Textbook of
Media Production
Grade - X

Preproduction

Commerical Production

Documentary Production

Social Media Video Production

Post Production

Production

NAVTTC

National Vocational & Technical Training Commission (NAVTTC)

Textbook of

Media Production

Grade – X

National Vocational and Technical Training Commission

H-9, Islamabad

Author: **Faisal Riaz,** Associate Professor, Dept. of computer sciences in Mirpur University of Science and Technology

Reviewers:

1. Saba Sadiq, DACUM facilitator, Islamabad
2. Dr. Muhammad Idrees, Curriculum Expert, Islamabad
3. Tahir Mehmood, Assistant Professer, FCE, Islamabad
4. Marryum Zaman, Lecturer Computer Graphics, NUTECH, Islamabad
5. Muhammad Zubair Akhtar, CEO, GoogleBiz, Faisalabad
6. Bilal Mahmood, Lab Engineer, NUTECH, Islamabad
7. Mubashar Chishtee, CEO / Lecturer, Coding phonix
8. Ali Raza, Game developer, Project Manager, Rawalpindi
9. Shehmir Riaz Bhatti, Game developer, Project Manager, Technophile Solution, RWP
10. Sadia Saeed, Senior Designer, Gyaan-e-Sehar Foundation
11. Hafiz Ishtiaq Rafique, Lecturer, ITU, Lahore
12. Ali Raza, Instructor, GSTC, Fsd
13. Haseeb Riaz, Instructor, CTTI
14. Muhammad Asim, Assistant Director, NAVTTC
15. Hoorya, Lecturer, Women Welfare Development Centre

PREFACE

This book has been written to fulfill the requirements of Matric-Tech course to prepare the students for the subject of Media Production in Grade 10. Matric-Tech in "Graphics Designing and Media Production" has been introduced first time in Pakistan. The main objective of starting this technical course is to produce technical workforce instead of teaching conventional theoretical subjects. On accomplishment of this objective, students will be able to explore the job market easily as well as start their careers as freelancers. Efforts have been made to present Media Production related training material in one book. The book contains material to better understand the purpose and role of media production. Working of Media Houses has also been explained as well as job roles are defined.

This book covers every topic to enrich students with the knowledge of Media Production. Each topic is clarified in a helpful approach for the students of Matric-Tech. The book contains the introduction to the software programs which are used in the field of Media Production. All the necessary tools have been explained and procedures are well described & demonstrated in a sequential order. This book should be read chapter wise to better understand the whole procedure. Students must perform all the activities and tasks to get hands on experience. All chapters in the book incorporate assessment in the form of MCQs, short and long questions. Any enhancement / idea for the improvement of this book will be highly appreciated.

Executive Director
National Vocational & Technical Training Commission
(NAVTTC)

Table of Contents

Chapter 01: Adobe Audition

After Completing this Chapter Students will be able to:

- describe adobe audition.

- install and set the workspace.

- learn about adobe audition interface.

- understand testing of inputs and outputs with audition.

- learn about import file in adobe audition.

- learn about selection of region for editing and change its levels

- understand the process of cut, delete, and past audio regions with multiple clipboard.

- learn about extending and shortening musical selections.

- describe the concept of loop (repeating part of a waveform).

- comprehend fading regions to reduce artifacts.

- learn about sound effects basics.

- learn use of effects rack.

- describe effects (amplitude, compression, delay and echo effects, filter and equalizer, modulation effects, noise reduction/restoration, reverb effects, special effects, stereo imagery effects, time and pitch effect, third-party effects (vst and au))
- managing presets.
- learn use of audio restoration.
- reducing hiss, crackles, pops, and clicks, broadband noise.
- learn about de-humming a file.
- removing artifacts, alternate click removal.
- learn mastering sound.
- equalization.
- dynamics.
- ambience.
- stereo imaging.
- "push" the drum hits; then apply the changes.
- mastering diagnostics.
- learn about sound design.
- rain sounds.
- babbling brook.
- insects at night.
- an alien choirs.
- sci-fi machine effects.
- alien drone flyby.
- extracting frequency bands.
- learn about recording, using waveform editor.
- about multitrack production.
- multitrack and waveform editor integration.
- changing track colors.
- loop selections for playback.
- track controls.
- channel mapping in the multitrack editor.

- side-chaining effects.

- save as template.

- creating a dj-style continuous music mix (mixtape) with crossfading.

- mix or export a collection of clips as a single file.

- edit for length.

- clip edits: split, trim, volume.

- extend a clip via looping.

- know about sound libraries.

- build a rhythm track using percussion, melodic elements, loops and other effects.

- learn about mixing and its process.

- learn testing your acoustics.

- learn about exporting as stereo.

- learn about burning an audio cd/ dvd album.

- learn about publishing to sound cloud.

Section 1: Introduction to Adobe Audition

1. Adobe Audition

1.1. About Adobe Audition

Audition is a complete toolset that contains multitrack, waveform, and spectral display for creating, mixing, editing, and restoring audio content. This effective audio workstation is created to quicken video production workflows and audio finishing — and deliver a refined mix with perfect sound. Adobe Audition is a stand-alone audio editing and sound-mixing system that permits you to edit and use effects to the audio from video footage.

Features and Benefits:

- Record, edit, and combine audio clips

- Produce expert quality audio

- Create a podcast

- Re-arrange any song to fit any length with Remix in Audition

Uses of Adobe Audition

- Employ high-quality software in sound editing/creating courses

- Record audio for talks or presentations

- Record audio from guest speakers for a virtual visit
- Easily edit audio for continuous virtual education

1.2. Install and set the workspace

System Requirements

Your computer must meet the minimum technical requirements outlined below to run and use Audition.

	Minimum requirement
Processor	Multicore processor with 64-bit aid
Operating system	Microsoft® Windows 10 (64-bit) v1909 or later
RAM	4GB Memory
Hard disk space	4GB of accessible hard-disk space for installation
Monitor resolution	1920x1080 or larger display
OpenGL	OpenGL 2.0 capable system
Sound card	Sound card compatible with ASIO protocol, WASAPI, or Microsoft WDM/MME
Control surface support	USB port and/or MIDI port may be required for external control surface support (see manufacturer's specifications for your device)
CD burning	Optical drive is used for CD burning (optional)
Internet	Internet connection is necessary for required software activation, validation of subscriptions, and access to online services.

Installation

Adobe Audition is part of the Adobe Creative Cloud Suit and can be downloaded and installed from the following url.

https://creativecloud.adobe.com/apps/download/audition

You can follow the onscreen instructions to install the software. You can also install its trial version that is available free of cost (with some conditions)

Set the Workspace

Adobe Audition delivers various views for editing audio files and creating multitrack mixes. To edit specific files, use the Waveform Editor. To mix multiple files and integrate them with video, use the Multitrack Editor.

Basic components of the editors

While offered options differ in the Waveform and Multitrack editors, both views share basic elements, such as the tool and status bars, and the Editor panel.
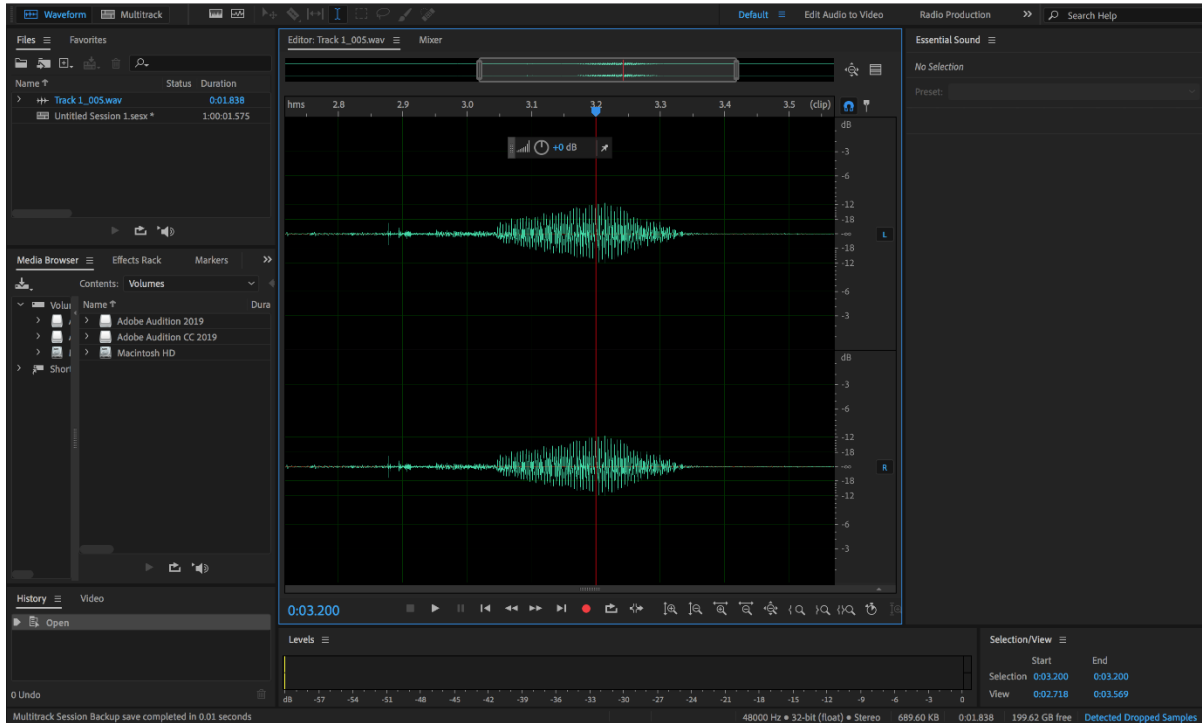

Basic Waveform view

Switch editors

1. Do one of the following:

   From the View menu, choose Waveform or Multitrack Editor.

   o In the toolbar, click the Waveform 🔲 or Multitrack Editor 🔲 button.

   o In the Multitrack Editor, double-click an audio clip to open it in the Waveform Editor. Otherwise, double-click a file in the Files panel.

   o In the Waveform Editor, choose Edit > Edit Original to open the multitrack session that created a mixdown file. (This command requires embedded metadata in the file.

   Zoom audio in the Editor panel
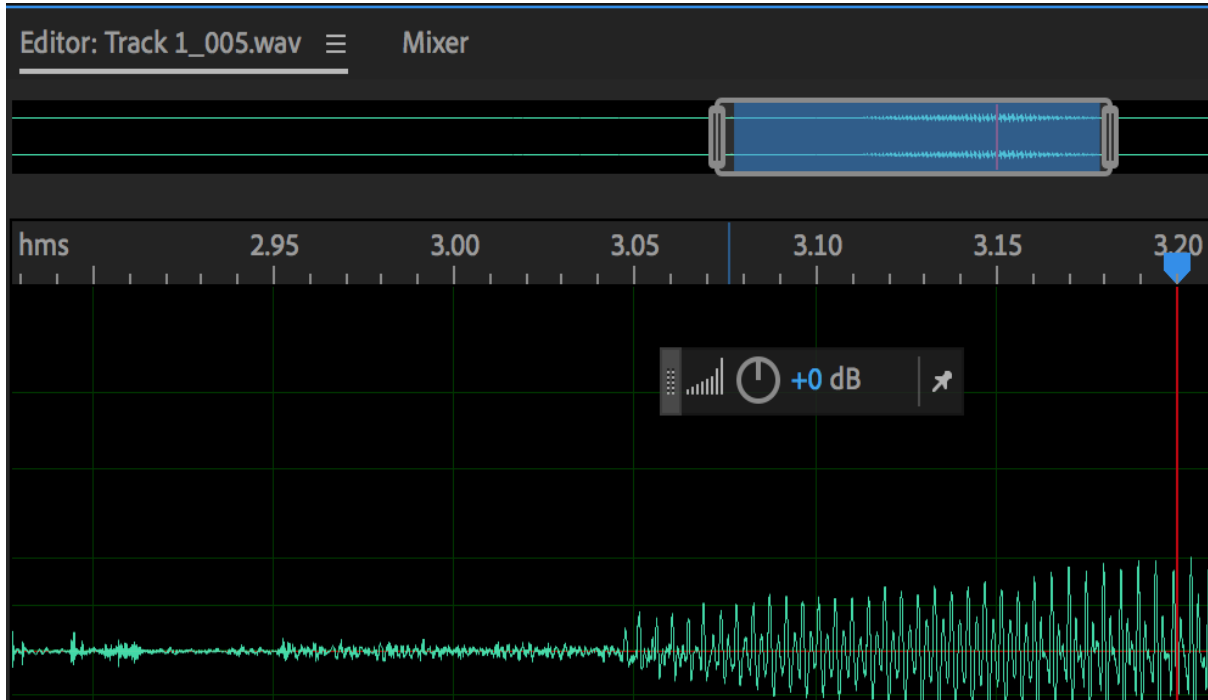
Zoom navigator
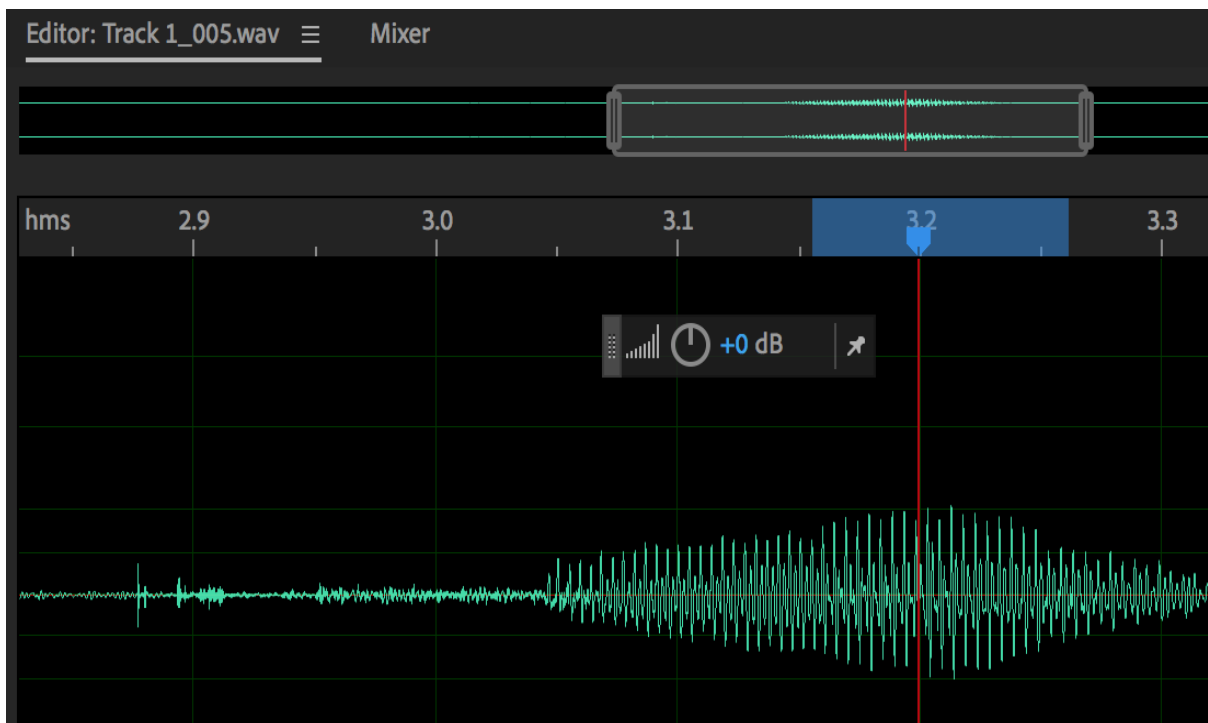
Timeline ruler

Zoom into a specific time range

In either the zoom navigator or the timeline ruler, right-click and drag. The magnifying glass icon 🔍 creates a selection showing the range that will fill the **Editor** panel.

Zoom to preset

Click on the Timer icon on the bottom of the **Editor** panel. There are five preset slots accessible that can be utilized to zoom to a specific time. In the **Save Preset** menu, you can overwrite a preset slot with the duration that is currently selected.
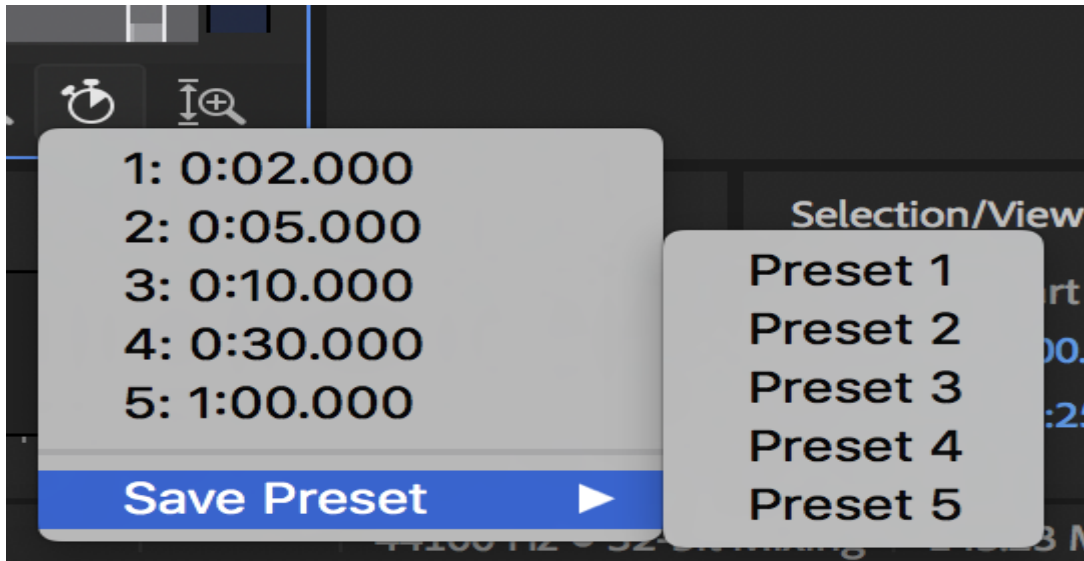
Zoom to time

Zoom to selected clip

Quickly zoom to the time range of one or more particular clips using the Zoom menu command. In the Multitrack Editor, choose **Zoom > Zoom To Selected Clips**.

Zoom into a specific frequency range

In the vertical ruler for the spectral display, right-click and drag.

Extend or shorten the displayed range

Take on the pointer over the left or right corner of the highlighted area in the zoom navigator, and then drag the magnifying glass icon 🔍.

Gradually zoom in or out

In the lower right of the Editor panel, click the Zoom In 🔍 or Zoom Out 🔍 button.

Note: You can set the Zoom Factor in the General section of the Preferences dialog box.

Zoom out full (all tracks)

You can zoom out all tracks to the similar height to totally cover vertical spaces. The view will resize track peaks to take up the full height of the multitrack editor panel. Track heights will resize to a stable height. Minimized tracks will remain at their lowest height.

To Zoom out full, choose **View > Zoom Out Full (All Tracks)**.

Zoom with the mouse wheel or mac trackpad

Place the pointer over the zoom navigator or ruler, and either roll the wheel or drag up or down with two fingers. (In the Waveform Editor, this zoom method also works when the pointer is over the waveform.)

Note: Roll or drag over the spectral display, and press Shift to switch between logarithmic and linear frequency scales. (Logarithmic better reflects human hearing; linear makes individual frequencies more visually distinct.)

Magnify selected audio

In the lower right of the Editor panel, click the Zoom In At In Point , Zoom In At Out Point , or Zoom To Selection buttons.

Display the entire audio file or multitrack session

In the lower right of the Editor panel, click the Zoom Out Full button .

Note: To display zoom buttons in a separate panel, choose Window > Zoom.

Navigate through time: At higher zoom levels, you can navigate to separate audio content in the Editor panel.

Navigate by scrolling

- In the zoom navigator, drag left or right.
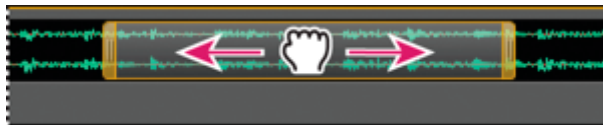
Scrolling with the zoom navigator

- Make use of horizontal mouse scroll or a middle button mouse drag to scroll the timeline in multitrack and waveform view.

- To scroll through audio frequencies in the spectral display, drag up or down in the vertical ruler.

Navigate with the Selection/View panel

The Selection/View panel reveals the start and end of the current selection and view in the Editor panel. The panel shows this info in the current time format, such as Decimal or Bars and Beats.

1. To show the Selection/View panel, choose Window > Selection/View Controls.

2. (Optional) Submit new values into the Begin, End, or Duration boxes to change the selection or view.

1.3. Adobe audition interface

Adobe video and audio products offer a consistent, customizable workspace. While each product has its own setting of panels (such as Project, Metadata, and Timeline), you can move and group panels in the same manner in all products.

The main screen of a software package is the *application window*. Panels are arranged in this window in an arrangement called a *workspace*. The default workspace contains groups of panels as well as panels that stand alone.

Note: You can use floating windows to create a workspace more like workspaces in previous versions of Adobe applications, or to place panels on multiple monitors.
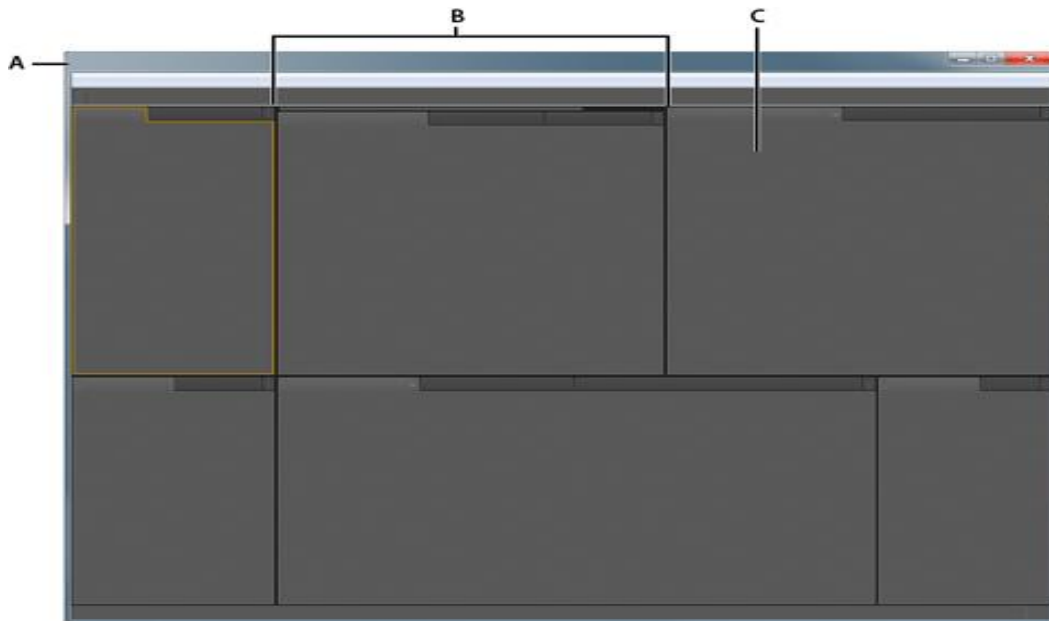
Example workspace

A. Application window **B.** Grouped panels **C.** Individual panel

Choose a workspace Every Adobe video and audio product contains various predefined workspaces that enhance the arrangement of panels for certain tasks. When you select one of these workspaces, or any custom workspaces you've saved, the existing workspace is redrawn consequently.

1. Open the project you want to work on, choose Window > Workspace, and select the desired workspace.

Dock, group, or float panels

You can dock panels all together, move them into or out of groups, and undock these so they can float above the product window. As you drag a panel, *drop zones*—areas onto which you can move the panel—turn out to be highlighted. The drop zone you choose defines where the panel is implanted, and whether it docks or groups with other panels.

Docking zones

Docking zones exist along the edges of a panel, group, or window. Docking a panel places it next to the current group, resizing all groups to adjust the new panel.
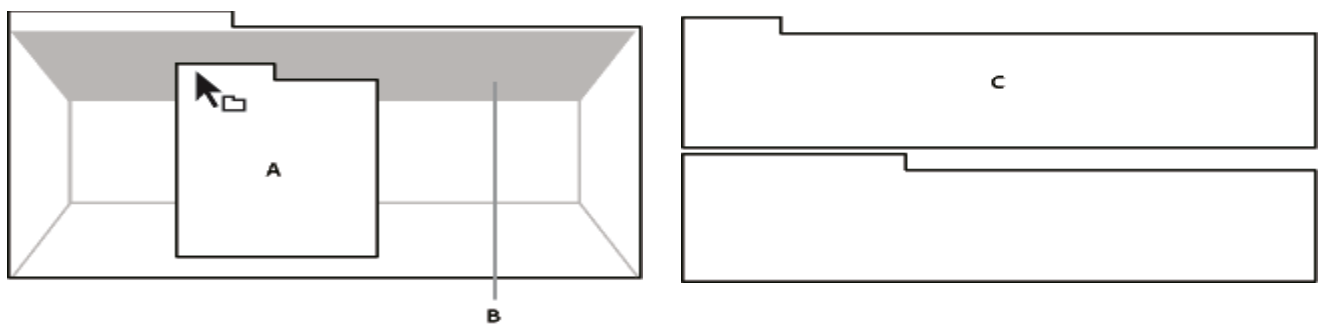
Dragging panel (A) onto docking zone (B) to dock it (C)

Grouping zones

Grouping zones exist in the middle of a panel or group, and along the tab area of panels. Dropping a panel on a grouping zone piles it with other panels.
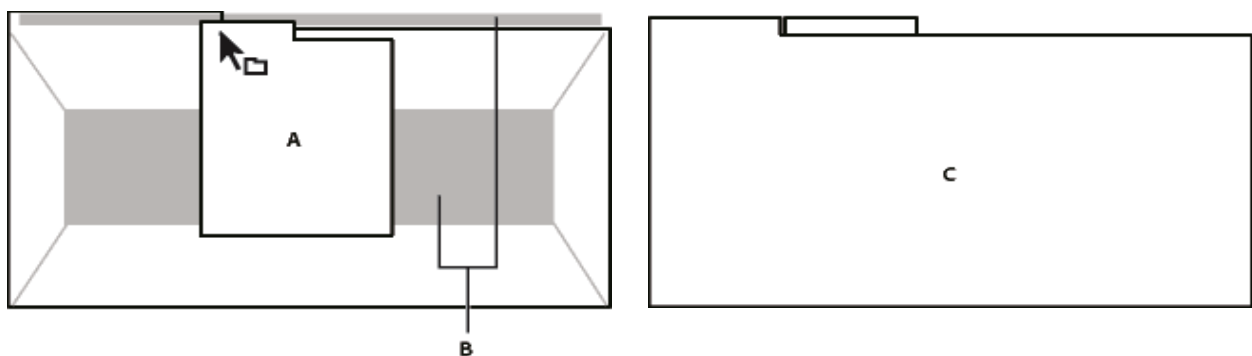
Dragging panel (A) onto grouping zone (B) to group it with existing panels (C)

Dock or group panels

1. If the panel you want to dock or group is not visible, choose it from the Window menu.

2. Do one of the following:

- To move an individual panel, drag the gripper area in the upper-left corner of a panel's tab onto the required drop zone.
- To move a whole group, drag the group gripper in the upper-right corner onto the desired drop zone.
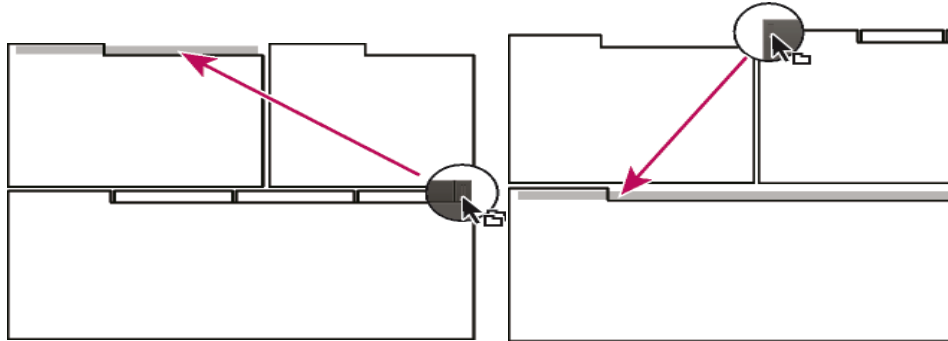
Drag group gripper to move entire

The application docks or groups the panel, according to the type of drop zone.

Undock a panel in a floating window

When you undock a panel in a floating window, you can add panels to the window and change it similarly to the application window. You can use floating windows to use a second monitor, or to create workspaces like the workspaces in previous versions of Adobe products.

1. Select the panel you want to undock (if it's not visible, choose it from the Window menu), and then do one of the following:

   - Choose Undock Panel or Undock Frame from the panel menu. Undock Frame undocks the panel group.
   - Hold down Ctrl and drag the panel or group from its present place. When you release the mouse button, the panel or group appears in a new floating window.
   - Drag the panel or group outside the application window. (If the application window is maximized, drag the panel to the Windows taskbar.)

Resize panel groups

If you point the mouse over dividers between panel groups, resize icons appear. When you drag these icons, all groups that share the divider are resized. For example, if your workspace comprises three panel groups stacked vertically. If you drag the divider among the bottom two groups, they are resized, but the uppermost group doesn't change.

1. Do either of the following:

- To resize horizontally or vertically, point the cursor between two panel groups. The pointer becomes a double-arrow ⇤⇥ .
- To resize in both directions at once, position the pointer at the junction between three or more panel groups. The pointer becomes a four-way arrow ✛.

2. Hold down the mouse button and drag to resize the panel groups.
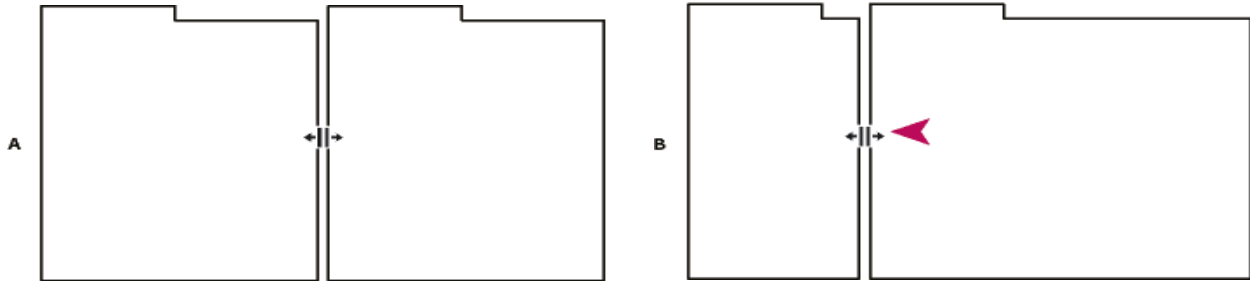
Dragging divider between panel groups to resize them horizontally

A. Original group with resize icon **B.** Resized groups

Display the toolbar

The toolbar offers instant access to tools, the Workspace menu, and buttons that toggle between the Waveform and Multitrack editors. Some tools are unique to each view. Likewise, some Waveform Editor tools are available only in the spectral display.

By default, the toolbar is docked directly beneath the menu bar. However, you can undock the toolbar, converting it to the Tools panel, which you can manipulate like any other panel.

Available tools differ in each view.

A. Waveform Editor tools for spectral display **B.** Multitrack Editor tools

Display the status bar

The status bar runs across the bottom of the Adobe Audition work area. The far left of the status bar indicates the time required to open, save, or process a file, as well as the current transport status (Playing, Recording, or Stopped). The far right of the bar displays various information that you can customize.
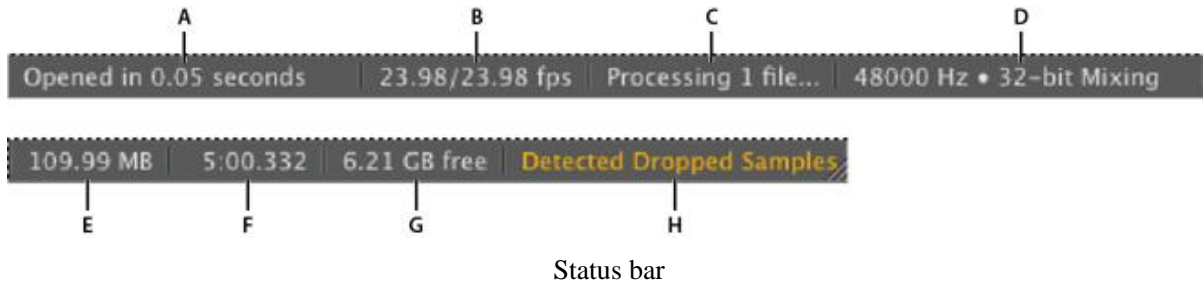
Status bar

A. Time to open, save, or process file **B.** Video Frame Rate **C.** File Status **D.** Sample

Type **E.** Uncompressed Audio Size **F.** Duration **G.** Free Space **H.** Detect Dropped Samples

To show or hide the status bar, choose View > Status Bar > Show. A check mark indicates that the status bar is visible.

Save, reset, or delete workspaces

Save a custom workspace

As you modify a workspace, the application marks your changes, storing the most recent layout. To store a specific layout more permanently, save a custom workspace. Saved custom workspaces appear in the Workspace menu, where you can return to and reset them.

Arrange the frames and panels as desired, and then choose Window > Workspace > New Workspace. Type a name for the workspace and click OK.

1.4. Understand testing of inputs and outputs with Audition

You can use a wide range of hardware inputs and outputs with Adobe Audition. Sound card inputs let you bring in audio from sources such as microphones, tape decks, and digital effects units. Sound card outputs let you monitor audio through sources such as speakers and headphones.

A. Sound card inputs connect to sources such as microphones and tape decks. **B.** Sound card outputs connect to speakers and headphones.

Configure audio inputs and outputs

When you configure inputs and outputs for recording and playback, Adobe Audition can use these kinds of sound card drivers:

- In Windows, ASIO drivers support professional cards and MME drivers typically support standard cards.

- In Mac OS, CoreAudio drivers support both professional and standard cards.

ASIO and CoreAudio drivers are preferable because they provide better performance and lower latency. You can also monitor audio as you record it and instantly hear volume, pan, and effects changes during playback.

- Choose Edit > Preferences > Audio Hardware (Windows) or Audition > Preferences > Audio Hardware (Mac OS).

- From the Device Class menu, choose the driver for the sound card you want to use.

- Choose a Default Input and Output from the card.

    Note: In the Multitrack Editor, you can override the defaults for specific tracks.

- (MME and CoreAudio) For Clock, choose the input or output to which you want other digital audio hardware to synchronize (ensuring accurate alignment of samples).

- For I/O Buffer Size (ASIO and CoreAudio) or Latency (MME), specify the lowest setting possible without audio dropouts. The ideal setting depends on the speed of your system, so some experimentation may be necessary.

- Choose a Sample Rate for the audio hardware. (For common rates for different output mediums,

- (Optional) To optimize the performance of ASIO and CoreAudio cards, click Settings. For more information, consult the documentation for the sound card.

Note: By default, Adobe Audition controls ASIO sound cards while playing or monitoring audio. If you want to access the card in another application, select Release ASIO Driver In Background. (Audition still controls the card while recording to avoid having recordings suddenly stop.)

Section 2: Basic Editing in Adobe Audition

1.5.   Creating and Importing Files

Create a new empty audio file

A new empty audio file is ideal for recording new audio or combining pasted audio.

- Choose File > New > Audio File.

Sample Rate: Defines the frequency scale of the file. To reproduce a given frequency, the sample rate must be at least twice that frequency.

Channels: Defines if the waveform is mono, stereo, 5.1 surround. Adobe Audition saves the last five custom audio channel layouts.

Note: For voice-only recordings, the mono option is a good choice that results in quicker processing and smaller files.

Bit Depth: Defines the amplitude range of the file. The 32-bit level gives maximum processing elasticity in Adobe Audition. For compatibility with common applications, you can convert to a lower bit depth when editing is complete.

Open existing audio files and multitrack mixes

The following file types open in the Multitrack Editor: Adobe Audition Session, Adobe Audition 3.0 XML, Adobe Premiere Pro Sequence XML, Final Cut Pro XML Interchange, and OMF.

All other supported file types open in the Waveform Editor, including the audio portion of video files.

If you open multiple files, Editor panel menu lets you choose which file to display

- Choose File > Open.

- Select an audio or video file.

Note: If you don't see the file that you want, choose All Supported Media from the menu at the bottom of the dialog box.
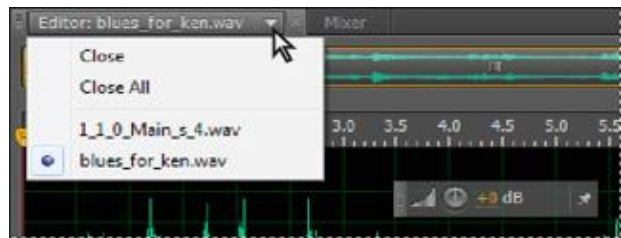
Append audio files to another

Note: Append files with CD Track markers to quickly assemble audio and apply consistent processing.

1. In the Waveform Editor, do either of the following:

    - To add to the active file, choose File > Open Append > To Current.

    - To add to a new file, choose File > Open Append > To New.

1. In the Open Append dialog box, select one or more files.

2. Click Open.

Import a file as raw data

You cannot open files which do not have header information that defines the sample type. To manually specify this information, import the file as raw data.

1. Choose File > Import > Raw Data.
2. Select the file, and click Open.
3. Set the following options:

Sample Rate: Match up the famous rate of the file, if possible. For examples of common settings, Adobe Audition can import raw data with rates ranging from 1 Hz to 10,000,000 Hz. But playback and recording are adopted only between 6000 Hz and 192,000 Hz.

Channels: Enter a number from 1 to 32.

Encoding: Indicates the data storage scheme for the file. If you are unsure what encoding the file uses, refer to the supplier of the file, or the documents for the application that created it.

Byte Order: Identifies the numerical series for bytes of data. The Little-Endian method is common to WAV files, while the Big-Endian method is common to AIFF files. The Default Byte Order automatically applies the default for your system processor and is typically the best option.

Start Byte Offset: Specifies the data point in the file at which the import process begins.

Insert an audio file into a multitrack session

When you add an audio file in the Multitrack Editor, the file turn into an audio clip on the chosen track. If more than one files are injected, or if the file is lengthier than the space available on the chosen track, a new clip is inserted. The clip is inserted to the nearest empty track.

1. In the Multitrack Editor, select a track, and then place the playhead 🏆 at the desired time position.
2. Choose Multitrack > Insert Files.
3. Select an audio or video file.

Import sequence from Adobe Premiere Pro

You can quickly bring in Adobe Premiere Pro projects (.prproj) to Adobe Audition. This import method uses the original media and does not require rendering.

- Click **File > Import > File** and choose the Adobe Premiere Pro project to import.

- The **Import a Premiere Pro Sequence** dialogue box opens with the list of sequences the project contains. You can select the specific sequence that you want to open. The selected sequence is directly imported referencing the original media.
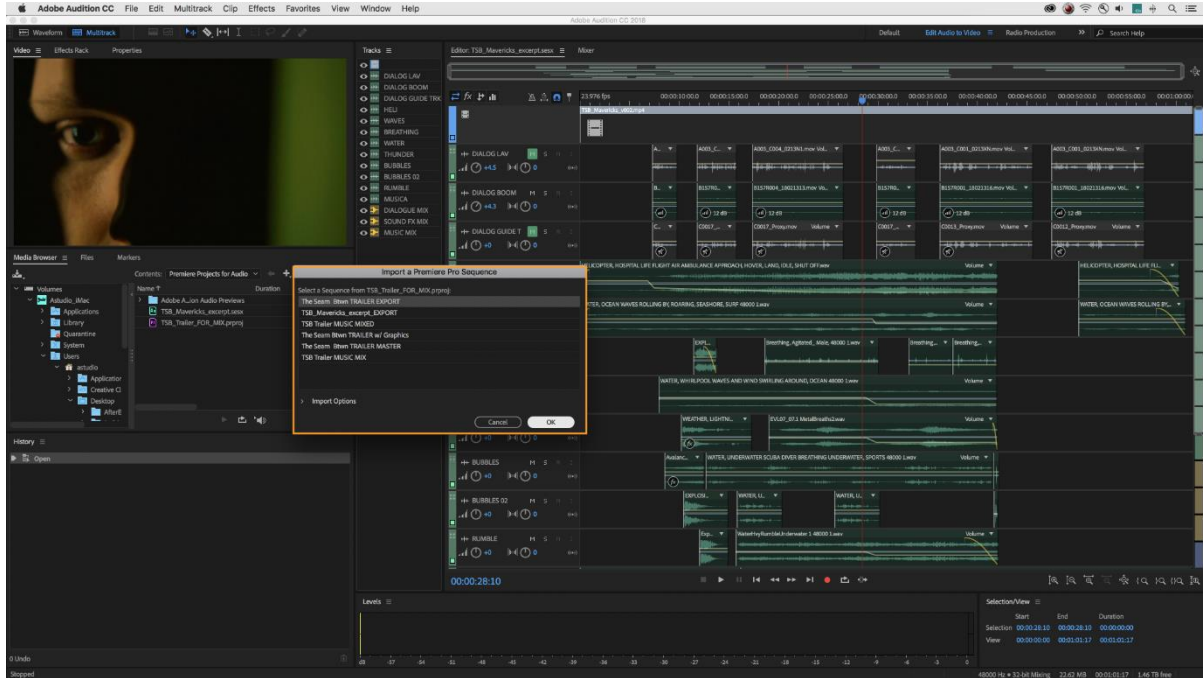
Import Adobe Premiere Pro Sequence

1.6. Selection of region for editing and change its levels

Monitoring time

In the Editor panel, the subsequent features help you monitor time:

1. In the timeline near the top of the panel, the *current-time indicator* 💡 lets you start playback or recording at a specific point.

2. In the lower left of the panel, the time display shows the current time in numerical format. The default time format is Decimal, but you can easily change it. The same format is used by the timeline.
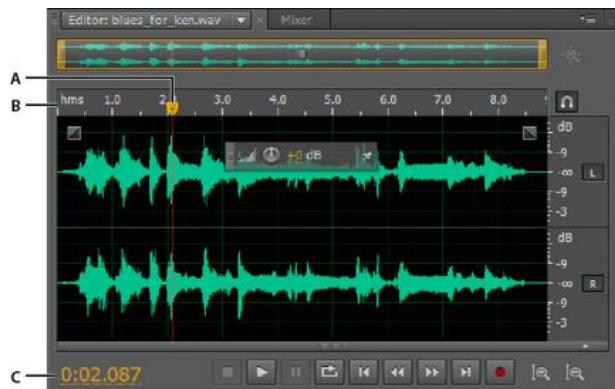
Features that help you monitor time

A. Current-time indicator **B.** Timeline **C.** Time display

Position the current-time indicator

In the Editor panel, do any of the following:

1. In the timeline, drag the indicator 🔰 or click a specific time point.

2. In the time display at lower left, drag across the numbers, or click to enter a specific time.

3. At the bottom of the panel, click one of the following buttons:

Pause

⏸ Temporarily stops the current-time indicator. Click the Pause button again to resume playback or recording.

Move CTI to Previous

⏮ Places the current-time indicator at the beginning of the next marker. If there are no markers, the current-time indicator moves to the beginning of the waveform or session.

Rewind

⏪ Shuttles the current-time indicator backward in time.

Fast Forward

⏩ Shuttles the current-time indicator forward in time.

Move CTI to Next

⏭ Moves the current-time indicator to the next marker. If there are no markers, the current-time indicator moves to the end of the waveform or session.
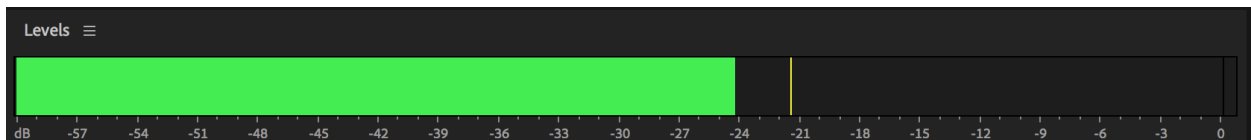
Level meters overview

To monitor the amplitude of incoming and outgoing signals during recording and playback, you use level meters. The Waveform Editor provides these meters only in the Levels panel. The Multitrack Editor provides them in both the Levels panel, which shows the amplitude of the Mix output, and track meters, which show the amplitude of individual tracks.

The meters show signal levels in *dBFS* (decibels below full scale), where a level of 0 dB is the maximum amplitude possible before clipping occurs. Yellow peak indicators remain for 1.5 seconds so you can easily determine peak amplitude.

Effects Rack Input/ Output monitor

In the Effects Rack, the two level meters display the signal level of the Input (the clips and tracks being routed through those effects) and the Output (the signal level leaving the effects chain).

Many effects will have a little impact on the overall level of the signal, both amplifying it and reducing it. By watching the levels, you can change the knobs next to each to fine-tune the amount of signal going into the effects (which can have control on how the sounds are processed) or exiting the effect (making sure the effects aren't clipping or are loud enough to be audible).
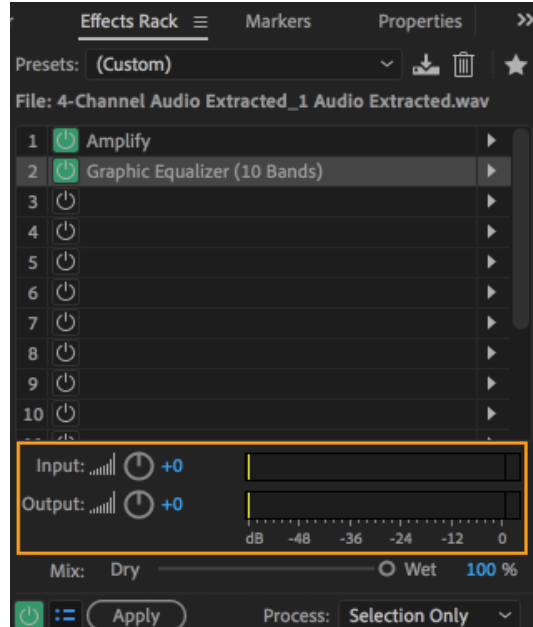
Customize level meters

Right-click the meters and select any of the following options:

Meter Input Signal

In the Waveform Editor, displays the level of the default hardware input. To quickly enable or disable this option, double-click the meters.

Range options

Change the displayed decibel range.

Show Valleys

Shows valley indicators at low-amplitude points.

Show Color Gradient

Gradually transitions the meters from green, to yellow, to red. Deselect this option to display abrupt color shifts to yellow at -18 dBFS, and red at -6.

Show LED Meters

Displays a separate bar for each whole decibel level.

Dynamic or Static Peaks

Change the mode of peak indicators. Dynamic Peaks resets the yellow peak level indicators to a new peak level after 1.5 seconds, letting you easily see recent peak amplitude. As the audio gets quieter, the peak indicators recede. Static Peaks retains peak indicators, letting you determine the

maximum amplitude of the signal since monitoring, playback, or recording began. However, you can manually reset peak indicators by clicking clip indicators.

Tip: To find out how loud audio will get before you record it, choose Static Peaks. Then monitor input levels; the peak indicators show the level of the loudest part.

1.7. Process of cut, delete, and paste audio

Copy or cut audio data

1. In the **Waveform Editor**, select the audio data you want to copy or cut. Or, to copy or cut the entire waveform, deselect all audio data.

2. Choose one of the following:

    1. **Edit** > **Copy** to copy audio data to the clipboard.

    2. **Edit** > **Copy to New** to copy and paste the audio data into a newly created file.

    3. **Edit** > **Cut** to remove audio data from the current waveform and copy it to the clipboard.

Paste audio data

1. Do either of the following:

    o To paste audio into the current file, place the current-time indicator 🛡 where you want to insert the audio or select existing audio you want to replace. Then choose **Edit** > **Paste**.

    o To paste audio data into a new file, choose **Edit** > **Paste to New**. The new file automatically inherits the sample type (rate and bit depth) from the original clipboard material.

Mix audio data when pasting

The **Mix Paste** command mixes audio data from the clipboard with the current waveform.

2. In the **Editor** panel, place the current-time indicator 🛡 where you want to start mixing the audio data. Alternately, select the audio data you want to replace.

3. Choose **Edit** > **Mix Paste**.

4. Set the following options and click **OK**.

    Copied and Existing Audio

    Adjust the percentage volume of copied and existing audio.

Invert Copied Audio

Reverses the phase of copied audio, either exaggerating or reducing phase cancellation if the existing audio contains similar content. (To understand phase cancellation.

Crossfade

Applies a crossfade to the beginning and end of the pasted audio, producing smoother transitions. Specify the fade length in milliseconds.

Paste Type | Audition CC

Specify the paste type. The options are as follows:

Insert

Inserts audio at the current location or selection. Adobe Audition inserts audio at the cursor location, moving any existing data to the end of the inserted material.

Overlap (Mix)

Mixes audio at the selected volume level with the current waveform. If the audio is longer than the current waveform, the current waveform is lengthened to accommodate the pasted audio.

Overwrite

Overdubs the audio beginning at the cursor location, and replaces the existing material thereafter for the duration of audio. For example, pasting 5 seconds of material replaces the first 5 seconds after the cursor.

Modulate

Modulates the audio with the current waveform for an interesting effect. The result is similar to overlapping, except that the values of the two waveforms are multiplied by each other, sample by sample, instead of added.

From Clipboard

Pastes audio data from the active internal clipboard.

From File

Pastes audio data from a file. Click **Browse** to navigate to the file.

Loop Paste

Pastes audio data the specified number of times. If the audio is longer than the current selection, the current selection is automatically lengthened accordingly.

Delete or crop audio

1. Do one of the following:

    1. Select audio you want to delete, and choose **Edit** > **Delete**.

    2. Select audio you want to keep, and choose **Edit** > **Crop**. (Unwanted audio at the beginning and end of the file is removed.)

1.8.   Extending and Shortening Musical Selection

Select time ranges

1. In the toolbar, select the Time Selection tool .

2. Do any of the following:

    • To select a range, drag in the Editor panel.

    • To extend or shorten a selection, drag the selection edges. (Shift-click beyond the edges to quickly extend a selection to a specific location.)
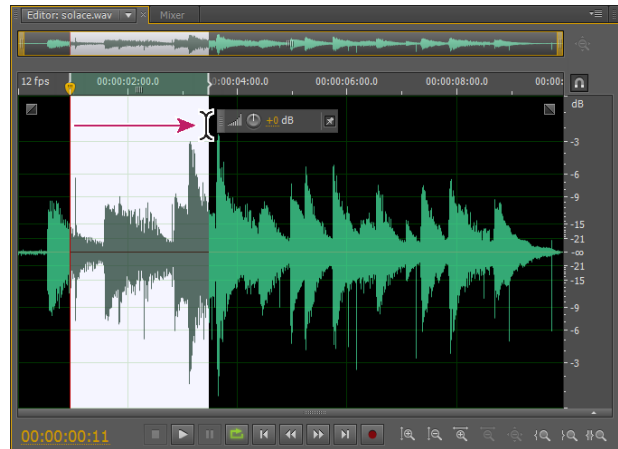
Dragging to select time ranges

Select spectral ranges

When operating in a spectral display, you can use the Marquee, Lasso, or Paintbrush Selection tool to select audio data within specific spectral ranges. The Marquee Selection tool lets you choose a rectangular area. The Lasso Selection and Paintbrush Selection tools let you make free-form choices.
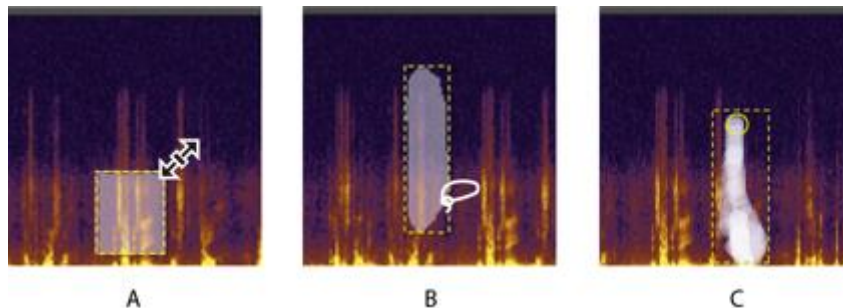
Types of spectral selections

A. Marquee **B.** Lasso **C.** Paintbrush

1. In the toolbar, select the Marquee , Lasso , or Paintbrush Selection .

2. In the Editor panel, drag in the spectral display to select the desired audio data.

   Note: When you make a selection in a stereo waveform, the selection is applied to all channels by default. To select audio data in specific channels, choose them from the Edit > Enable Channels menu.

3. To adjust the selection, do any of the following:

   - To move the selection, position the pointer in the selection, and drag it to the desired location.

   - To resize the selection, position the pointer on the corner or edge of the selection, and drag it to the desired size. (For paintbrush selections, you can also adjust the brush Size setting in the toolbar.)

   - To add to a lasso or paintbrush selection, Shift-drag. To subtract from the selection, Alt-drag.

   - To determine the intensity of effects applied to paintbrush selections, adjust the Opacity setting in the toolbar.

1.9. Concept of Loops

Creating playlists

A *playlist* is an array of marker ranges that you can play back in any order and loop a required number of times. A playlist lets you try different versions of an arrangement before you commit to edits. You create playlists in the Playlist panel (Window > Playlist).

Note: To store a playlist with a file, you must save in WAV format.

Create a playlist

1. In the Playlist panel, click the Open Markers Panel button 🔲.

2. In the Markers panel, select marker ranges you want to add to the playlist. Then click the Insert Selected Range Markers Into Playlist button 🔳, or drag the range markers to the Playlist panel.

Change the order of items in a playlist

1. Drag the item up or down.

Play items in a playlist

1. To play all or part of the list, select the first item you want to play. Then click the Play button ▶ at the top of the panel.

2. To play a specific item, click the Play button to the left of the item name.

Loop an item in a playlist

1. Select an item, and enter a number in the Loops column. Each item can loop a different number of times.

1.10. Visually Fading and Changing Amplitude

Various effects can change amplitude or produce fades, visual fade and gain controls make the task quick and intuitive. As you drag these controls in the Editor panel, a preview helps you precisely adjust audio.

Visual controls in the Editor panel

A. Fade controls **B.** Gain control (heads-up display)

Note: To quickly fade selected audio, choose Favorites > Fade In or Fade Out.

Visually fade in or out

Adobe Audition offers three types of visual fades:

2. Linear fades produce an even volume change that works well for much material. If this fade sounds too abrupt, however, try one of the other options.
3. Logarithmic fades smoothly change volume slowly and then rapidly, or vice versa.
4. Cosine fades are shaped like an S-curve, changing volume slowly at first, rapidly through the bulk of the fade, and slowly at the finish.

Note: In the Waveform Editor, fades permanently change audio data. To apply fades you can readjust in the Multitrack Editor.
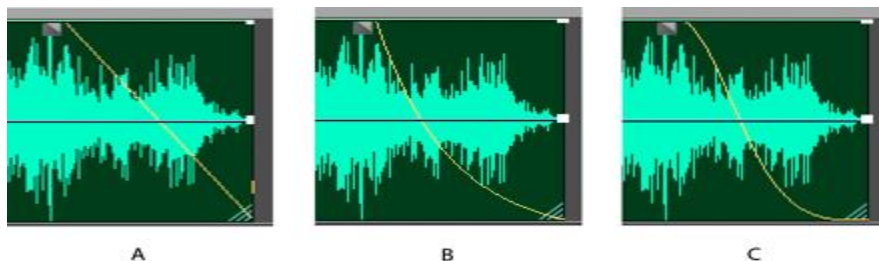
Fade types

A. Linear **B.** Logarithmic **C.** Cosine

1. In the upper left or right of the waveform, drag the Fade In ◢ or Fade Out ◣ handle inward, and do any of the following:

   - For a linear fade, drag perfectly horizontally.

   - For a logarithmic fade, drag up or down.

   - For a cosine (S-curve) fade, hold down Ctrl (Windows) or Command (Mac OS).

Note: To create cosine fades by default and hold the keys above to create linear or logarithmic fades, change the Default Fade setting in the General preferences.

Visually raise or lower amplitude

1. In the Editor panel, select specific audio, or select nothing to adjust the entire file.

2. In the gain control that floats above the panel, drag the knob or numbers.

   The numbers indicate how new amplitude compares with existing amplitude. When you release the mouse button, the numbers return to 0 dB, so you can make further adjustments.
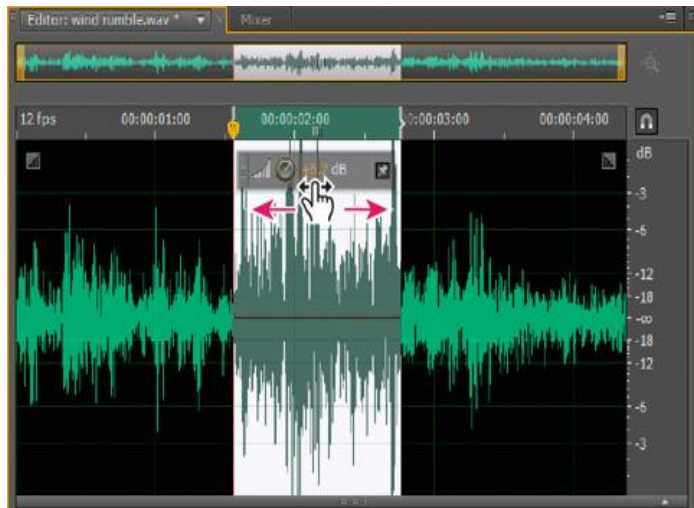
Changing the volume of selected area

Section 3: Effects in Adobe Audition

1.11. Basics of Sound Effects in Adobe Audition

Audition CC supports Common Extensibility Platform (CEP) extensions, which enable developers to build integrated panels in Adobe desktop applications.

Developers design the panels using HTML5 and JavaScript. They use Extend Script to communicate with the application.

The Adobe-CEP repository at Github contains source code, documentation, and community-built extensions.

Accessing the CEP extensions

Choose **Window > Extensions > Adobe Audition Portal** to access extensions.
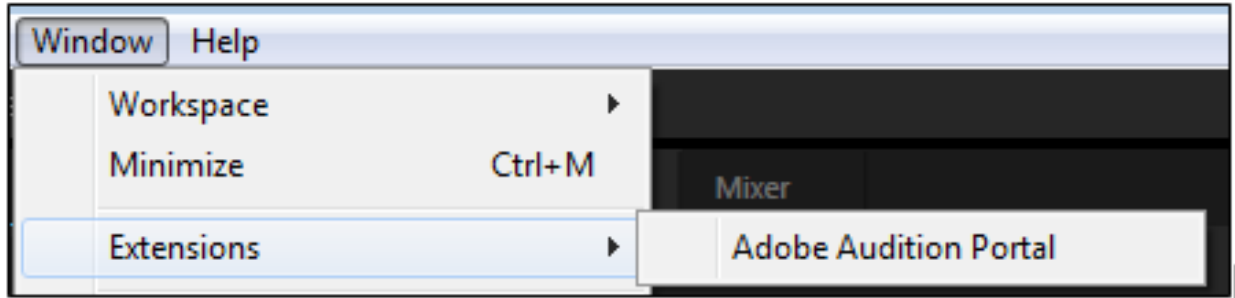
You can install extensions using the Creative Cloud desktop application. Download from the Adobe Add-ons Marketplace and then enable File Sync in the application to automatically install extensions.

You can use the SDK to create custom CEP extensions. Refer to the documentation and sample code in the SDK.

Download the Audition SDK from the Audition Developer Center.

1.12. Effects Rack overview

The Effects Rack lets you insert, edit, and reorder up to 16 effects, optimize mix levels, and store favorite presets. Most rack controls are present in both the Waveform and Multitrack editors.
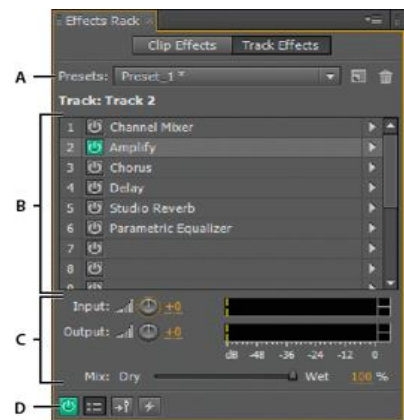
Controls shared by the waveform and Multitrack editors

A. Rack Preset controls **B.** Effect slots **C.** Level controls **D.** Main Power button

Controls unique to the Waveform Editor

In the Waveform Editor, the Effects Rack provides a Process menu. This menu lets you modify a selection or the entire file, and an Apply button that permanently applies effects.
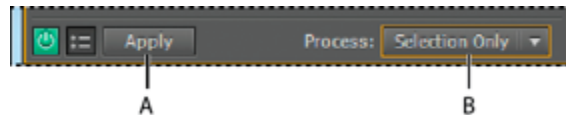
Controls unique to the Waveform Editor

A. Apply button permanently applies effects **B.** Process menu lets you modify selection or entire **file Controls unique to the Multitrack Editor**

The Effects Rack provides Pre-render Track and FX Pre/Post-Fader buttons that you use to optimize and route effects. Each clip and track has its own Effects Rack, which is saved with the session.

Note: Buses and the Mix track lack a Pre-render option because processing effects from all source tracks would reduce performance.

Controls unique to the Multitrack Editor

A. FX Pre/Post-Fader **B.** Pre-render

Set input, output, and mix levels in racks

1. To optimize volume, adjust Input and Output levels so their meters peak without clipping.

2. To change the percentage of processed audio, drag the Mix slider. 100% (Wet) equals fully processed audio; 0% (Dry) equals original, unprocessed audio.

Insert, bypass, reorder, or remove effects in racks

In the Effects Rack, you manage groups of effects by using individual effect slots.

Note: In the Multitrack Editor, the fx section of the Editor panel or Mixer provides quick access to slots in the Effects Rack.
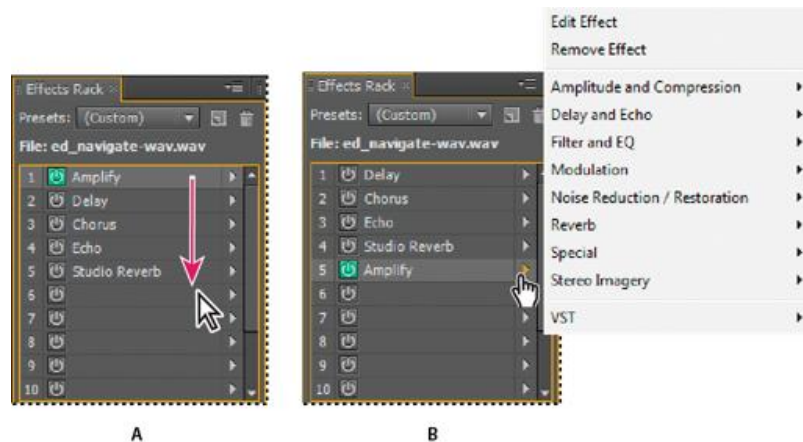
Reordering and inserting effects in racks:

A. Reorder by dragging **B.** Insert with the slot menu

1. To insert an effect, choose it from a slot's pop-up menu. Then adjust effect settings as desired.

2. To bypass an effect, click its Power button ⏻.

3. To bypass all effects, click the main Power button in the lower left corner of a rack. You cab also click the *fx* power button in the Editor panel or Mixer.

4. To bypass a selected group of effects, choose Toggle Power State of Selected Effects from the panel menu ▤.

5. To remove a single effect, choose Remove Effect from a slot's pop-up menu. Or select the slot, and press Delete.

6. To remove all effects, choose Remove All Effects from the panel menu 📰.

7. To reorder effects, drag them to different slots.

1.13. Description of Effects

Amplitude and Compression Effects

Amplify effect

The Amplitude And Compression > Amplify effect boosts or attenuates an audio signal. Because the effect operates in real time, you can combine it with other effects in the Effects Rack.

Channel Mixer effect

The Amplitude and Compression > Channel Mixer effect alters the balance of stereo or surround channels. You change the apparent position of sounds, correct mismatched levels, or address phasing issues.
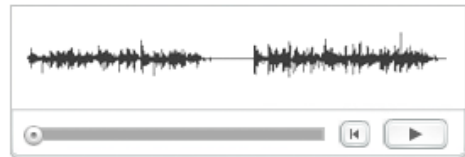
DeEsser effect

The Amplitude and Compression > DeEsser effect removes *sibilance*, "ess" sounds heard in speech and singing that can distort high frequencies.

Dynamics processing effect

The Amplitude And Compression > Dynamics Processing effect can be used as a compressor, limiter, or expander. As a compressor and limiter, this effect reduces dynamic range, producing consistent volume levels. As an expander, it increases dynamic range by reducing the level of low-level signals. (With extreme expander settings, you can create a *noise gate* that totally eliminates noise below a specific amplitude threshold.)
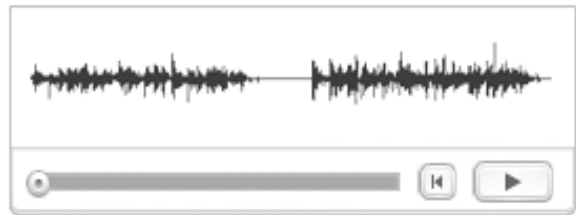
Dynamic Effects

The Amplitude and Compression > Dynamics Effects consist of four sections. They are Auto Gate, Compressor, Expander, and Limiter. You can individually control each one of the section. The LED and gain reduction meters helps you get the overview about how the audio signal is processed.

Fade Envelope effect

To reduce amplitude by varying amounts over time, choose **Fade Envelope** (**Effects > Amplitude and Compression**).

In the Waveform Editor panel, click the yellow envelope line to add key frames, and drag them up or down to change amplitude. To quickly select, reposition, or delete multiple key frames,

Gain Envelope effect

To boost or reduce amplitude over time, choose **Gain Envelope** (**Effects > Amplitude and Compression**).

In the Waveform Editor panel, click the yellow envelope line to add key frames, and drag them up or down to change amplitude. To quickly select, reposition, or delete multiple key frames

Hard Limiter effect

The Amplitude and Compression > Hard Limiter effect greatly attenuates audio that rises above a specified threshold. Typically, limiting is applied with an input boost, a technique that increases overall volume while avoiding distortion.

Multiband Compressor effect

The Amplitude and Compression > Multiband Compressor effect lets you independently compress four different frequency bands. Because each band typically contains unique dynamic content, multiband compression is a powerful tool for audio mastering.

Normalize effect (Waveform Editor only)

The Amplitude and Compression > Normalize effect lets you set a peak level for a file or selection. When you normalize audio to 100%, you achieve the maximum amplitude that digital audio allows—0 dBFS. If you're sending audio to a mastering engineer, however, normalize audio to between −3 and −6 dBFS, providing a cushion for further processing.

Single-band Compressor effect

The Amplitude and Compression > Single-band Compressor effect reduces dynamic range, producing consistent volume levels and increasing perceived loudness. Single-band compression is effective for voiceovers, because it helps the speaker stand out over musical soundtracks and background audio.

Speech Volume Leveler effect

The Amplitude and Compression > Speech Volume Leveler is a compression effect that optimizes dialogue, evening out levels and removing background noise.

Delay and Echo Effects

*Delay*s are separate copies of an original signal that reoccur within milliseconds of each other. *Echoes* are sounds that are delayed far enough in time so that you hear each as a distinct copy of the original sound. When reverb or chorus might muddy the mix, both delays and echoes are a great way to add ambience to a track.

Analog Delay effect

The Delay and Echo > Analog Delay effect simulates the sonic warmth of vintage hardware delay units. Unique options apply characteristic distortion and adjust the stereo spread. To create discrete echoes, specify delay times of 35 milliseconds or more; to create more subtle effects, specify shorter times.

Delay effect

The Delay and Echo > Delay effect can be used to create single echoes, as well as a number of other effects. Delays of 35 milliseconds or more create discrete echoes, while those between 15-34 milliseconds can create a simple chorus or flanging effect. (These results won't be as effective as the Chorus or Flanger effects in Adobe Audition, because the delay settings don't change over time.)

Echo effect

The Delay and Echo > Echo effect adds a series of repeated, decaying echoes to a sound. (For a single echo, use the Delay effect instead.) You can create effects ranging from a Grand Canyon-type "Hello-ello-llo-lo-o" to metallic, clanging drainpipe sounds by varying the delay amount. By equalizing the delays, you can change a room's characteristic sound from one with reflective surfaces (creating echoes that sound brighter) to one that is almost totally absorptive (creating echoes that sound darker).

Filter and Equalizer Effects

FFT Filter effect

The graphic nature of the **Filter and EQ** > **FFT Filter** effect makes it easy to draw curves or notches that reject or boost specific frequencies. *FFT* stands for **Fast Fourier Transform**, an algorithm that quickly analyzes frequency and amplitude.

This effect can produce broad high- or low-pass filters (to maintain high or low frequencies), narrow band-pass filters (to simulate the sound of a telephone call), or notch filters (to eliminate small, precise frequency bands).

Graphic Equalizer effect

The **Filter and EQ** > **Graphic Equalizer** effect boosts or cuts specific frequency bands and provides a visual representation of the resulting EQ curve. Unlike the **Parametric Equalizer**, the **Graphic Equalizer** uses preset frequency bands for quick and easy equalization.

Notch Filter effect

The **Filter and EQ** > **Notch Filter** effect removes up to six user-defined frequency bands. Use this effect to remove very narrow frequency bands, such as a 60 Hz hum, while leaving all surrounding frequencies untouched.

Parametric Equalizer effect

The **Filter and EQ** > **Parametric Equalizer** effect provides maximum control over tonal equalization. Unlike the **Graphic Equalizer**, which provides a fixed number of frequencies and Q bandwidths, the **Parametric Equalizer** gives you total control over frequency, Q, and gain settings. For example, you can simultaneously reduce a small range of frequencies centered around 1000 Hz, boost a broad low-frequency shelf centered around 80 Hz, and insert a 60 Hz notch filter.

Scientific Filter effect

Use the **Scientific Filter** effect (**Effects > Filter and EQ**) for advanced manipulation of audio. You can also access the effect from the **Effects Rack** for single assets in the waveform editor, or for tracks and clips in the **Multitrack editor**.

Modulation Effects

Chorus effect

The Modulation > Chorus effect simulates several voices or instruments played at once by adding multiple short delays with a small amount of feedback. The result is lush, rich sound. You can use Chorus to enhance a vocal track or add stereo spaciousness to mono audio.

Adobe Audition uses a direct-simulation method to achieve a chorus effect, making each voice sound distinct from the original by slightly varying timing, intonation, and vibrato. The Feedback setting lets you add extra detail to the result.

Chorus/Flanger effect

The Modulation > Chorus/Flanger effect combines two popular delay-based effects. The Chorus option simulates several voices or instruments played at once by adding multiple short delays with a small amount of feedback. The result is lush, rich sound. Use this effect to enhance vocal tracks or add stereo spaciousness to mono audio.

Flanger effect

Flanging is an audio effect caused by mixing a varying, short delay in roughly equal proportion to the original signal. It was originally achieved by sending an identical audio signal to two reel-to-reel tape recorders, and then pressing the flange of one reel to slow it down. Combining the two resulting recordings produced a phase-shifted, time-delay effect, characteristic of psychedelic music of the 1960s and 1970s. The Modulation > Flanger effect lets you create a similar result by slightly delaying and phasing a signal at specific or random intervals.

Phaser effect

Similar to flanging, phasing shifts the phase of an audio signal and recombines it with the original, creating psychedelic effects first popularized by musicians of the 1960s. But unlike the Flanger effect, which uses variable delays, the Modulation > Phaser effect sweeps a series of phase-shifting filters to and from an upper frequency. Phasing can dramatically alter the stereo image, creating unearthly sounds.

Noise Reduction and Restoration of Audio Effects

Noise Reduction effect (Waveform Editor only)

The **Noise Reduction/Restoration** > **Noise Reduction** effect dramatically reduces background and broadband noise with a minimal reduction in signal quality. This effect can remove a combination of noise, including tape hiss, microphone background noise, power-line hum, or any noise that is constant throughout a waveform.

Sound Remover effect

The **Sound Remover** effect (**Effects > Noise Reduction/Restoration**) removes unwanted audio sources from a recording. This effect analyzes a selected portion of the recording, and builds a sound model, which is used to find and remove the sound.

Adaptive Noise Reduction effect

The **Noise Reduction/Restoration** > **Adaptive Noise Reduction** effect quickly removes variable broadband noise such as background sounds, rumble, and wind. Because this effect operates in real time, you can combine it with other effects in the **Effects Rack** and apply it in the **Multitrack Editor**. By contrast, the standard **Noise Reduction** effect is available only as an offline process in the **Waveform Editor**. That effect, however, is sometimes more effective at removing constant noise, such as hiss or hum.

Automatic Click Remover effect

To quickly remove crackle and static from vinyl recordings, use the **Noise Reduction/Restoration** > **Automatic Click Remover** effect. You can correct a large area of audio or a single click or pop.

Automatic Phase Correction effect

The **Noise Reduction/Restoration** > **Automatic Phase Correction** effect addresses azimuth errors from misaligned tape heads, stereo smearing from incorrect microphone placement, and many other phase-related problems.

Click/Pop Eliminator effect

Use the **Click/Pop Eliminator** effect (**Effects > Noise Reduction/Restoration**) to remove microphone pops, clicks, light hiss, and crackles. Such noise is common on recordings such as old vinyl records and on-location recordings. The effect dialog box stays open, and you can adjust the selection, and fix multiple clicks without reopening the effect several times.

DeHummer effect

The **Noise Reduction/Restoration** > **DeHummer** effect removes narrow frequency bands and their harmonics. The most common application addresses power line hum from lighting and electronics. But the **DeHummer** can also apply a notch filter that removes an overly resonant frequency from source audio.

DeReverb effect

The **Noise Reduction/Restoration > DeReverb** effect estimates the reverberation profile and helps adjust the reverberation amount. The values range from 0% to 100% and control the amount of processing applied to the audio signal.

DeNoise effect

The **Noise Reduction/Restoration > DeNoise** effect reduces or completely removes noise from your audio file. This could be unwanted hum and hiss, fans, air conditioner or any other background noise. You can control the amount of noise reduced using a slider. The values range from 0% to 100% and control the amount of processing applied to the audio signal.

Hiss Reduction effect (Waveform Editor only)

The **Noise Reduction/Restoration** > **Hiss Reduction** effect reduces hiss from sources such as audio cassettes, vinyl records, or microphone preamps. This effect greatly lowers the amplitude of a frequency range if it falls below an amplitude threshold called the *noise floor*. Audio in frequency

ranges that are louder than the threshold remain untouched. If audio has a consistent level of background hiss, that hiss can be removed completely.

Reverb Effects

In a room, sound bounces off the walls, ceiling, and floor on the way to your ears. All these reflected sounds reach your ears so closely together that you don't perceive them as separate echoes, but as a sonic ambience that creates an impression of space. This reflected sound is called *reverberation,* or *reverb* for short. With Adobe Audition, you can use reverb effects to simulate a variety of room environments.

Convolution Reverb effect

The Reverb > Convolution Reverb effect reproduces rooms ranging from coat closets to concert halls. Convolution-based reverbs use *impulse* files to simulate acoustic spaces. The results are incredibly realistic and life-like.

Full Reverb effect

The Reverb > Full Reverb effect is convolution-based, avoiding ringing, metallic, and other artificial sounding artifacts.

Reverb effect

The Reverb > Reverb effect simulates acoustic spaces with convolution-based processing. It can reproduce acoustic or ambient environments such as a coat closet, a tiled bathroom shower, a concert hall, or a grand amphitheater. The echoes can be spaced so closely together that a signal's reverberated tail decays smoothly over time, creating a warm and natural sound. Alternatively, Pre-Delay Time can be adjusted to give a sense of room size.

Studio Reverb effect

Like the other reverb effects, the Reverb > Studio Reverb effect simulates acoustic spaces. It is faster and less processor-intensive than the other reverb effects, however, because it isn't convolution-based. As a result, you can make real-time changes quickly and effectively in the Multitrack Editor, without pre-rendering effects on a track.

Surround Reverb effect

The Reverb > Surround Reverb effect is primarily intended for 5.1 sources, but it can also provide surround ambience to mono or stereo sources. In the Waveform Editor, you can choose Edit > Convert Sample Type to convert a mono or stereo file to 5.1, and then apply Surround Reverb. In

the Multitrack Editor, you can send mono or stereo tracks to a 5.1 bus or mix with Surround Reverb.

Special Effects

Distortion effect

Use the **Special** > **Distortion** effect to simulate blown car speakers, muffled microphones, or overdriven amplifiers.

Doppler Shifter (process) effect

The **Special** > **Doppler Shifter (process)** effect creates the increase and decrease in pitch we notice when an object approaches and then passes us, such as when a police car passes with its siren on. When the car comes toward you, the sound reaches your ears as a higher frequency because each sound wave is compressed by the car moving forward. The opposite happens as the car passes by; the waves are stretched out, resulting in a lower-pitched sound.

Guitar Suite effect

The **Special** > **Guitar Suite** effect applies a series of processors that optimize and alter the sound of guitar tracks. The **Compresso**r stage reduces dynamic range, producing a tighter sound with greater impact. **Filter**, **Distortion**, and **Box Modeler** stages simulate common effects that guitarists use to create expressive, artistic performances.

Mixing effect

Mixing describes the complete process of optimizing audio files for a particular medium, such as radio, video, CD, or the web. In Adobe Audition, you can quickly mix audio with the **Special** > **Mixing** effect.

Loudness Radar Meter effect

TC Electronic **Loudness Radar** meter plug-in provides you with information about peak, average, and range levels. **Loudness History**, **Momentary Loudness**, **True-peak Level** and flexible descriptors are combined to give you the loudness overview in a single view. The **Radar** sweep view, which provides an excellent view of loudness changes over time, is also available. Choose **Effects** > **Special** > **Loudness Radar** Meter.

Vocal Enhancer effect

The **Special** > **Vocal Enhancer** effect quickly improves the quality of voice-over recordings. The Male and Female modes automatically reduce sibilance and plosives, as well as microphone handling noise such as low rumbles. Those modes also apply microphone modeling and

compression to give vocals a characteristic radio sound. The **Music** mode optimizes soundtracks so they better complement a voice-over.

Stereo Imagery Effects

Some effects let you change the apparent location, or *stereo imagery*, of sounds coming from the speakers.

Center Channel Extractor effect

The Stereo Imagery > Center Channel Extractor effect keeps or removes frequencies that are common to both the left and right channels—in other words, sounds that are panned center. Often voice, bass, and lead instruments are recorded this way. As a result, you can use this effect to bring up the volume of vocals, bass, or kick drum, or you can remove any of them to create a karaoke mix.

Graphic Phase Shifter effect

The **Stereo Imagery** > **Graphic Phase Shifter** effect lets you adjust the phase of a waveform by adding control points to a graph.

Stereo Expander effect

The Stereo Imagery effect positions and expands the stereo image. Because the Stereo Expander is VST-based, however, you can combine it with other effects in the Mastering Rack and Effects Rack. In Multitrack View, you can also vary the effect over time by using automation lanes.

Time and Pitch Effects

Automatic Pitch Correction effect

The **Automatic Pitch correction** effect is available in both the **Waveform** and **Multitrack** editors. In this letter, its parameters can be automated over time using keyframes and external control surface.

Manual Pitch Correction effect

The **Manual Pitch Correction** effect lets you visually adjust pitch with the **Spectral Pitch Display**. The **Spectral Pitch Display** shows the fundamental pitch as a bright blue line, and overtones in yellow to red hues. Corrected pitch appears as a bright green line.

Pitch bender effect

Use the Pitch Bender effect to change the tempo over time to vary the pitch. The effect now uses a keyframe edit envelope laid across the entire waveform, similar to the Fade and Gain Envelope effects.

Pitch shifter

The Pitch Shifter effect changes the musical pitch. It's a real-time effect which can be combined with other effects in the mastering rack or the effects rack. In the Multitrack View, you can also vary pitch over time by using automation lanes.

Stretch and Pitch effect (Waveform Editor only)

The Time And Pitch > Stretch And Pitch effect lets you change the pitch of an audio signal, the tempo, or both. For example, you can use the effect to transpose a song to a higher key without changing the tempo, or you can use it to slow down a spoken passage without changing the pitch.

Third Party Effects (VST and AU)

Third-party plug-ins let you extend the already powerful effects provided with Adobe Audition. The application supports VST3 and VST plug-ins on both platforms and Audio Units plug-ins on macOS.

Applying plug-in effects is identical to applying built-in effects. For information about plug-in features, consult the documentation provided by the plug-in manufacturer.

Enable VST3, VST and Audio Units plug-ins

To access third party effects, the plug-ins must be scanned, click **Scan for Plug-in** button to scan all the system audio plug-in folders. To optimize the menus in the application, use the check boxes next to the effect name to enable and disable them in the application.

Section 4: Audio Restoration

1.14. Techniques for restoring audio

You can fix a wide array of audio problems by combining two powerful features. First, use **Spectral Display** to visually identify and select ranges of noise or individual artifacts. Then, use either **Diagnostic** or **Noise Reduction** effects to fix problems like the following:

1.15. Removing Noise

Phase cancelation from poorly placed stereo microphones or misaligned tape machines.

DeHumming

Background noise like wind rumble, tape hiss, or power-line hum.

Automatic Click Removal

Crackle from wireless microphones or old vinyl records.

Note: The real-time restoration effects above, which are available in both the **Waveform** and **Multitrack** editors, quickly address common audio problems. For unusually noisy audio, however, consider using offline, process effects unique to the **Waveform Editor**, such as **Hiss Reduction** and **Noise Reduction**.

Use the Audio restoration techniques to learn best practices for fixing audio in Audition using the Amplitude Statistics panel, spectral frequency display, adaptive noise reduction, Diagnostics panel, and DeClipper and DeHummer effects.
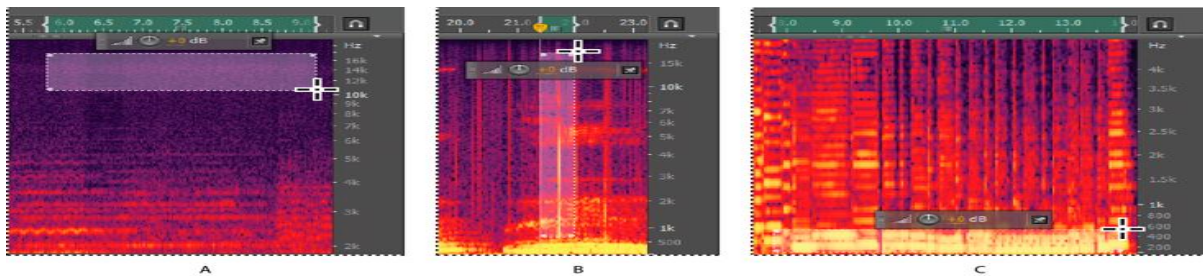
Selecting various types of noise in Spectral Display

A. Hiss **B.** Crackle **C.** Rumble

Section 5: Mastering Sound

1.16. Mastering Sound

This lesson brings a more "component" approach by using special effects, which are exhibited in the order in which you would typically apply these effects (equalization, dynamics, ambience, stereo imaging), and waveform "touchup." Note that sometimes touching up the waveform occurs first if there are known problems that need to be fixed, such as a portion of the track is too quiet and needs to be raised in level with the Amplify effect.

Step 1: Equalization

Usually, the first step of mastering involves adjusting equalization to create a pleasing tonal balance.

1. With Audition open to the Waveform Editor, choose File > Open, navigate to the Lesson06 folder, and open the file KeepTheFunk.wav.

2. In the Effects Rack, click insert 1's right arrow and choose Filter and EQ > Parametric Equalizer.

3. If necessary, choose the Default preset from the Presets drop-down menu, and then select the 30dB Range radio button in the lower-right corner.

4. Click the Transport Play button and listen. The music sounds a little "muddy" in the low frequencies and lacks crispness in the highs. Loop the file by clicking the Transport's loop button so it keeps playing while you make the following adjustments.

5. One way to identify problem areas is to boost a parametric stage's Gain, sweep its frequency, and listen to whether any frequencies jump out as excessive. So, click the Band 2 box, drag it all way up to +15dB, and drag the box left and right. Note that the sound is "tubby" around 150Hz.

6. Drag the Band 2 box down to around -5dB at around 150Hz. Note how this tightens up the low end. The difference is subtle, but often mastering is about the cumulative effect of multiple subtle changes.

7. The kick drum seems like it should be stronger and have more of a deep "thud" for this kind of music; use Band 1 to dial in the drum's frequency and add a narrow boost. Set Band 1's Q to 8, and drag the Band 1 box up to +15dB. Sweep the Frequency back and forth between 20 and 100Hz, and note that the kick really stands out around 45Hz.

8. Bring the Band 1 level back down to around 5-6dB so the kick isn't too prominent.

9. The hi-hat and cymbals seem kind of dull, but increasing the high-frequency response can improve that. Set Band 4's Q to 1.5, set Frequency to 8kHz, and drag the Band 4 box up to around +2dB.

10. Toggle the power state button again for comparison. Note that in the screen shot, unused bands have been turned off for clarity. Keep Audition open for the next lesson.

Step 2: Dynamics

Dynamics processing can make a piece of music "jump out" of the speakers because it acquires more punch and makes low-level sounds louder. This can also help the music overcome

background noises found in many different listening environments. To avoid listener fatigue, you don't want to add too much processing and kill the dynamics, but some processing can produce a nice, lively lift.

This lesson uses the Multiband Compressor to control dynamics. In addition to offering compression in four frequency bands, there's an overall output limiter.

In the Effects Rack, click insert 4's right arrow and choose Amplitude and Compression > Multiband Compressor. (The reason for choosing insert 4 is because you'll want to add some effects later between the EQ and dynamics.)

Choose the Pop Master preset from the Presets menu to give the music much

more apparent loudness.

If you listen for a while, you'll hear that the dynamics have been reduced dramatically—in fact, too much. To restore some dynamics, set each band's

Threshold parameter to -18.0dB.

4 Click in the limiter's Threshold field and drag down to -20dB. The sound becomes overly limited, squashed, and uneven. Now drag up to 0. No limiting is being applied, and the sound lacks "punch." Drag down to a good compromise setting between these two extremes, like -8.0dB.

5 Toggle the Effects Rack's power state to compare the sound with and without the EQ and Multiband Compressor. The processed sound is fuller, tighter, more distinct, and louder. Also note that the Multiband Dynamics has emphasized the EQ changes made previously.

Step 3: Ambience

Although reverb is seldom added during mastering, the music seems a little "dry." So, you'll add some ambience to give the illusion of the music being played in an acoustic space.

1. In the Effects Rack, click insert 2's right arrow and choose Reverb > Studio Reverb.

2. Choose the Room Ambience 1 preset from the Presets menu. You'll need to stop the Transport to choose a preset. After choosing the preset, click the Transport Play button.

3. Set the Dry slider to 0 and the Wet slider to 40% so it's easy to hear the results of any edits.

4. Set Decay to 500ms, Early Reflections to 20%, Width to 100, High Frequency Cut to 6000Hz, Low Frequency Cut to 100Hz, and both Damping and Diffusion }} to 100%.

5. Adjust the blend of Dry and Wet signals. Set Dry to 90% and Wet to 50%.

6. Toggle the Reverb's power state; you won't hear much difference unless you listen very carefully, because this adds just a tiny bit of "spice." The added ambience is most noticeable when the drums hit by themselves.
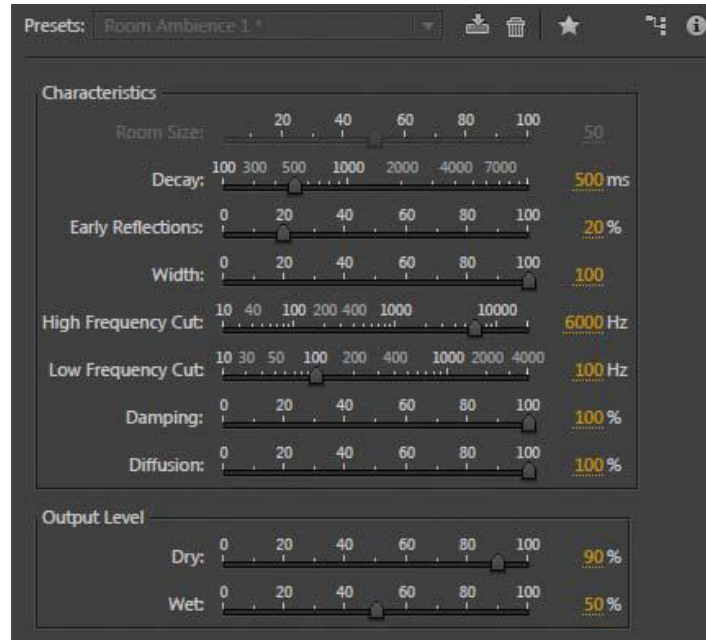
Step 4: Stereo Imaging

As with reverb, stereo imaging isn't added often, but it's appropriate for this particular lesson. Stereo imaging stretches the stereo image so the left channel moves more to the left, and the right channel moves more to the right. In this lesson, increasing the stereo image helps separate the two guitars in the opposite channels even more.

1. In the Effects Rack, click insert 3's right arrow and choose Special > Mastering. Only the Widener will be used.

2. If necessary, choose the Default preset from the Presets menu.

3. Set the Widener slider to 85%.

4. Toggle the Effects Rack's power state to compare the sound with and without the various mastering processors—the results speak for themselves. Also, try turning the power state on and off for the individual processors to hear each processor's overall contribution to the sound.
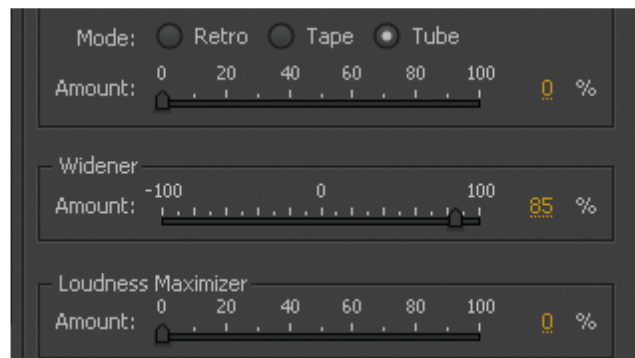
Step 5: "push" the drum hits; then apply the changes four drum hits happen between 23.25 and 24 seconds. You'll boost them just a bit to give them more emphasis.

1. Click the Transport Stop button. Select the four hits (zoom in if necessary) and add +3.9dB of gain with the HUD (heads-up display).

2. Play the file to hear the result of boosting these four drum hits.

3. You'll apply all these effects to make them a permanent part of the file, which will also redraw the waveform to show the changes caused by mastering. In the Effects Rack, choose Entire File from the Process drop-down menu.

4. Click Apply. Audition applies the result of all the effects to the file and removes the effects from the Effects Rack.

4.1. Mastering Diagnostics

Diagnostic and calculation tools can tell you a lot about the features of an audio file. Audition diagnostic tools are highly advanced and are intended for professional distribution and similar use, but some are applicable even to basic projects.

"Mixing," includes the importance of having your own monitor speakers in the section — in other words, when the same signal is used on both speakers, both speaker keys go in or out. When one console moves in one direction and the other in another direction when fed the same signal, the speakers are not in the category. However, situations outside the category are also possible within audio files. Testing can detect and correct this condition.

- With Audition still open to the Waveform Editor from the previous lesson, choose Window > Workspace > Reset "Mastering and Analysis."

- Choose File > Open, navigate to the Lesson06 folder, and open the file EthnoWorld5_phase.wav. (This file was created using the Best Service Ethno-World 5 sound library.)

- Click the Phase Analysis panel, and then start playback. Observe the Phase Analysis panel as well as the Phase Meter to the right of the Levels meter. You may need to resize some of the panels to see the waveform, Phase Meter, and Phase Analysis panel simultaneously.

- If the Phase Meter "needle" goes to the left of 0 or the Phase Analysis "ball" drops below the centerline and turns red, that means that one of the channels is out of phase with respect to the other. This is not desirable, because it produces a thin sound due to cancellations occurring between the two channels.

- To fix this, click on the waveform and press Ctrl + A (Command + A).

- Press the down arrow key to select only the right channel. Then choose Effects > Invert to invert the right channel's phase.

- Press the up arrow so that both channels are selected, and start playback. Note that the Phase Meter needle now moves to the right of 0, the Phase Analysis ball is now green and above the centerline, and the sound is much fuller.

- To compare the in-phase and out of phase sounds, choose Edit > Undo Invert. The sound is thinner, and the phase meters indicate the out of phase condition. Now choose Edit > Redo Invert; the channels are no longer out of phase, and the sound is fuller.
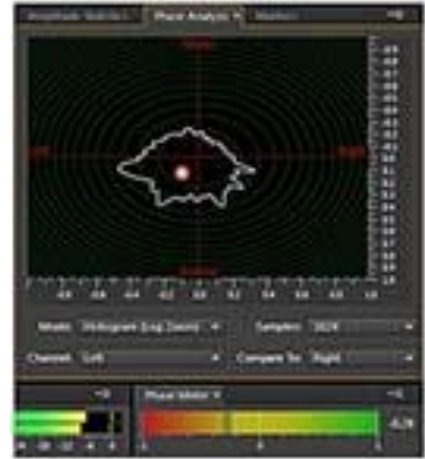
Section 6: Sound Design

4.2. About Sound Design

Sound design is the process of capturing, recording, and/or manipulating the audio elements used in movies, television, video games, museum installations, theater, postproduction, and other art forms that require sound. Sound design can refer to music, but this lesson emphasizes sound effects and ambience. These types of sounds are also common in sonic logos (like the sound you hear to identify Intel Inside or NBC) or the sounds layered in movie scenes to create a particular mood. Sound effects libraries are available from several companies, but a sound designer will often modify these or record sounds using a field recorder.

You need to record two files as mentioned below for the following lessons using a portable digital recorder: water running into a sink from a faucet and a wall fan. You'll learn how to turn these sounds into a variety of sound effects and ambience.

Creating rain sounds

With sound design, it helps to start with a sound in the same genre. To create rain, the running water would most likely produce a better end result than the recording of the fan.

1. Choose File > Open, navigate to the Lesson07 folder, and open the file

RunningWater.wav.

2. Click the Transport Loop button so the water sound plays back continuously. Click the Transport Play button to audition the loop.

3. You'll first change this sound to a light, spring rain. Click the Effects Rack tab, and drag the panel's lower splitter bar downward to extend the panel to its full height because you'll be using several effects.

4. Click Effects Rack insert 1's right arrow button and choose Filter and EQ > Graphic Equalizer (10 Bands). Ensure that Range is 48dB and Master Gain is 0.

5. Pull the sliders for all bands other than 4k and 8k all the way down to -24dB.

6. Bring the 4k sand 8k sliders down to -10dB.

7. Toggle the effect's power state on and off a few times to compare how the EQ has changed the overall sound. With the EQ power on, you now have a light spring rain. You might find the effect more realistic if you bring the 8k slider down to -15dB.
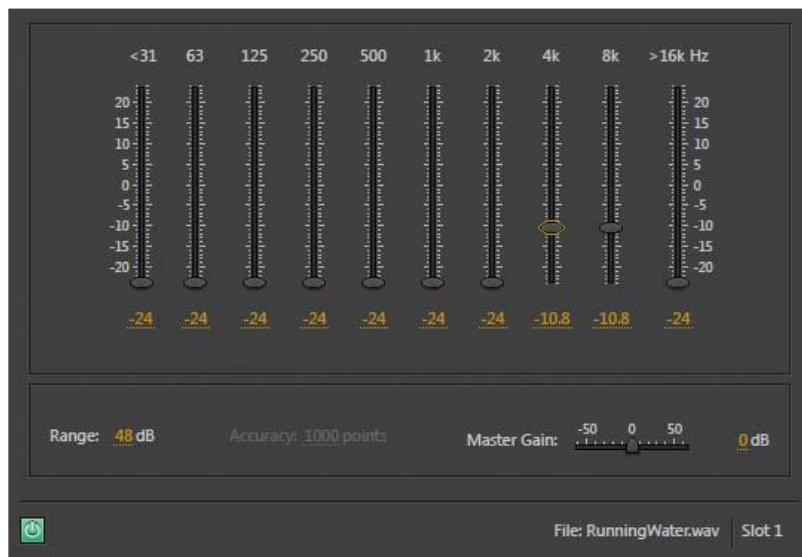
8. Suppose you wanted to do sound design for a scene where the character is inside a house, and it is raining outside. In this case there would be fewer high frequencies due to the house walls and windows blocking the highs. Pull the 8k slider down all the way, and the rain sounds more like it's outside.

9. To surround the character with rain if the character, say, opens the door, leaves the house, and is in the middle of the rain, click insert 2's right arrow button and choose Delay and Echo > Delay.

10. The Default patch spreads out the sound, but it's too separated: Rain wouldn't fall only to the character's right and left, but all around. Change both Mix controls to 50% so there's a convincing panorama of rain.

11. it's important that the delay not create any kind of rhythm. Set the Left Channel Delay Time to around 420ms and the Right Channel Delay Time to 500ms. These delays are long enough that you won't perceive a rhythm.

12. If the character then goes outside again, return to the Graphic Equalizer window by double-clicking its insert in the Effects Rack, and increase the 8 kHz slider to around 14 kHz. Keep this project open as you move to the next lesson.

Creating a babbling brook

Changing the scene from rain to a babbling brook in the distance simply involves removing the delay and changing the EQ setting.

1. Click the Delay insert's arrow, and choose Remove Effect. A babbling brook has a more distinct sound than sheets of rain, so you don't need the additional "rain drops" created by the Delay.

2. Click on the Graphic Equalizer's window to select it. Set Range to 120dB and Master Gain to 0dB.

3. Set the Graphic Equalizer sliders as follows: <31, 63, 8k, and >16k all to -60dB. Set 125 and 250 to 0, 500 to -10, 1k to -20, 2k to -30, and 4k to -40.

4. The babbling brook is now in the distance. As the character moves closer to the brook, increase 2k to -20 and 4k to -30. Now the brook sounds closer. Keep this project open as you move on to the next lesson.

Creating insects at night

It's even possible to use the running water to create a nighttime insect/crickets sound. This lesson demonstrates how signal processing can turn one sound into something completely different.

1. Double-click in the Waveform Editor to select the entire waveform.

2. From the Effects menu near the top of the window, choose Time and Pitch > Stretch and Pitch (process).

3. In the Stretch and Pitch window, select the Default preset if it is not already selected.

4. Move the Pitch Shift slider all the way to the left (-36 semitones), and then click OK. It will take several seconds for processing to occur.

5. Click on the Graphic Equalizer window to select it. With Range still at 120dB, move all sliders to -60dB except set 4k to 10dB. Click the Transport Play button to hear the processed sound.

6. You can smooth out the sound and make it sound a little more distant by adding reverb. In the Effects Rack's insert 3, click the right arrow button and choose Reverb > Studio Reverb. Stop playback by clicking the Transport Stop button so you can select a reverb preset.

7. Click the Presets drop-down menu and choose Great Hall.

8. Click the Transport Play button and listen to your refined insects at night sound. Creating an alien choir for the last effect using the running water sound, you'll create a totally abstract sound that's ethereal and quite evocative.

   - If the entire waveform isn't already selected, double-click in the Waveform Editor.

   - Choose Effects > Time and Pitch > Stretch and Pitch (process). The settings should be the same as they were previously, but if not, choose the preset Default from the drop-down menu.

   - If needed, move the Pitch Shift slider all the way to the left (-36 semitones), and then click OK. It will take several seconds for processing to occur.

   - Make an audio selection that excludes the first and last two seconds, and then choose Edit > Crop.

   - The level will be very low, so let's bring it up. With the waveform still selected, choose Effects >Amplitude and Compression > Normalize (process).

   - Select Normalize To and enter 50%. Normalize All Channels Equally should also be selected. Click OK.

   - Bypass the Graphic Equalizer. The Reverb should still have the Great Hall preset selected. Move the Decay, Width, Diffusion, and Wet sliders all the way to the right. Move the Dry

slider all the way to the left. When you click the Transport Play button, you should now hear an ethereal, animated pad.

- Now add some animation for the final touch. In an Effects Rack's insert after the Studio Reverb, click the insert's right arrow and choose Delay and Echo > Echo. Select the preset Spooky.

- In an Effects Rack's insert after the Echo, click the insert's right arrow and choose Modulation > Chorus. Select the preset 10 Voices. You may need to turn down the Effects Rack's Output control to avoid clipping. Note how extensive pitch stretching coupled with effects from the Studio Reverb, Echo, and Chorus can turn running water into an alien soundscape.
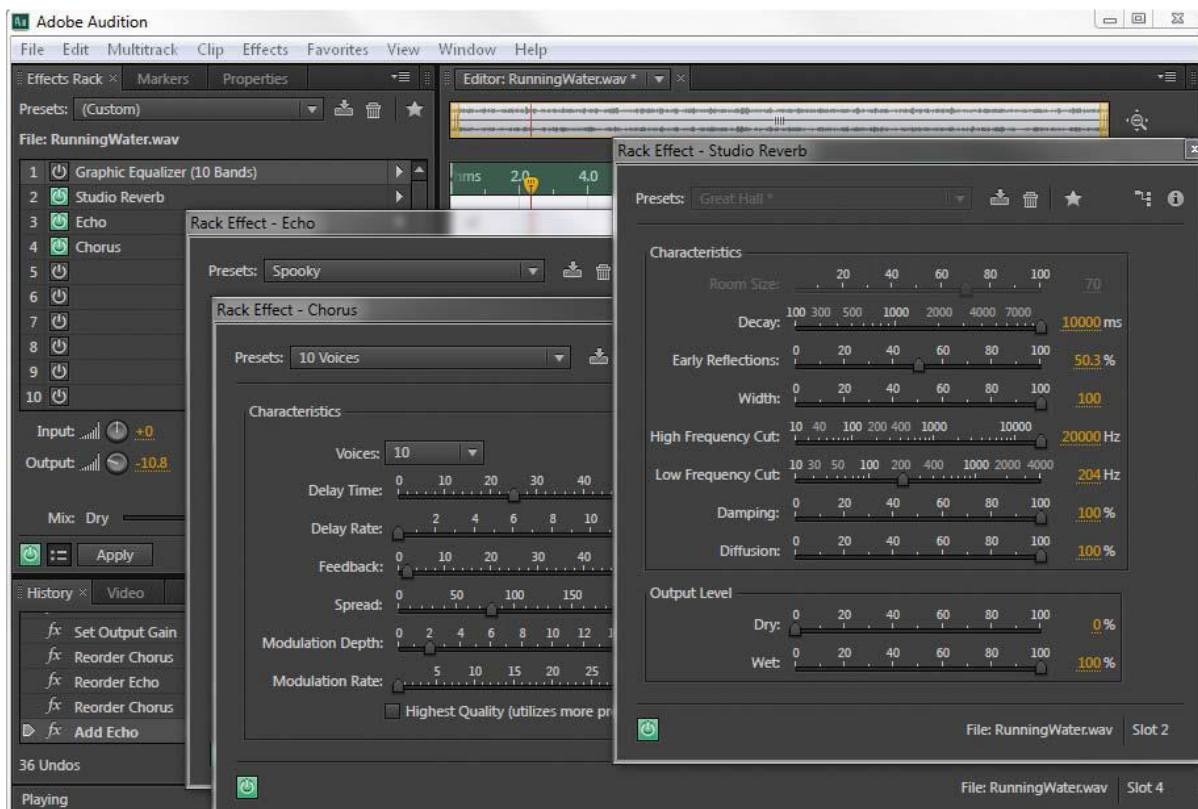
Creating sci-fi machine effects

Just as you used running water to generate water-based effects, the fan sound makes a good basis for machine and mechanical sounds. This lesson describes how to turn an ordinary wall fan sound into a variety of science-fiction, spaceship sound effects.

1. If Audition is open, close it without saving to start fresh. Open the program, choose File > Open, navigate to the Lesson07 folder, and open the file Fan.wav. Click the Transport Play button to hear what the file sounds like.

2. Double-click inside the Waveform Editor to select the entire waveform.

3. Choose Effects > Time and Pitch > Stretch and Pitch (process).

4. Select the preset Default if it is not already selected.

5. Set the Pitch Shift slider to -24 semitones. Lowering the pitch makes the engine sound "bigger," but lowering beyond -24 semitones makes the sound indistinct. Click OK; processing will take a few seconds.

6. As in the previous lessons, for the smoothest sound, make an audio selection that excludes the first and last two seconds, and then choose Edit > Crop.

7. Click the Effects Rack insert 1's right arrow button and choose Special > Guitar Suite. From the Presets drop-down menu, choose Drum Suite. Click the Transport Play button, and note how the sound becomes more metallic and machine-like.

8. Click the Effects Rack insert 2's right arrow button and choose Filter and EQ > Parametric Equalizer. If the preset Default is not already selected, choose it from the Presets drop-down menu.

9. Deselect bands 1–5 to leave only the L (low) and H (high) bands active.

10. Click the L and H Q/Width button to select the steepest (the button's center line is most vertical) slope.

11. If the file isn't already playing, click the Transport Play button. Pull the H box all the way down and left to around 3kHz.

12. Pull the L box up to 20 and right to about 300Hz.

13. Add some character to the engine with a resonant peak that increases the level in a narrow band of frequencies. Click the Band 2 button to enable that parametric stage. Edit Frequency to 500Hz, Gain to 10dB, and Q/Width to around 20. The Guitar Suite and Parametric EQ effects provide the main engine sound.
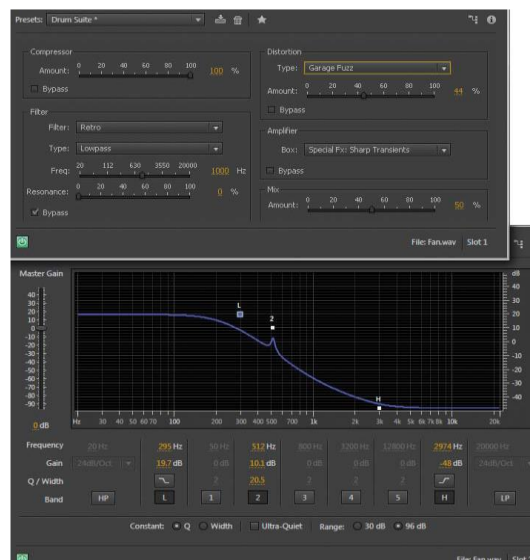
14. Now let's travel to a different section of the virtual spaceship, away from the main hum of the machine room but where you can still hear the engine rumble. Click the Effects Rack insert 3's right arrow button and choose Reverb > Studio Reverb.

15. Click the Transport Stop button to change the Studio Reverb preset, and then choose Great Hall from the Presets drop-down menu.

16. You'll now add lots of reverb but only to the low frequencies to emphasize the rumble. Set the Decay, Width, Diffusion, and Wet sliders all the way to the right. Set the High Frequency Cut slider to 200Hz, the Low Frequency Cut slider full left, and the Dry slider full left. Click the Transport Play button.
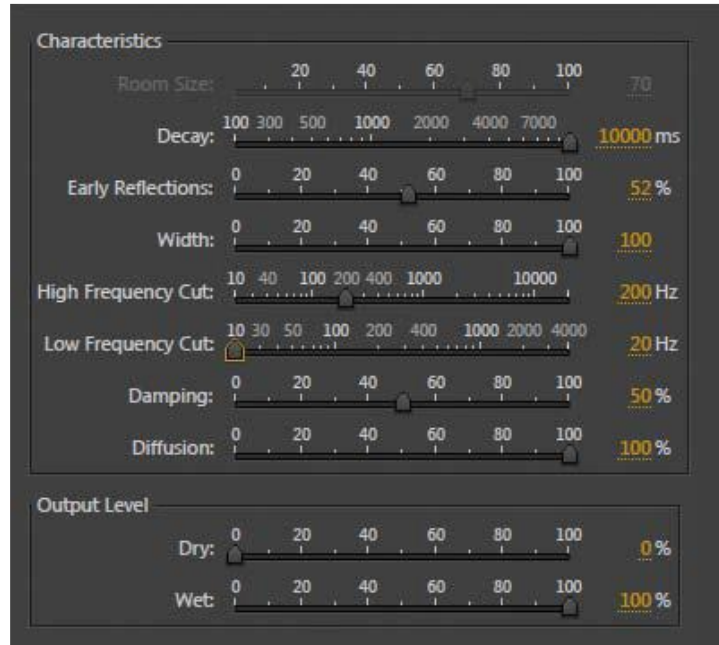
17. Bypass the Studio Reverb to return to the engine room sound, or enable it to move farther away to a different part of the spaceship. Leave this project open in preparation for the next lesson.

Creating an alien drone flyby

In addition to creating static sound effects, Audition includes a Doppler Shifter processor that imparts motion—from left to right, around in circles, tracing an arc, and so on. In this lesson you'll take advantage of the Doppler Shifter processor to "animate" the sound of an alien drone.

1. If the waveform isn't already selected, double-click within the Waveform Editor to select the entire waveform.

2. Choose Effects > Time and Pitch > Stretch and Pitch (process).

3. Choose the preset Default from the Presets menu. Set the Stretch slider to 200%. Click OK; processing will take a few seconds.

4. Either bypass the Parametric Equalizer effect, or click its insert's arrow and choose Remove Effect.

5. Either bypass the Studio Reverb effect, or click its insert's arrow and choose Remove Effect.

6. If the Guitar Suite window isn't open already, double-click its insert in the Effects Rack. Choose the preset Lowest Fidelity from the Presets drop-down menu.

7. With the entire waveform still selected, choose Effects > Special > Doppler Shifter (process).

8. Choose the preset Whizzing by From Left to Right from the Doppler Shifter's Presets drop-down menu, and then click OK. Click the Transport Play button to hear the drone fly by from left to right.

9. Because the sound is most effective if it fades up from nothing and fades out to nothing, in the Waveform Editor click the Fade In button in the upper-left corner, and drag it to the right about two seconds.

10. Similarly, click the Fade Out button in the Waveform Editor's upper right, and drag it left to about eight seconds.

11. To enhance the Doppler Shifter effect, click an Effects Rack insert's right arrow and choose Modulation > Flanger.

12. In the Flanger window, choose the preset Heavy Flange from the Presets dropdown menu.

13. Click on the Modulation Rate parameter, type 0.1, and then press Enter. Using the slider would make it almost impossible to choose this precise a value.

14. Click the Transport Play button, and the alien drone will sound even more realistic as it flies by from left to right.
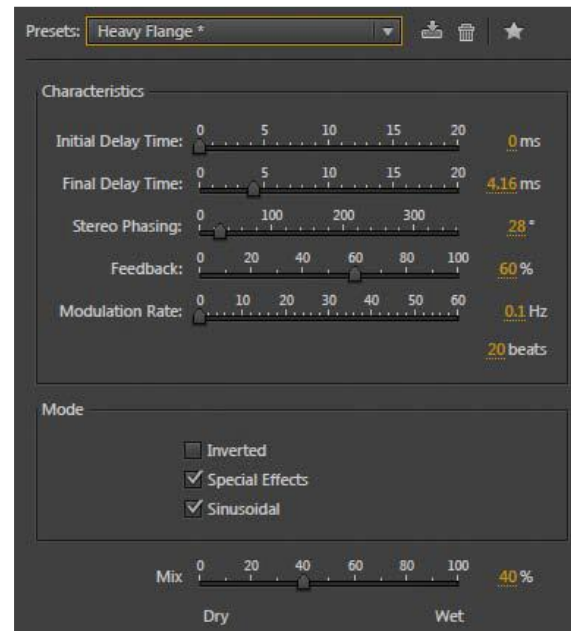
4.3. Extracting Frequency Bands

Frequency Band Splitter allows you to take a selected audio clip (or part of it highlighted) and make up to eight copies, each copying the frequency of the original version. Specific crossover frequencies, determine different points. Each copy of the waveform is placed on its track in the session window. You can then edit or apply effects to each band separately.

For example, using the automatic set of three bands with crossover values of 800 and 3200 creates three copies of the selected waveform: one with selected frequencies from 0 Hz to 800 Hz, one

from 800 Hz to 3200 Hz, and one. from 3200 Hz to 22050 Hz (any large frequency available, based on sample rate).

STEPS

- Open an audio clip. To process a selection, using a selection tool, select a range you want to process.
- Choose Edit > Frequency Band Splitter.
- Set the desired options and click OK.
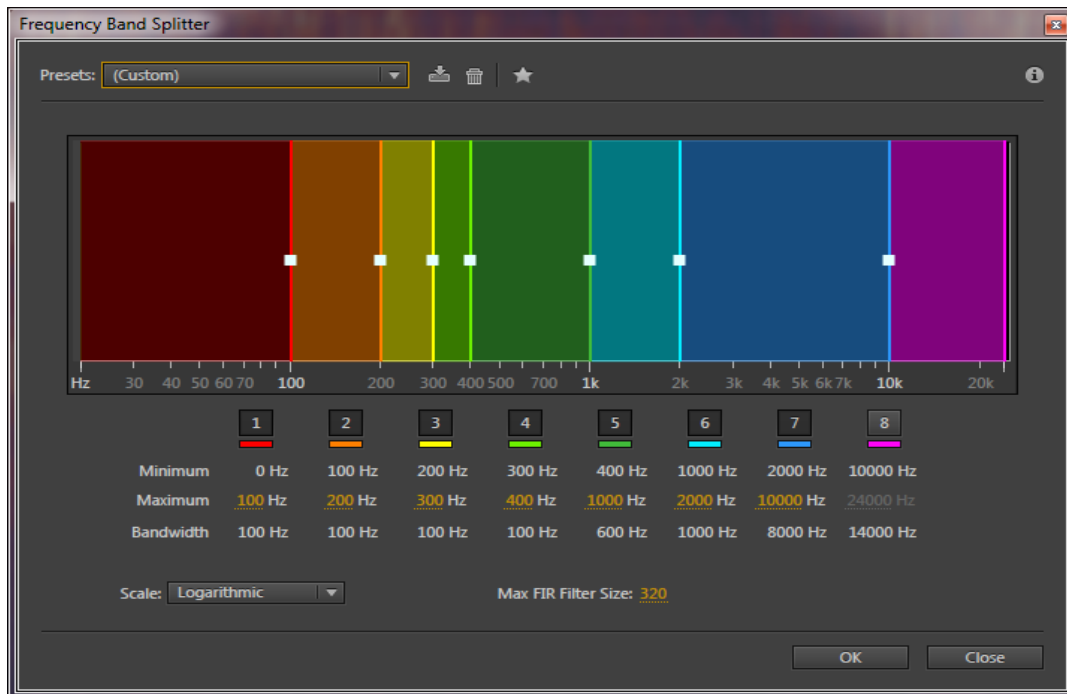
Frequency Splitter options

Bands: Sets the number of different points. The original waveform is copied to the number of times you specify, each copy has a different frequency range, as determined by the number of crossovers.

Plurality: Specifies the maximum frequency of each band. Minimum Display and Bandwidth values are calculated based on the maximum frequency values of current and nearby bands.

Scale: Specifies the scale shown to show the bands by image. You can choose Linear or Logarithmic.

Size FIR Filter Size: Sets the FIR (Finite Impulse Response) filter size limit, which keeps phase errors over the turn curve. FIR filters are not the same as IIR filters, which may have a phase error (usually sounding like ring quality). Higher values create higher accuracy in filtering frequency.

The default value, 320, works most of the time, but you should increase it if distortions or vibrations occur in filtered waves.

Section 7: Multitrack Editor

4.4. Recording using Waveform Editor

You can record audio from a microphone or any device you can plug into the Line In port of a sound card. Before recording, you must adjust the input signal to optimize signal-to-noise levels.

3. Set audio inputs.

4. Do one of the following:

   o Create a file.

   o Open an existing file to overwrite or add new audio and place the current-time indicator 🏆 where you want to start recording.

2. At the bottom of the Editor panel, click the Record button 🔴 to start and stop recording.

Correct DC offset

Some sound cards record with a slight *DC offset*, in which direct current is introduced into the signal, causing the center of the waveform to be offset from the zero point (the center line in the waveform display). DC offset can cause a click or pop at the beginning and end of a file.

3. In the Waveform Editor, choose Favorites > Repair DC Offset.

4.5. Multitrack Production

In the Multitrack Editor, Adobe Audition automatically saves each recorded clip directly to a WAV file. Direct-to-file recording lets you quickly record and save multiple clips, providing tremendous flexibility.

Inside the session folder, you find each recorded clip in the [*session name*] _Recorded folder. Clip filenames begin with the track name, followed by the take number (for example, Track 1_003.wav).

After recording, you can edit takes to produce a polished final mix. For example, if you create multiple takes of a guitar solo, you can combine the best sections of each solo. Or, you can use one version of the solo for a video soundtrack, and another version for an audio CD.

Record audio clips in the Multitrack Editor

In the Multitrack Editor, you can record audio on multiple tracks by *overdubbing*. When you overdub tracks, you listen to previously recorded tracks and play along with them to create

sophisticated, layered compositions. Each recording becomes a new audio clip on a track. In the Inputs/Outputs area of the Editor panel, choose a source from a track's Input menu.

Note: To change the available inputs, choose Audio Hardware, and then click Settings. Click the Arm for Record button ⬛ for the track.

The track meters display the input, helping you optimize levels. (To disable this default and display levels only while recording, deselect Enable Input Metering When Arming Tracks in the Multitrack preferences.)

To hear hardware inputs routed through any track effects and sends, click the Monitor Input button ⬛.

Note: Routing inputs through effects and sends requires significant processing. To reduce latency (an audible delay) that disrupts timing for performers, to simultaneously record on multiple tracks, repeat steps 1-3.

In the Editor panel, position the current-time indicator 🔰 at the desired starting point, or select a range for the new clip.

At the bottom of the panel, click the Record button ⬛ to start and stop recording.

4.6. **Multitrack and Waveform Integration**

Adobe Audition provides different views for editing audio files and creating multitrack mixes. To edit individual files, use the Waveform Editor. To mix multiple files and integrate them with video, use the Multitrack Editor.

The Waveform and Multitrack editors use different editing methods, and each has unique advantages. The Waveform Editor uses a *destructive* method, which changes audio data, permanently altering saved files. Such permanent changes are preferable when converting sample rate and bit depth, mastering, or batch processing. The Multitrack Editor uses a *nondestructive* method, which is impermanent and instantaneous, requiring more processing power, but increasing flexibility. This flexibility is preferable when gradually building and reevaluating a multilayered musical composition or video soundtrack.

You can combine destructive and nondestructive editing to suit the needs of a project. If a multitrack clip requires destructive editing, for example, simply double-click it to enter the Waveform Editor. Likewise, if an edited waveform contains recent changes that you dislike, use

the Undo command to revert to previous states—destructive edits aren't applied until you save a file.

Basic components of the editors

Though available options differ in the Waveform and Multitrack editors, both views share basic components, such as the tool and status bars, and the Editor panel.
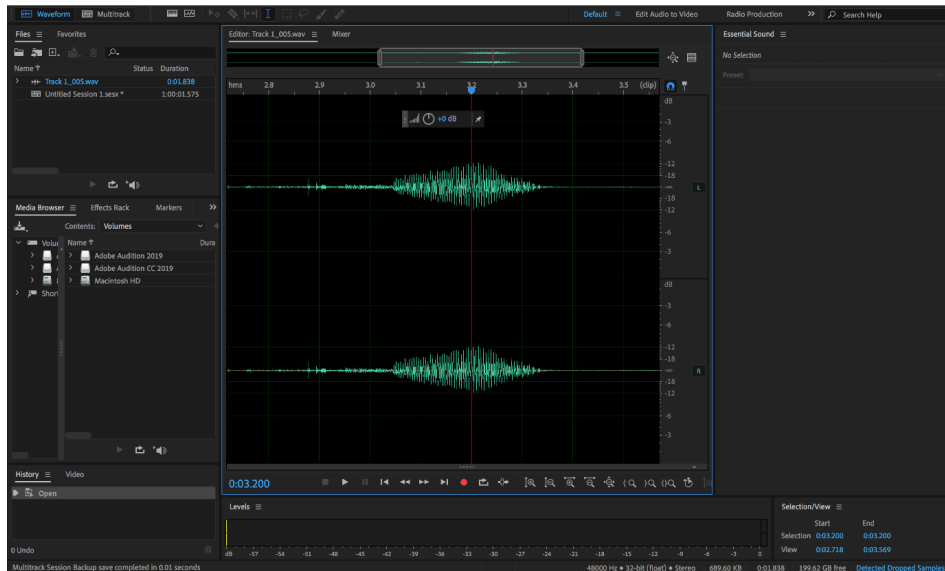
Basic Waveform view

Switch editors

1. Do one of the following:
   o From the View menu, choose Waveform or Multitrack Editor.
   o In the toolbar, click the Waveform [icon] or Multitrack Editor [icon] button.
   o In the Multitrack Editor, double-click an audio clip to open it in the Waveform Editor. Alternatively, double-click a file in the Files panel.
   o In the Waveform Editor, choose Edit > Edit Original to open the multitrack session that created a mixdown file. (This command requires embedded metadata in the file.)

4.7. Changing Track Colors

1. To easily distinguish between multiple tracks in a project, Audition randomly designates track colors.
2. When you add new tracks in Audition, each track is assigned a different color. Audition generates a different color for each new track by assigning a random hue value between 0-360.

3. The first track has the standard Audition green color (Hue value of 153), and all other tracks have different colors.

- Standard Green color for the first track **B.** Random colors for all other tracks

- This feature is turned on by default. You can turn it off using the **Preferences** dialog. Deselect **Randomize Track color** under the **Appearance** category.

- To change the color randomly assigned to a clip, right-click (Win) or Ctrl-click (Mac) the track header, and select **Track Color**. Click the color that you want from the color picker.
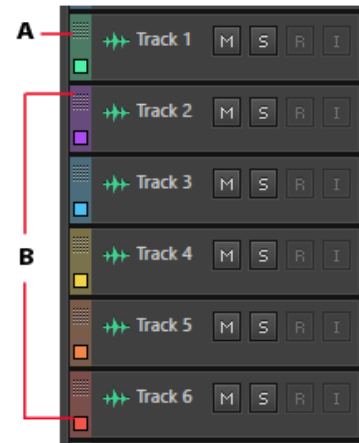
4.8. Loop Selections for Playback

Play audio linearly or in a loop

Note: To quickly start and stop playback, press the spacebar.

1. In the Editor panel, position the current-time indicator, or select a range.

2. (Optional) At the bottom of the panel, right-click the Play button , and select one of the following:

   Return CTI to Start Position on Stop

   Reflects the behavior of Audition 3.0 and earlier. (Press Shift+X to toggle this option on and off.)

   Play Spectral Selection Only

   Plays only frequencies you've selected with the Marquee , Lasso , or Paintbrush Selection tool.

3. (Optional) Click the Loop Playback button if you want to fine-tune a selected range or experiment with different effects processing.

4. To start playback, click the Play button.

Note: By default, the Editor panel scrolls when playback extends beyond the visible section of a waveform. In the Playback area of the Preferences dialog box, you can disable auto-scrolling.

4.9. Track Controls

Understanding video, audio, bus, and mix tracks

Multitrack sessions can include four different types of tracks:

- Video tracks ▦ contain an imported video clip. A session can include one video track and clip at a time. You can watch a preview in the Video panel (Window > Video).

- Audio tracks ⁞⁞⁞ contain either imported audio or clips recorded in the current session. These tracks offer the widest range of controls. You can specify inputs and outputs, apply effects and equalization, route audio to sends and buses, and automate mixes.

- Bus tracks ⇥ let you combine the outputs of several audio tracks or sends and control them collectively.

- The Mix track ⇥ , which is the last in each session, lets you easily combine the outputs of multiple tracks and buses. You can also control them with a single fader.

Choose between mono, stereo, and 5.1 tracks

Multitrack sessions support an unlimited number of mono, stereo, and 5.1 audio and bus tracks. When adding tracks, choose a channel configuration based on the configuration of the Mix track:

1. For mono mix, add mono audio and bus tracks.

2. For stereo mix, add stereo audio and bus tracks. Except for audio tracks with mono sources (like a single microphone).

3. For 5.1 mix, add stereo audio tracks and 5.1 bus tracks (to maintain proper gain staging). If you have any 5.1 audio clips, however, add 5.1 audio tracks to contain them.
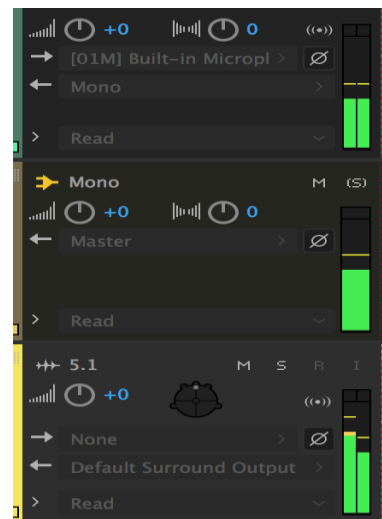
To identify track channels, note the meters in the Editor or Mixer panel:

A. Mono **B.** Stereo **C.** 5.1

Add or delete tracks

Note: A multitrack session supports only one video track, which Adobe Audition always inserts at the top of the Editor panel.

Add track

- To add a track, select the track you want to precede it, and then choose **Multitrack > Track > Add [type of] Track**.

 Add multiple tracks

1. To add multiple tracks, choose **Multitrack > Add Tracks**. You can enter the number of tracks you want to add and the channel layout. Audition also lets you add Bus tracks. You can also choose the channel layout for Bus tracks.

Delete track

2. To delete a track, select the track and choose **Multitrack > Track > Delete Selected Track.**

Delete empty tracks

To delete all empty tracks at once, select **Multitrack > Delete empty tracks**.

Name or move tracks

You can name tracks to better identify them, or move them to display related tracks together.

1. In the Editor panel or Mixer, type in the name text box.

• Position the pointer to the left of the track name, and then drag either up or down in the **Editor** panel. You can also drag them right or left in the **Mixer**.
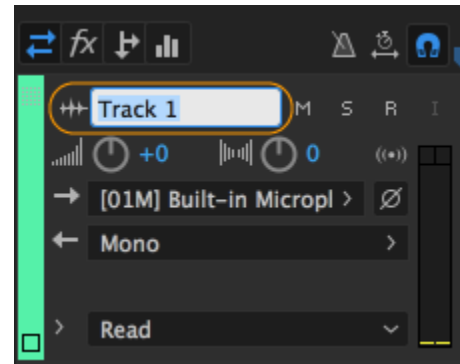
Name text box in the Editor panel
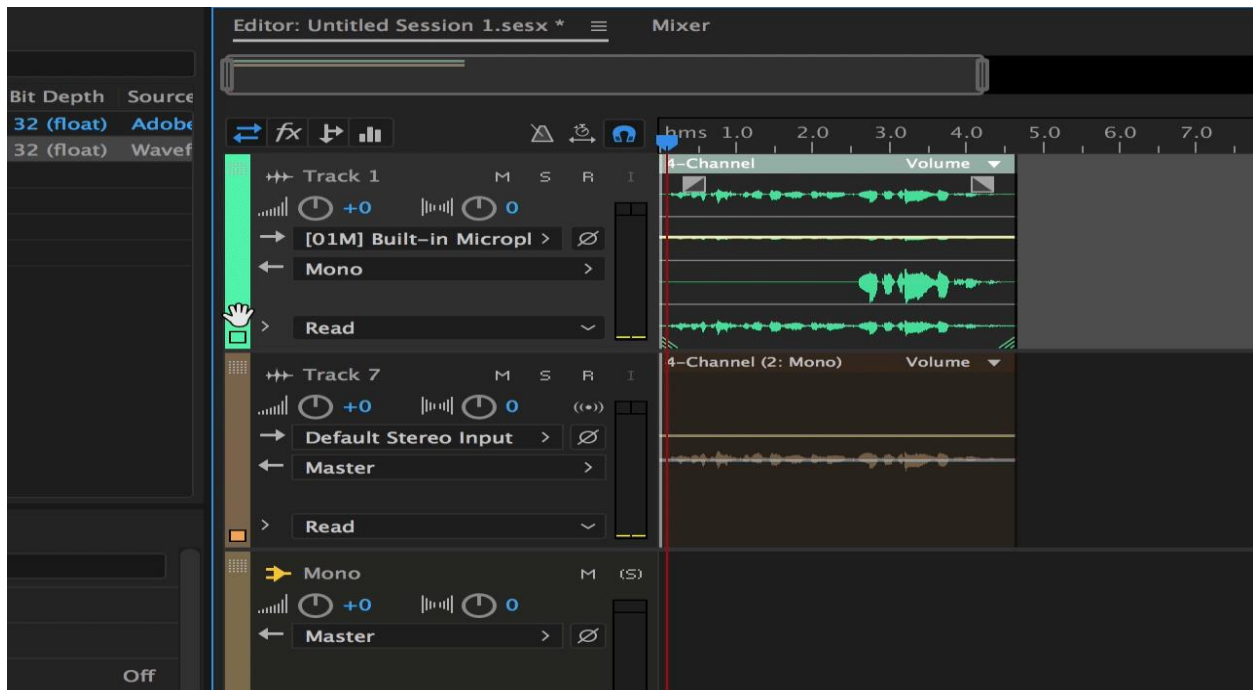
Moving a track in the Editor panel

Show or hide tracks

While working on the multitrack editor, you can use the **Tracks** panel to customize tracks. You can use the panel to choose the tracks you want to see or hide while working on a project. To open the **Tracks** panel, follow this step:

1. Select **Windows > Tracks**.
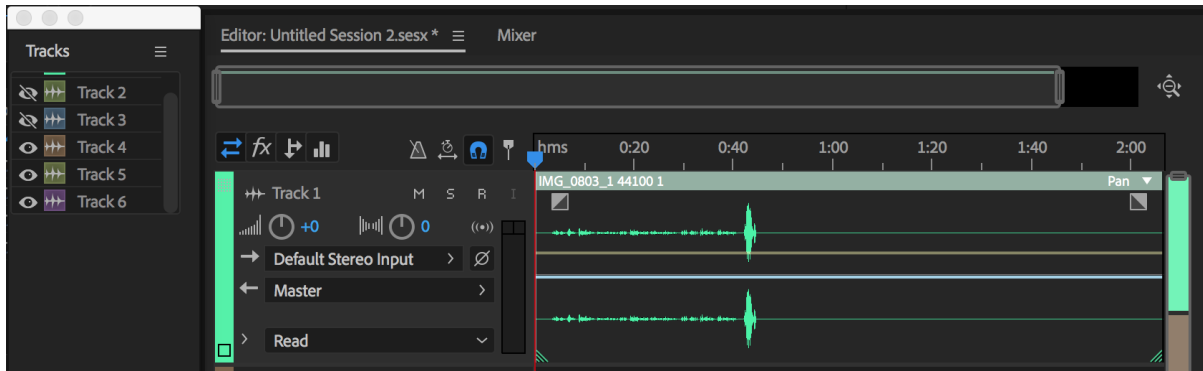
Tracks panel

Use **Track Visibility** to see the available presets for tracks. To open **Track Visibility** options, do one of the following:

1. To open **Track Visibility** from Tracks panel, select the **Tracks** pop-up window> **Track Visibility.**

2. To open **Track Visibility** from Editor panel, select the **Editor** pop-up window > **Track Visibility.**

3. To open Track Visibility from the main menu, select **Multitrack > Track Visibility**.
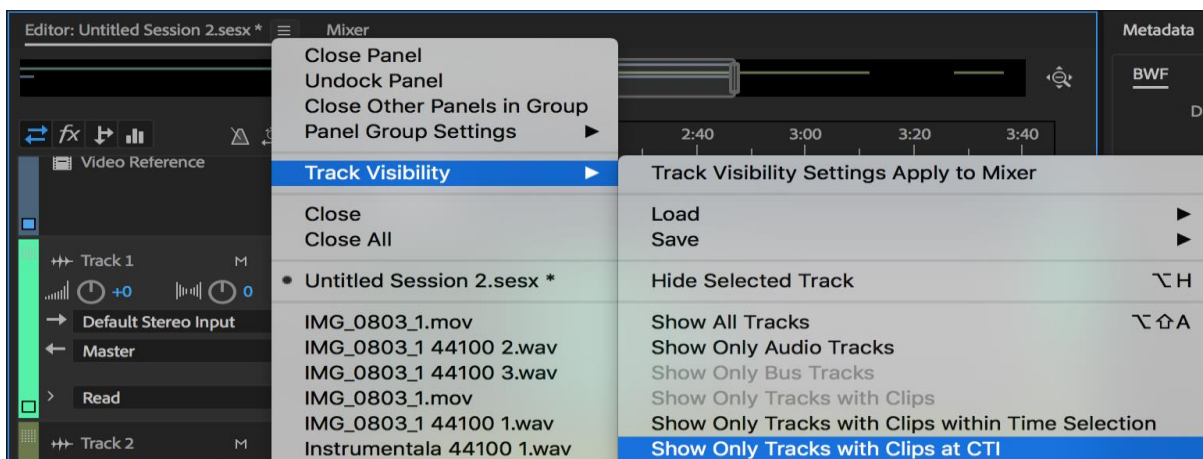
Track visibility options

To save custom presets, select **Track Visibility > Save > Preset**. You can save up to nine presets.

To hide tracks, use the eye icon. indicates that the track is visible, and indicates that the track is hidden.

Vertically zoom tracks

When you use the vertical Zoom options in the lower right of the Editor panel, all tracks zoom simultaneously. If a session contains many tracks, it is advised to zoom them individually.

1. In the track controls, drag the top or bottom border of the track up or down.

Note: To quickly zoom all tracks, roll the mouse wheel over the track controls. To horizontally resize all track controls, drag the right border.

Mute and solo tracks

You can mute solo tracks to hear them separately from the rest of a mix. Conversely, you can mute tracks to silence them in a mix.

1. To mute a track, click its Mute button in the Editor panel or Mixer.

2. To solo a track, click its Solo button in the Editor panel or Mixer. To automatically remove other tracks from Solo mode, Ctrl-click (Windows) or Command-click (Mac OS).

   Tip: *To remove other tracks from Solo mode by default, select Track Solo: Exclusive in the Multitrack section of the Preferences dialog box. (Regardless of this setting, when you solo a bus, assigned tracks are always placed in Solo mode.)*

Apply an identical setting to all tracks

To increase your efficiency, you can quickly apply several settings to an entire session.

1. Hold down Ctrl + Shift (Windows) or Command + Shift (Mac OS). Then select an Input, Output, Mute, Solo, Arm for Record, or Monitor Input setting for any track.

Set track output volume

1. Do any of the following:

   1. In the **Editor** panel, drag the Volume knob . To change settings in large increments, hold down Shift. To change settings in small increments, hold down Ctrl (Windows) or Command (Mac OS)

   2. In the **Mixer,** drag the track fader, or click above or below to move incrementally to the next tick mark. To move to a specific point, Alt-click (Windows) or Option-click (Mac OS) above or below the fader.

Note: To return knobs and faders to zero (unity gain), Alt-click (Windows) or Option-click (Mac OS) directly on them.

Pan tracks in stereo

1. Drag the Pan knob [image] in the Editor panel or Mixer.

To change settings in large increments, hold down Shift. To change settings in small increments, hold down Ctrl (Windows) or Command (MacOS)

Tip: By default, the Multitrack Editor pans using an equal power method, which maintains consistent perceived loudness by slightly boosting one channel over the other. To change the boost amount, or switch to logarithmic panning (which simply attenuates one channel), change Panning Mode in the Multitrack preferences.

Duplicate tracks

To perfectly copy all clips, effects, equalization, and envelopes in a track, duplicate it. Duplicate tracks provide a great starting point for new adjustments, helping you compare different processing and automation settings.

2. In the Editor panel or Mixer, select a track.

3. Choose Multitrack > Track > Duplicate Selected Track.

4.10. Channel Mapping in the Multitrack Editor

To use multichannel audio or video files within a session, you can bring each of the channels of the file into the **Multitrack Editor** as one single multichannel clip (default behavior). You can also automatically split each channel or groups of channels into different clips by holding **Alt** (Windows) or **Option** (Mac) while dragging.
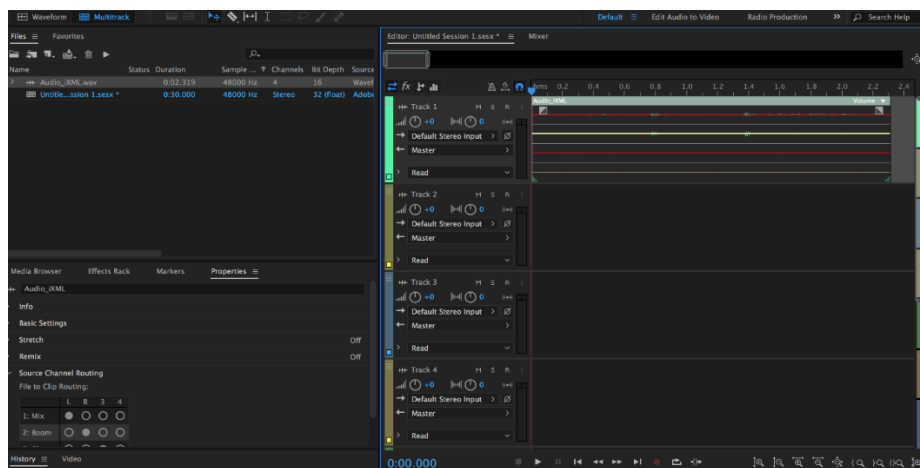
Importing audio as one multichannel clip
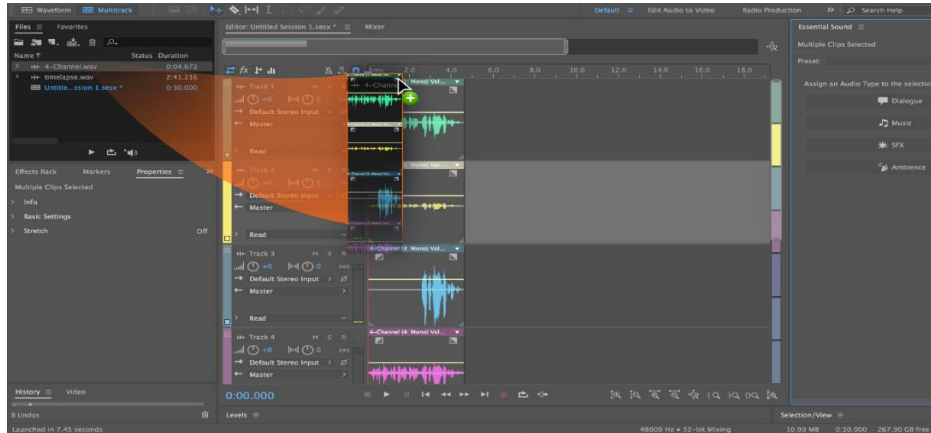
Importing audio to Multitrack Editor as different clips

1. Select and drag the channels you want to import to the **Multitrack** panel. You can also select multiple channels and drag them to the same track or different tracks.

2. To add channels to different tracks, hold **Alt** (Windows) or **Option** (MAC).
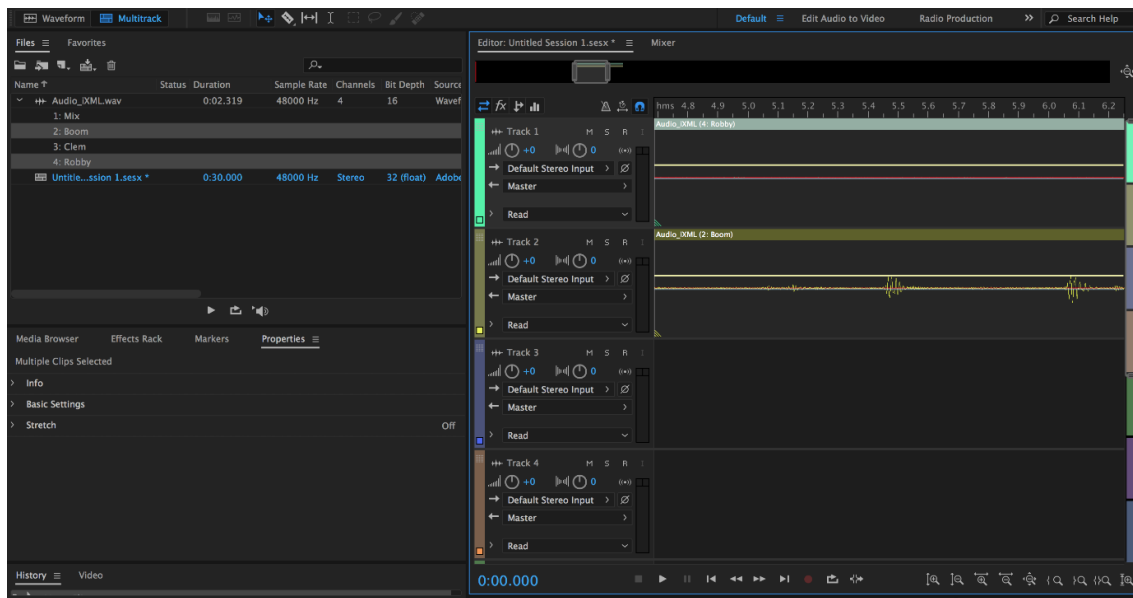
Insert clip to different tracks

Note: To channelize the clip according to the channelization of the destination track, use the double-modifier behavior using **Command+Option** (MAC) and **Control+Alt** (Windows).

Modify the channels in a specific clip

To modify the channels that you have added to specific clip, follow these steps.

Note: You cannot modify the number of channels in a clip you have added to a track. You can, however, replace one channel with another.

1. Select the clip you want to edit.

2. In the **Properties** panel, select **Source Channel Routing.**

3. Use radio buttons to modify the source channel routing of the selected clip

Effects channelization

While working with effects, you can assign different in/out channels, and query for the different channel configurations they support. Easily route specific audio clip or track channels to mono, stereo, or surround/immersive effects, and quickly see at-a-glance existing routing configurations.
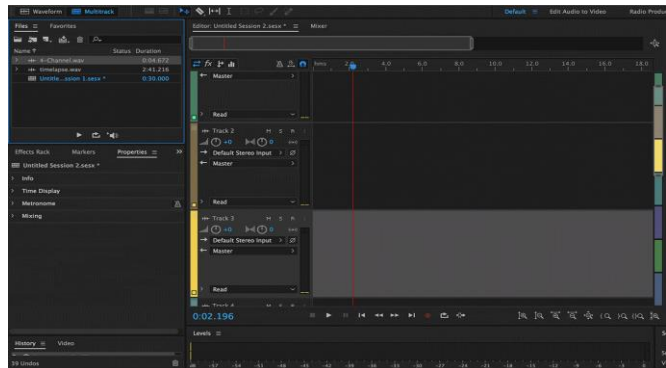
Specific Channel Routing

4. To modify effects layout, open an effect from the Effects Rack or Effects menu. The Effects window opens. Now, select the Channel map editor.

5. Choose Request Layout. The Request Effects Layout window opens.
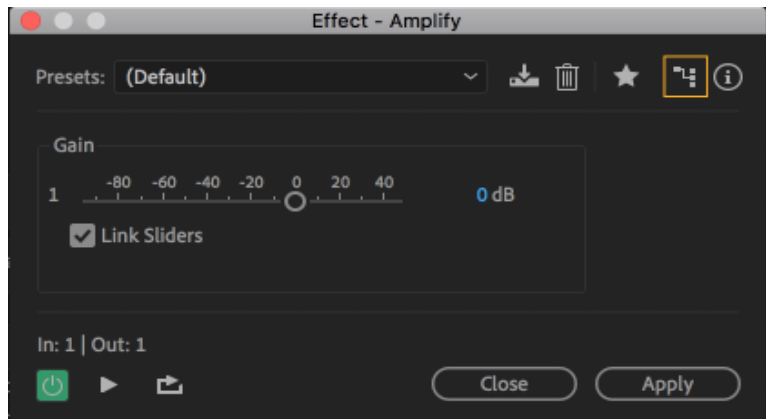
Channel map editor

6. The new Request Effects layout window allows you to choose the input type. Choose from Mono, Stereo, and 5.1 from the drop-down.
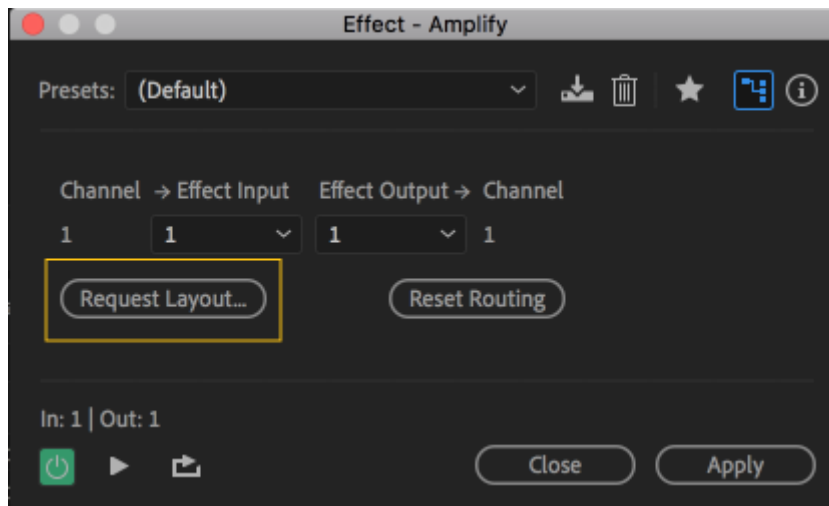
Request layout
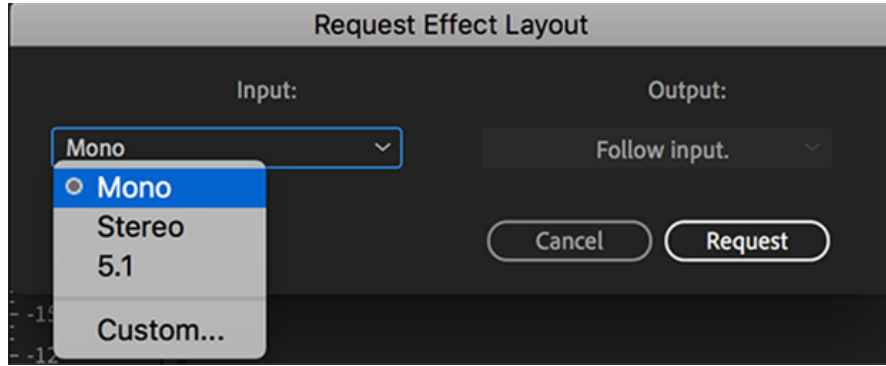
Choose input from drop-drown

Note: The output is always follows the input and cannot be changed.

7. For custom channel configurations, choose Custom and assign or edit Channel Label

8. Use the plus and minus icon shown below to add and remove channels.
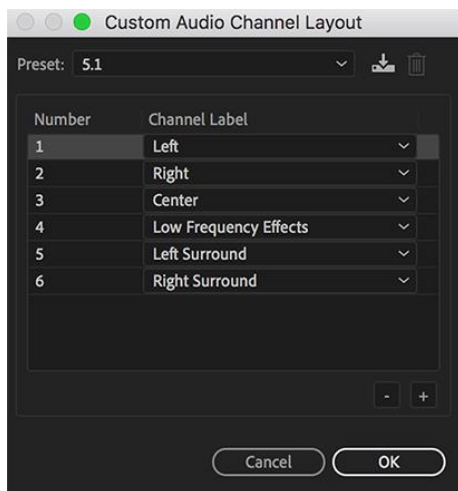
Custom audio channel layout
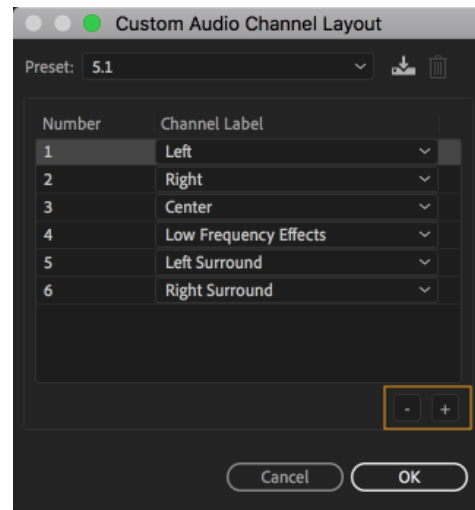
Add or remove channels

9. You can now modify the effect input and effect output for all individual channels.
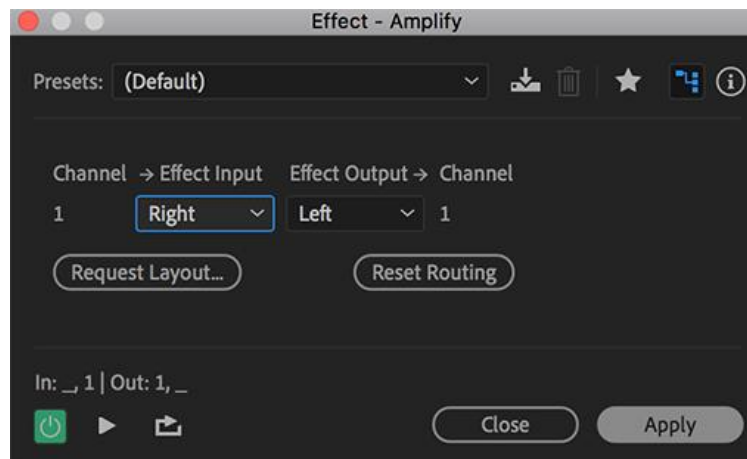
Modify effect input and effect output

4.11. Side Chaining Effects

Sidechain is **an effect that you have on one sound that is triggered by the level of another sound**. The classic example is when you have a compressor on a bass track and you set it so it ducks the level of the bass whenever a kick drum hits.
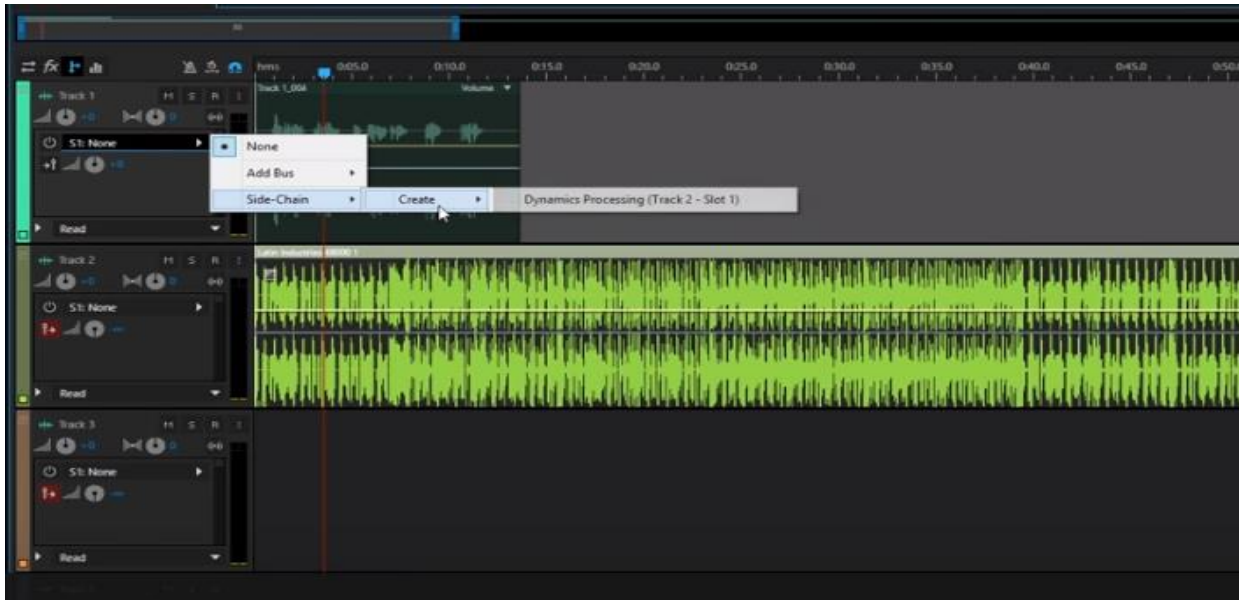
4.12. Save as Template

The multitrack output can be saved as new template as shown in below picture
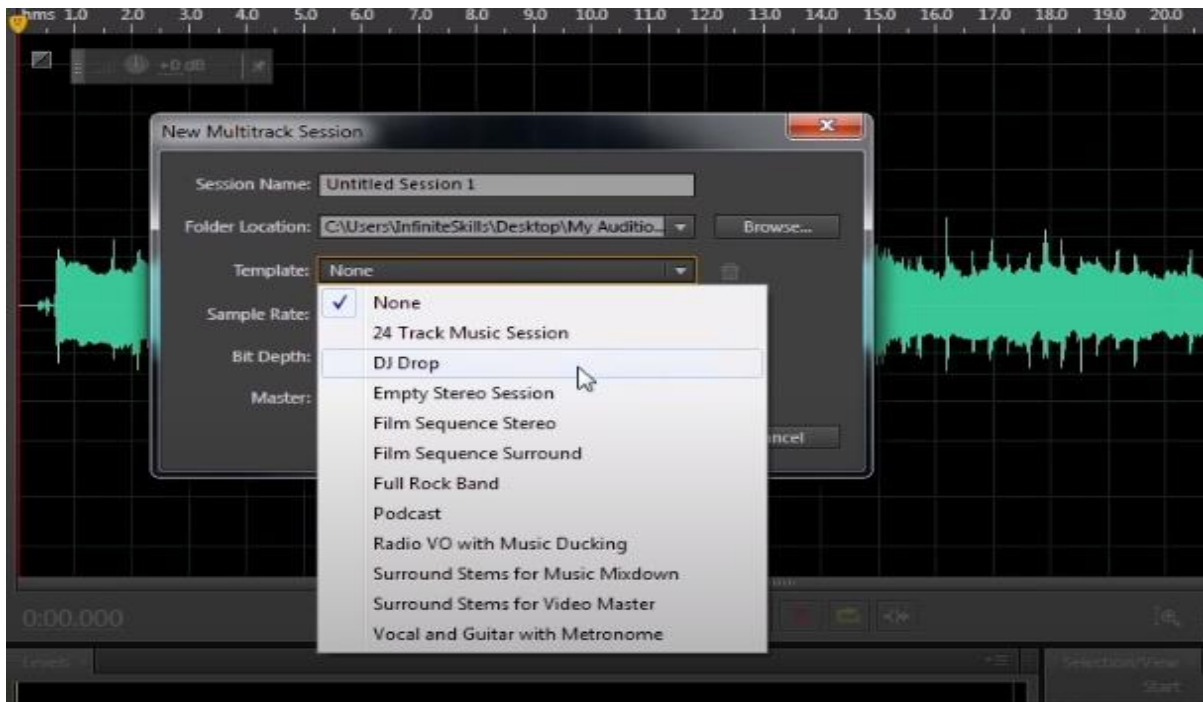
Section 8: Editing Clips

4.13. Creating DJ-Style Continuous Music Mix with Crossfading

Creating a dJ-style continuous music mix with Crossfading between clips can provide for smooth transitions between the end of one clip and the start of another. However, crossfading is also a crucial element of creating a DJ mix. Here, you'll take five clips and create a dance mix.

1. With Audition open, navigate to the Lesson11 folder, and open the Multitrack Session DJ Mix.sesx located in the DJ Mix folder.

2. With the Editor panel open, right-click (Control-click) on the timeline and choose Time Display > Bars and Beats.

3. Right-click (Control-click) on the timeline and choose Time Display > Edit Tempo. Enter 120 in the Tempo field and then click OK.

4. Click on any clip, and then verify that Automatic Crossfades Enabled (Clip > Automatic Crossfades Enabled) is selected so that overlapping one clip with another creates a crossfade in the overlapping section.

5. Place the playhead at the project's beginning and click Play. Listen to the song "Poptronica," and as you listen, make a mental note of where you might like another song to start playing. The theme returns at measure 57 and then repeats at measure 65 before fading out. So, measure 65 is a good candidate for another song to kick in.

6. Now listen to the song "UK Grime." The first eight measures are an introduction; the main part of the song doesn't start until measure 9.

7. Enable snapping by clicking the Snap button (indicated by a magnet icon) to the left of the timeline. Drag "UK Grime" into Track 1 so it overlaps "Poptronica" starting at measure 65. This is ideal, because "Poptronica" will fade out over eight measures, "UK Grime" will fade in over eight measures, and when "Poptronica" finishes fading out, the main part of "UK Grime" will start.

8. Position the playhead before measure 65, and then click the Play button to hear the transition.

9. Proceed to creating the next transition. Listen to the end of "UK Grime"; it goes on for a long time, so you'll probably want to trim it. As the song starts getting repetitive at measure 122, you'll have the clip end at measure 130 to allow for an eight-measure crossfade.

10. Hover over the right edge of the "UK Grime" clip so the cursor turns into a Trim tool (a red right bracket). Drag left until the right edge of "UK Grime" snaps to measure 130.

11. Move the playhead to the beginning of the song "Electro Patterns," and then click Play to hear it. With "Electro Patterns," the first eight measures would be good for a fade in, because the main theme starts at the beginning of the ninth measure.

12. Drag "Electro Patterns" into Track 1 so it overlaps "UK Grime" starting at measure 122. Play this transition.

13. It would sound stronger if the kick in "Electro Patterns" came in sooner and was louder. You can alter the crossfade to do this. Click the Fade In control square in the "Electro Patterns" file, and drag it straight up so the tooltip displays Fade In Linear Value: 100.
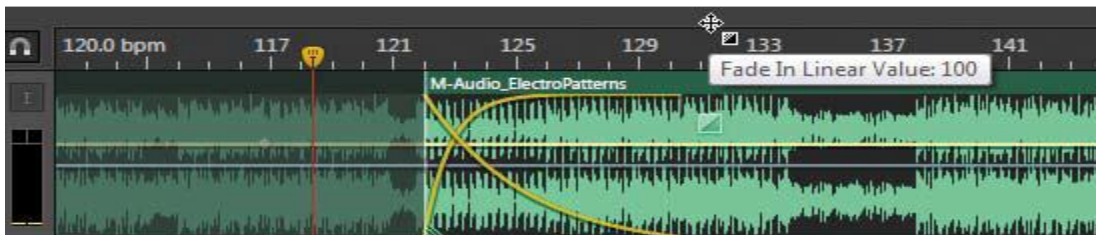
14. Click Play and listen to the transition; it's much stronger.

15. Listen to the end of "Electro Patterns" and the beginning of "Iced." "Iced" doesn't really get going until after 16 measures, whereas the ending for "Electro Patterns" starts at measure 166. From a musical standpoint, the "Electro Patterns" measures that play after measure 166 are kind of heavy and bassy, whereas the first part of "Iced" is "lighter." It's unclear what would make a good transition, so drag "Iced" into Track 1 starting at measure 166 so it overlaps "Electro Patterns," and you'll tweak it from there.

16. Click on "Electro Patterns" to select it. Hover over its right edge so the cursor turns into a Trim tool. Drag left to trim the clip, but leave enough to make a good transition area into the next clip; I recommend dragging left to measure 174.

17. For the final transition, you'll try a "mashup" (i.e., two pieces of music playing at the same time for a fairly long amount of time). Drag "Acid Jazz City" into Track 1 starting at measure 192. Return the playhead to the beginning, click Play, and enjoy your mix.
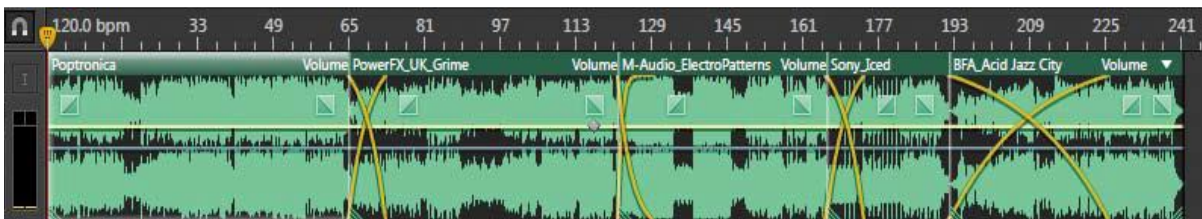
18. Keep this project open, so you can save your work as a single file in the next lesson.

4.14. Mixing or exporting a collection of clips as a single file

When creating a DJ mix or chopping up a clip to fit it to a specific length (as covered in the next lesson), you might want to save a collection of edited clips as a single file that incorporates all the edits you've made. You have two options for doing this. The first option, which converts the clips into a single file that appears in the Waveform Editor, is ideal if you want to make some overall tweaks on the final, composite file.

1. Right-click (Control-click) in an empty space in the track (in this case, Track 1) containing the clips you want to bounce (mix) together into a single, new clip.

2. Choose Mixdown Session to New File > Entire Session. This creates a new file in the Waveform Editor and automatically switches to the Waveform Editor. The second option exports the mix as a single file to your desktop or other designated folder without going through the Multitrack Editor. Exporting is covered in more detail in Lesson 15, "Mixing," because in almost all cases you'll want to export a final mix to a mono, stereo, or surround file.
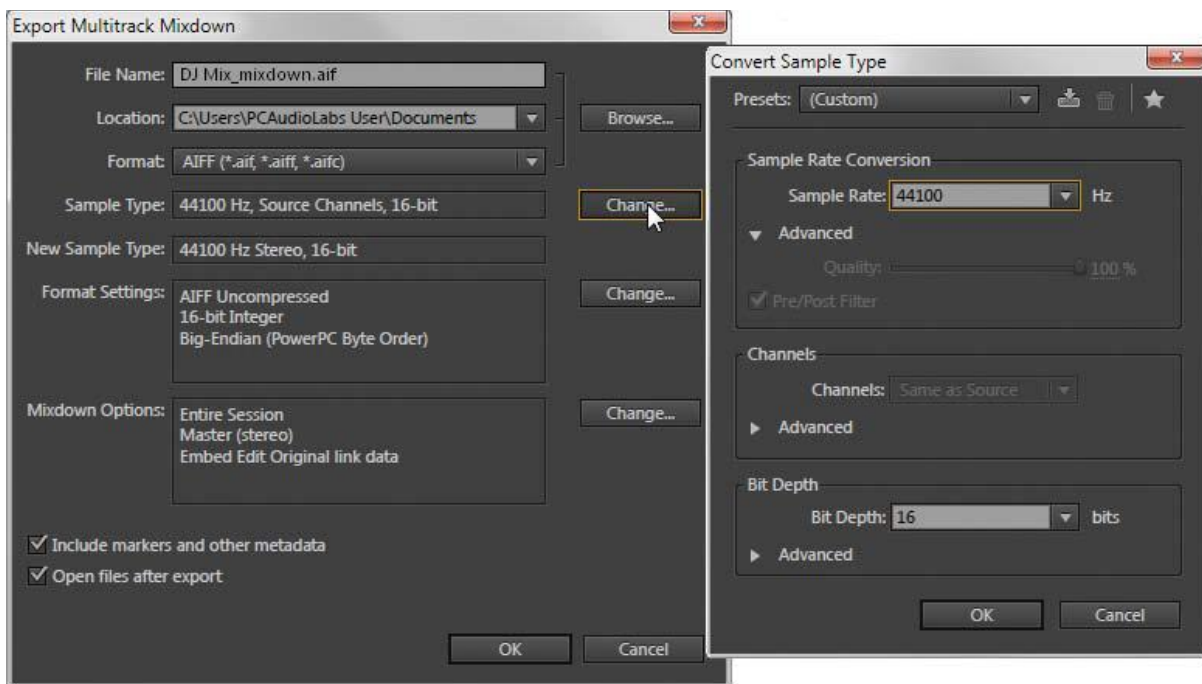
1. Right-click (Control-click) in an empty space in the track containing the clips you want to bounce (mix) together.

2. Choose Export Mixdown > Entire Session. A dialog box appears in which you can specify several attributes of the mixed file, such as the folder location where the file will be stored, format, sample rate, bit resolution, and the like.

3. Select the desired attributes in the dialog box, and then click OK.

4. Close Audition, and when the Save Changes dialog box appears, click No To All Editing for length Music often needs to be cut to fit a specific amount of time—for example, a 30-second commercial. In this lesson, you'll use many of Audition's clip editing tools to trim down a 45-second music clip to make the background for a 30-second commercial.

1. With Audition open, navigate to the Lesson11 folder, and open the Multitrack Session 30SecondSpot.sesx located in the 30SecondSpot folder.

2. Right-click (Control-click) on the timeline and choose Time Display > Decimal (mm:ss.ddd) to verify that the music is about 45 seconds long. Then right-click (Control-click) on the timeline and choose Time Display > Bars and Beats for editing.

3. Right-click (Control-click) on the timeline and choose Time Display > Edit Tempo. Enter 125 in the Tempo field, and then click OK. The first two measures and next four measures are similar except that there's a bass in measures 3 and 4 that leads well into the next section. So, you'll delete the first two measures.

4. Choose the Time Selection tool or press T.

5. If necessary, click the Snap button to enable snapping.

6. Click at measure 3:1 and drag left to select the first two measures. Zoom in far enough to ensure accurate snapping.

7. Choose Edit > Ripple Delete > Time Selection in All Tracks. The section of the music that starts at measure 7 is similar to the section that starts at measure 11. So, let's eliminate measures 7–10.
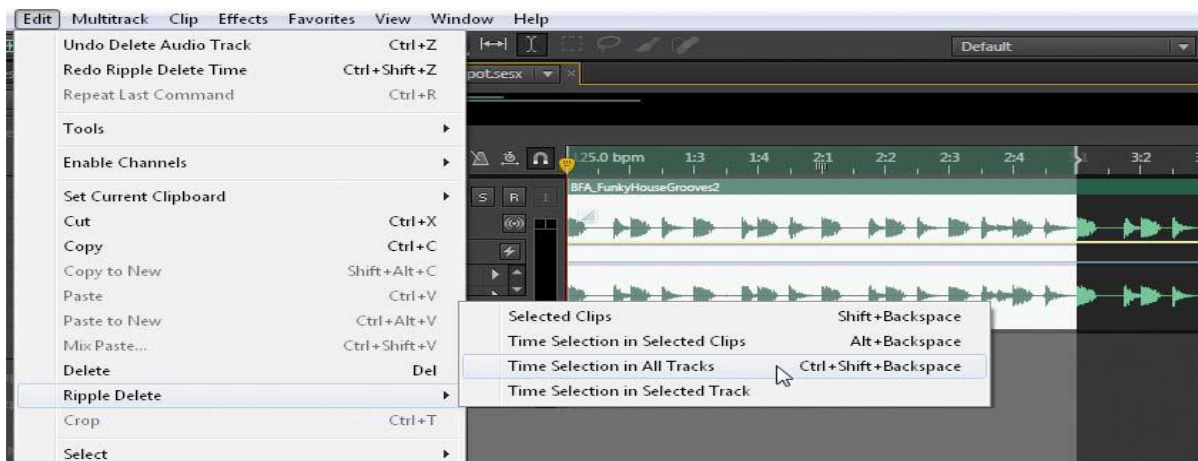
8. Click at the beginning of measure 11:1, and drag left until measure 7:1.

9. Choose Edit > Ripple Delete > Time Selection in All Tracks.

10. Keep this project open for the next lesson.

4.15. Editing individual clips in the Waveform Editor

Although the Multitrack Editor has many useful editing tools, for detailed or unusual edits, it's easy to flip a clip between Waveform and Multitrack Editors.

1. The bass slide starting at 6:3 is good, but the slide ends too soon. Shortening the bass slide and repeating it might sound more interesting, so start by trimming the bass note. Hover the cursor over the end of the first clip until the cursor turns into a red right bracket. Click and drag left to 6:4. This trims the last beat of the bass slide.
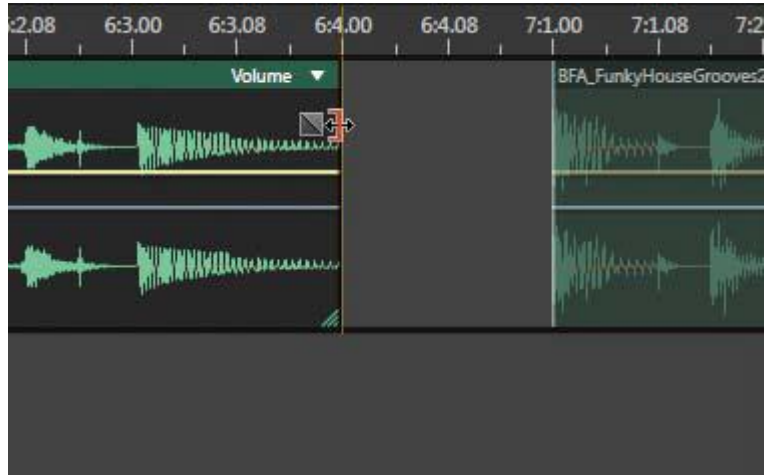
2. Choose the Razor Selected Clips tool or press R.

3. Position the Razor tool so that there's a line at the beginning of the bass slide at 6:3, and then click to split the bass note from the rest of the clip.
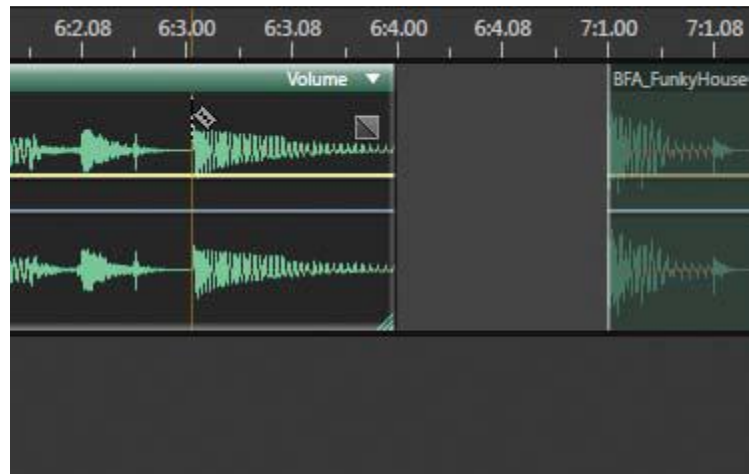
4. Choose the Move tool or press V.

5. Alt-click (Option-click) the name header at the top of the bass slide clip you just split, and drag right so that the copied clip starts at measure 6:4.

6. Place the playhead around the beginning of measure 6, and then click Play to hear the result of the two bass parts playing in a row. That's more interesting, but let's make it even more interesting by processing the second slide independently from the first slide. However, a copied clip defaults to referencing the original clip, so any change you make to either clip changes both clips.

7.   To convert the second slide into a unique clip, right-click (Control-click) the second slide and choose Convert to Unique Copy. Although the unique copy takes up additional disk space, you can edit it without affecting any other clips.

8.   Click the Waveform Editor button to edit the second slide.

9.   Choose Edit > Select > Select All or press Ctrl+A (Command+A).

10. Choose Effects > Reverse to play the bass slide backward, so it slides up instead of down.

11. Click the Multitrack Editor button to return to the Multitrack Session. The reversed section will default to being selected, so click anywhere in Track 1 other than the selected section to deselect it.

12. Position the playhead around the beginning of measure 6, and then click Play to hear how the two slides sound when played together. Keep the project open for the next lesson.

4.16. Clip edits: split, trim, volume

Digital audio editing allows for sound-warping options that would be difficult or even impossible to implement in any other way. Several of these involve isolating specific sections of a clip and processing them individually; the Split function is ideal for doing this. However, this lesson also employs other editing techniques to alter a clip.

1.   With Audition open, navigate to the Lesson11 folder, and open the Multitrack Session Stutter Edits.sesx from the StutterEdits folder.

2.   Place the playhead at the beginning of the file, and click the Transport Play button to hear the Boring Drums clip.

3.   Right-click (Control-click) on the timeline and choose Time Display > Bars and Beats.

4.   Right-click (Control-click) on the timeline and choose Time Display > Edit Tempo. Enter 100 in the Tempo field, and then click OK.

5.   Choose Edit > Snapping > Snap to Rule (Fine). Because you'll be zooming in quite a bit during this lesson, "fine" snapping will allow for snapping to finer resolutions, like eighth notes.

6.   Click the Transport Loop Playback button.

7.   Having two 16th note kick drum hits at the end would make a better lead-in back to the beginning. To isolate a kick drum, zoom in until you can see both 1:3.00 and 1:3.04 in the timeline.

8.   Choose the Time Selection tool or press T.

9. Click at 1:3.00 and drag right to 1:3.04. Because Fine snapping was selected, the selection should snap to these times on the timeline. This selects the kick drum hit.

10. Choose Clip > Split.
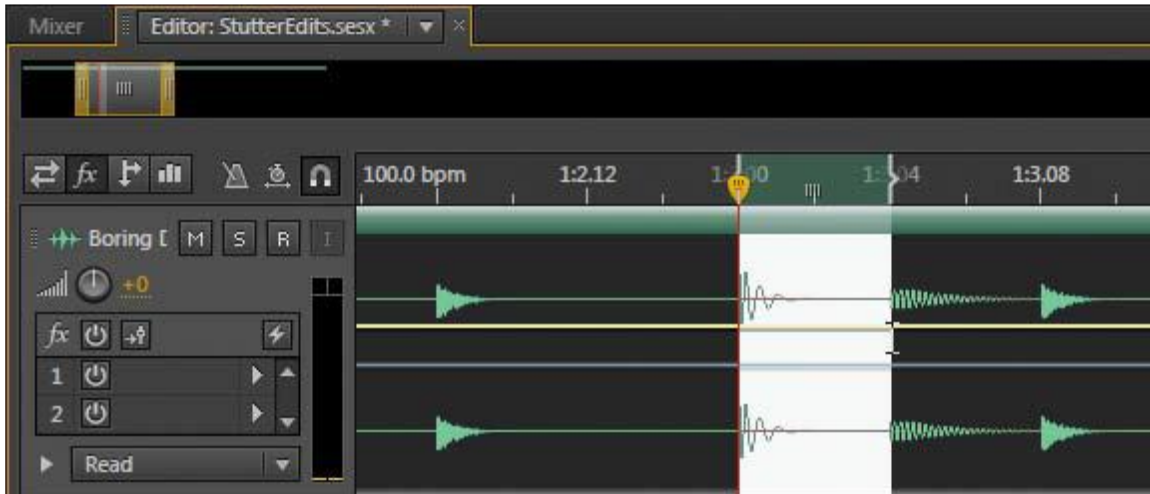
11. Go to the end of the clip, and use the Trim tool to bring the end from 3:1.00 to 2:4.08.

12. To make a copy of the clip, Alt-click (Option-click) on the isolated kick hit's name heading, and then drag right until the kick clip's left edge snaps to the end of the clip.

13. Alt-click (Option-click) on the name heading of the kick hit you just moved, and then drag right until the newly copied kick clip's left edge snaps to the end of the previously copied kick hit. There should now be two kick hits between 2:4.08 and 3:1.00.
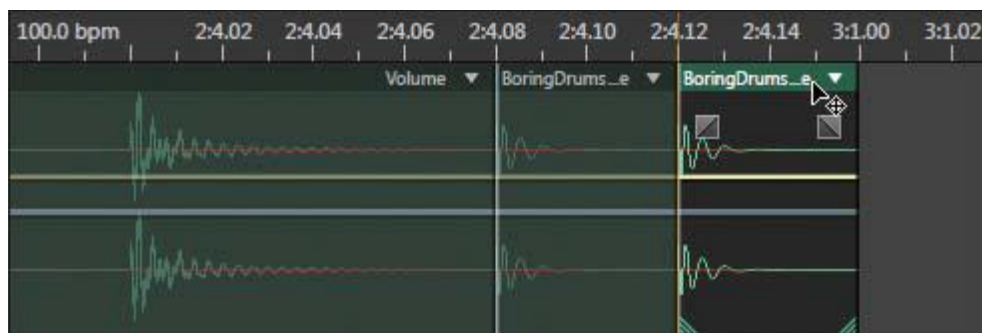
14. If necessary, click outside of any selected area so it won't loop, and then click Play. You'll now hear the clip with the double kick lead-in at the end.

15. Now add some dynamics by making the first copied kick hit a little softer. Click on the clip's yellow volume line, and then drag down to around -9dB. Click Play to hear how the two kicks have become more dynamic.

4.17. Extending a clip via looping

Any clip can be turned into a loop and extended for as many iterations as desired using the following procedure.

1. To convert the bounced clip created in the previous lesson to a loop, first verify that the clip start and loop end points are snapped exactly on measure or beat boundaries. If a clip is slightly short or long, any errors will accumulate as you create more iterations of the loop.

2. Right-click (Control-click) anywhere in the clip (except for a fade control square, Volume automation line, or Pan automation line) and choose Loop. A small loop icon appears in the clip's lower left.

3. Position the cursor over the clip's right edge. It turns into the Trim tool (red right bracket) but also shows a loop symbol. Drag right to extend the clip for the desired length. A vertical dashed line indicates the end of one iteration and the beginning of another.
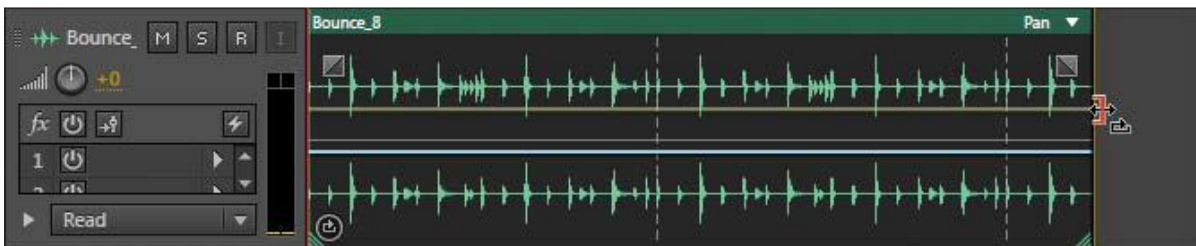
Section 9: Sound Libraries

4.18. About Sound Libraries

Before computers, needledrop music often provided music for commercials, radio station breaks, and even some TV shows and movies. Needledrop music got its name because various companies produced sets of vinyl records with different types of music, sometimes classified by mood, and you would "drop the needle" on a suitable track for your background music. These records were usually expensive, and you needed to pay for a new license every time you wanted to use the music— even if the same song was used twice in a single project.

Today, many companies make sound libraries available on CD-ROM, DVD-ROM, or via download that consist of musical fragments, loops, and sound effects. You can assemble these various sound clips to create professional-quality, custom music. Sound library licensing agreements vary; many are royalty-free, but read the fine print to avoid potential legal problems.

building a rhythm track Although there are no "rules" about creating a piece of music, it's common to start with a rhythm track consisting of drums and bass, and then add othermelodic elements.

1. From the Media Browser, drag the file Drums_F#L into Track 1 so its left edge is flush with the beginning of the session.

2. Hold down the Alt (Option) key and click the clip's name (Drums_F#L). Drag right to copy the audio clip, and release the mouse when the clip's start is at the beginning of measure 5.

3. Similarly, create another copy so that the new clip copy starts at measure 9.

4. Create another copy so that the new clip copy starts at measure 13. There should now be four successive Drums_F#L clips in a row, lasting a total of 16 measures (e.g., the right edge of the last Drums_F#L clip is at the start of measure 17).

5. Enable the Transport Loop button, return the playhead to the beginning, and click Play. The music should play through to the end and then jump back to the beginning and repeat. Click Stop after verifying this.

6. From the browser, drag the file Bass_Sub_F#H into Track 2 so the clip's left edge starts at measure 5.

7. Similarly to how you copied the drum file, copy two more iterations of the Bass_Sub_F#H so that the second copy starts at measure 9 and the third copy starts at measure 13.

8. Because a constant bass part can get monotonous, you can trim some of the file so it drops out and let the drums carry the beat. To do this, hover the cursor over the right edge of the bass clip that begins at measure 5—in the part of the waveform just below the name—until the cursor turns into the Trim tool, as signified by a red right bracket.

9. Click and drag left until the clip ends at the beginning of measure 8.

10. Similarly, drag the right edge of the third copy left so that it ends at measure 16.
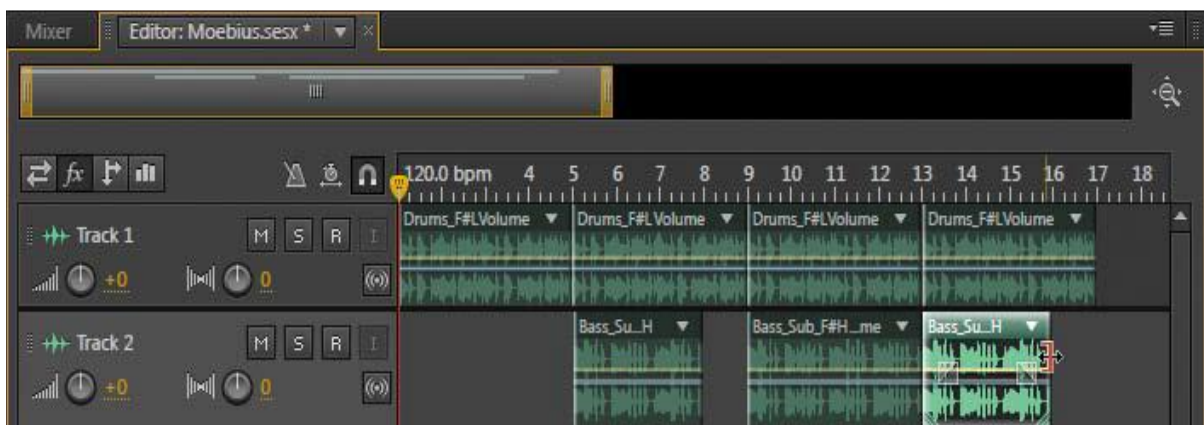
11. Add some variety to the drum track as well. Similar to how you shortened the bass clip, hover the cursor over the right edge of the last drum clip until it turns into a red right bracket, click, and then drag to the left to trim the clip so that it ends at measure 16.

12. From the Media Browser, drag the file Drums_F#H into Track 1 so the clip's left edge starts at measure 16. Hover the cursor over the right edge of this drum clip until it turns into a red right bracket, click, and then drag to the left so that this clip ends at the beginning of measure 17.

13. Return the playhead to the beginning, and click Play to listen to the drum and bass tracks.

14. The transition between the fourth and fifth drum clips seems a little abrupt. To smooth this, zoom in for a detailed view of the transition between the two clips at measure 16. Click on the fourth drum clip (the one that ends at measure 16) to select it.

15. Hover the cursor over the right edge of the fourth drum clip until it turns into a red right bracket, click, and then drag right so that the clip now ends at measure

16. beat 2 (shown as 16:2 on the Time Display if you're zoomed in far enough). This will auto-crossfade the end of the fourth clip with the beginning of the fifth clip. Play that transition; it will sound much smoother.
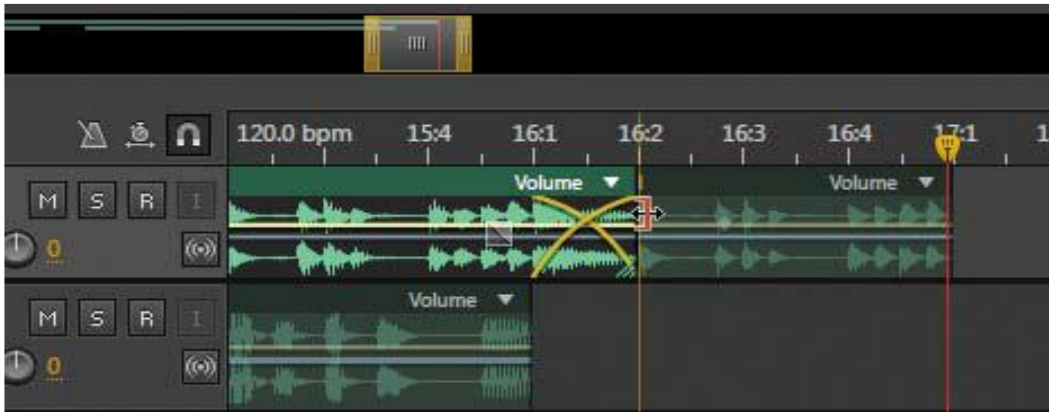
4.19. Adding percussion

Before moving on to additional melodic elements, let's add a little light percussion to augment the rhythmic feel.

1. From the browser, drag the file Seq_TunedNoiseSeq into Track 3 so it's left edge snaps to the beginning of measure 5.

2. Hover the cursor over the right edge of this clip until the cursor turns into a red right bracket, click, and then drag left so that the clip ends at the beginning of measure 7.

3. Hold down the Alt (Option) key, click the clip's name, and drag right to copy the audio clip. Release the mouse button when the clip starts at the beginning of measure 9.

4. Hold down the Alt (Option) key, click the clip's name, and drag right to copy the audio clip. Release the mouse button when the clip starts at the beginning of measure 13.

5. Hover the cursor over the right edge of this clip until the cursor turns into a red right bracket, click, and then drag right so that the clip ends at the beginning of measure 16.
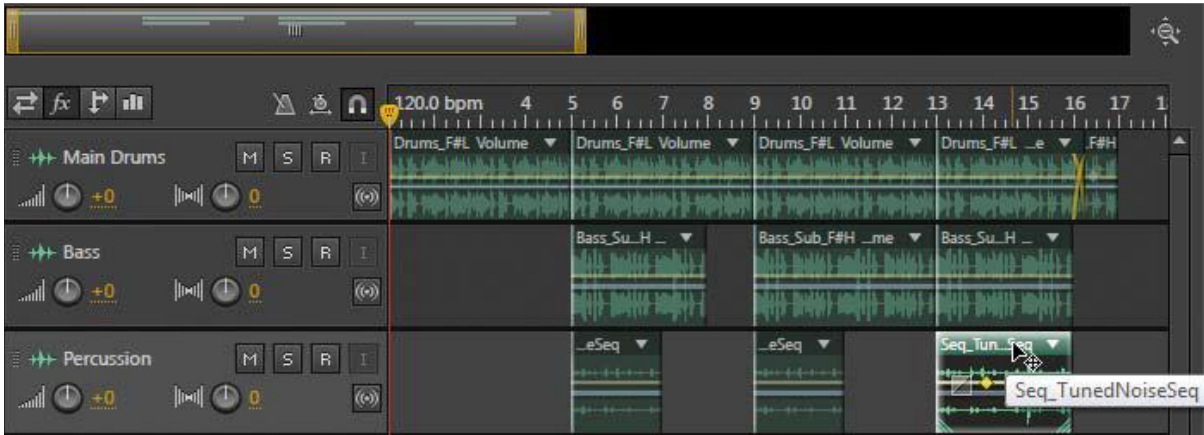
6. Return the playhead to the beginning, and click Play to hear the music so far. After playing through the music, click Stop. adding melodic elements With drums, bass, and percussion covered, you'll now add some melodic elements. Because you're already familiar with the process of dragging from the Media Browser, aligning clips to rhythmic divisions via snapping, and shortening clips, this process will go expeditiously.

- Drag the file Pad_DreamyBrass_F#L into Track 4 so it starts at measure 7.

- Drag the file Pad_DreamyBrass_F#H into Track 4 so it starts at measure 13.

- Drag the file Organ_Church_F#L into Track 5 so it starts at measure 9.

- Drag the file String_Harp_F#H into Track 6 so it starts at measure 11.

- Drag the file Seq_Bouncy_F#L into Track 7 so it starts at measure 13.

- Return the playhead to the beginning, and click Play to hear what you've assembled so far.
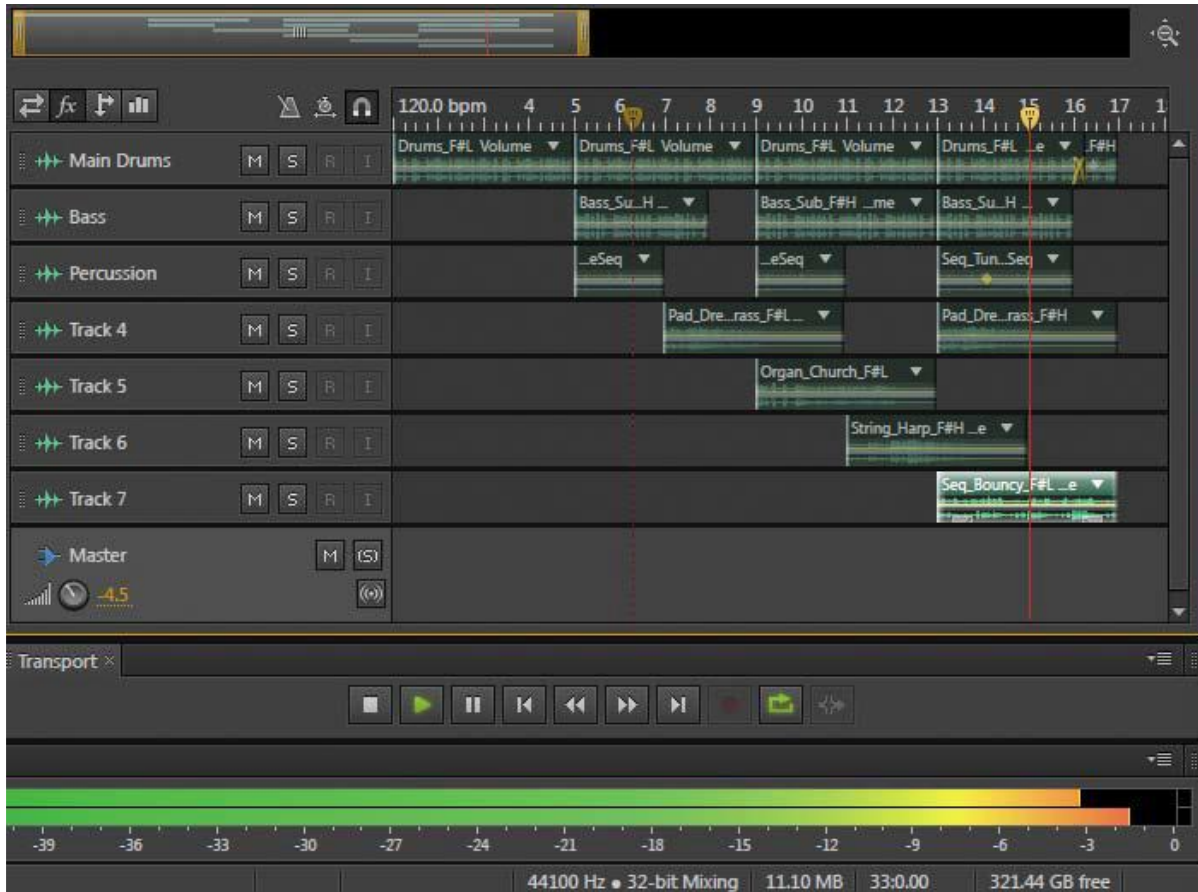
Using loops with different pitch and tempo

The advantage of the construction kit approach is that files within the kit will have a common pitch and tempo. However, it's also possible to use files with different pitches and tempos if they're not too different from the current session—extreme changes can lead to an unnatural sound.

In this lesson, you'll use a file in the key of E instead of F# with a tempo of 125 bpm instead of 120 bpm. It even has a different file format—AIF instead of WAV.

1. If you need to create a new track for another loop, right-click (Control-click) within the Multitrack Editor and choose Track > Add Stereo Audio Track.

2. Drag the file BeatFilter_E_125.aif from the Lesson12 folder into Track 8 or any empty track. It should start at the beginning of the track.

3. Return the playhead to the beginning and click Play. You'll hear that this new clip is out of time and out of tune with the rest of the music.

4. To match the clip tempo to the Session tempo, activate the Toggle Global Clip stretching button (a clock with a double arrow underneath located to the left of the timeline). Then click

on the white stretch triangle toward the right of the clip (just underneath the clip's name header), and drag right until the end of the clip reaches the beginning of measure 5 (shown as 5:1 on the timeline).

5. With the BeatFilter_E_125.aif clip selected, click the Waveform tab (pitch edits need to be made in the Waveform Editor).

6. In the Waveform Editor, press Ctrl+A (Control+A) to select the entire waveform. Choose Effects > Time and Pitch > Stretch and Pitch (process).

7. In the Stretch and Pitch dialog box, choose Default from the Presets drop-down menu.

8. Click the Advanced disclosure triangle. If necessary, select Solo Instrument or Voice, and deselect Preserve Speech Characteristics.

9. The BeatFilter_E_125.aif needs to transpose up two semitones so that its key is F# instead of E (E-F-F#). Click on the Semitones field and type 2. Click OK.

10. A dialog box warns you that this file is used in a Multitrack Session and will modify that session. This is what you want, so click OK.

11. When the file is finished processing, click the Multitrack tab to return to the Multitrack Session.

12. Click Play. BeatFilter_E_125 is now in time and in pitch with the rest of the music. Adding processing The basics of the music are in place. You can now use some of the techniques described in Lessons 10 and 11 to modify the music further, such as change
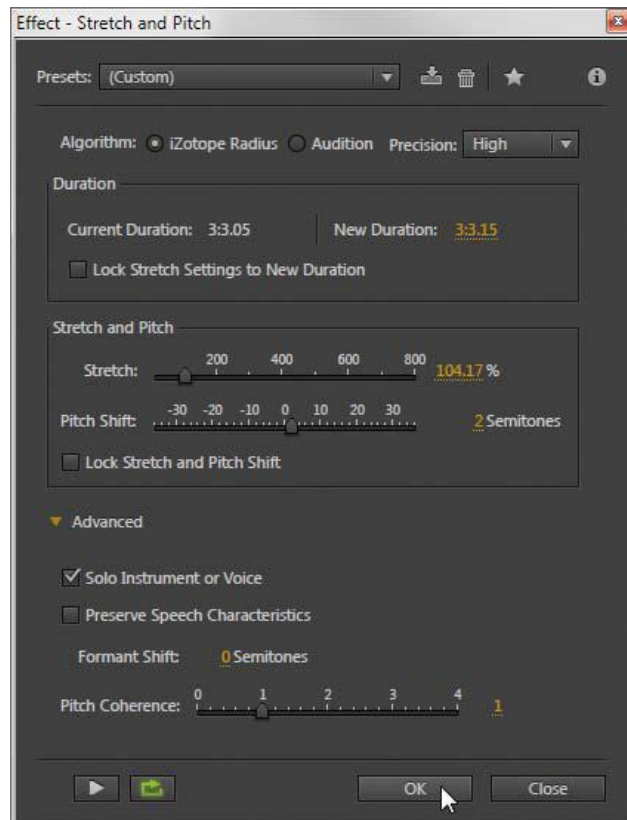
clip levels, add processing, alter panning, and so on. In this section, you'll make the brass pad even dreamier with some echo.

1. Click and drag on the divider between Track 4 and Track 5, and drag down until you can see Track 4's Effects Rack. Remember that the fx button in the Multitrack Editor's toolbar must be enabled.

2. In Track 4's Effects Rack, click insert 1's right arrow and choose Delay and Echo > Echo. This turns the master fx button on automatically.

3. If necessary, choose the Echo's Default preset from the Presets drop-down menu, and then choose beats from the Delay Time Units drop-down menu.

4. Set the Echo parameters as follows: Left Channel Delay Time to 2, Right Channel Delay Time to 3, and for both channels, Feedback and Echo Level to 80. Set all Successive Echo Equalization sliders to 0. Select Echo Bounce so the echo creates a wider stereo image.

5. Click Play to hear how the echo affects the overall sound.

6. The second clip in Track 4 seems a bit loud. To reduce its level so it sits more in the background, click on the clip's yellow volume line, and drag it down to around -5.5dB.
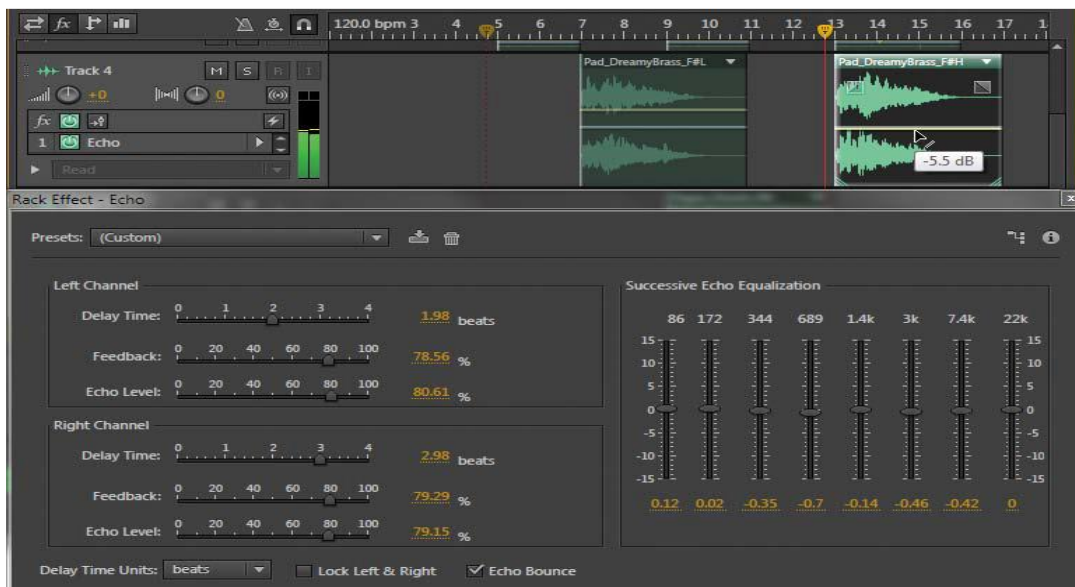
Section 10: Mixing

4.20. About mixing

After recording your parts and doing any overdubs, you're ready for the next step: mixing and ultimately, mastering and publishing/distributing your project. Reduced to its basics, mixing

simply means adjusting the levels, tonal balance, stereo or surround placement, and adding effects as needed to create a wonderful sonic experience.

However, part of mixing is making numerous value judgments. Which instrument should be most prominent at any given time? Do you want to mute some sections that seem redundant? Which is more appropriate—a raw, in-your-face sound or a smooth, well-produced sound? Do you want a massive guitar timbre or something that shares its space with other instruments? Who is your target audience?

How successfully you answer these types of questions determines the success of your mix. Mixing is a combination of art—being able to judge what sounds good— and science, knowing what technologies and processes will produce the sounds you want. This lesson covers both aspects.

Note that there are as many ways to approach mixing as there are people who mix, so consider the information in this lesson as guidelines, not rules.

4.21. Testing your acoustics

Any effort you put into mixing means nothing if your monitoring system—which includes your hearing, the room's acoustics, the amp and cables that drive your monitors, and the speakers— aren't accurate. If you've ever done a mix that sounded great on your system but sounded wrong when played elsewhere, you've experienced what can go wrong with the monitoring process. A good mix should be able to "translate" over a wide variety of systems.

Fortunately, Audition provides tools you can use to do some basic diagnostic tests on your listening environment prior to mixing.

1. With Audition open, navigate to the Lesson15 folder, open the Test Tones folder, and then open the file 100Hz_SineWave.wav.

2. Start with your monitoring system's volume control full off, and then click the Transport Play button.

3. Slowly turn up the monitoring system's volume to a comfortable listening level.

4. Walk around the room and listen. In an untreated acoustical space, there will be places where the sound gets louder and others where it gets softer. This is because the sound waves are reflecting around the room and interact with each other to cause peaks and cancellations.

5. Now navigate to the Test Tones folder and open the file 1000Hz_SineWave.wav.

6. Again, walk around the room and listen. You'll probably note that in some places the sound will become very quiet if you reach a "null point" in the room where the sound waves cancel.

7. Navigate to the Test Tones folder and open the file 10000Hz_SineWave.wav.

8. If you can't hear this tone, consult an audiologist. Otherwise, walk around the room and listen. Because high-frequency wavelengths are so short, there will be even more peaks and cancellations than with the other frequencies.

4.22. Exporting a stereo mix of the song

Now that the song is mixed, you can export it as a stereo file in a variety of formats.

1. Choose File > Export > Multitrack Mixdown, and then choose either Time Selection (if you've defined what should be exported as a time selection) or Entire Session (from the start of the first clip to the end of the last clip).

2. The Export Multitrack Mixdown dialog box appears. Enter a filename, the location where you want to save it, and the format.

3. Click the Change button for Sample Type to change the sample rate and bit depth (resolution). Click the dialog box's advanced disclosure triangle to specify the type of dithering you want to use. Dithering can offset the effects of truncating bit resolution when converting from a higher resolution to a lower one, such as mixing audio recorded in 24-bit resolution down to the 16-bit resolution required by CDs. Enabling the default is the simplest option.

4. Click OK, and the song will be exported as a stereo mix to the specified location. Burning an audio CD of the song When you save a stereo mixdown, the file automatically becomes available from the Waveform Editor's drop-down menu. You can then master it or burn the mix to an audio CD.
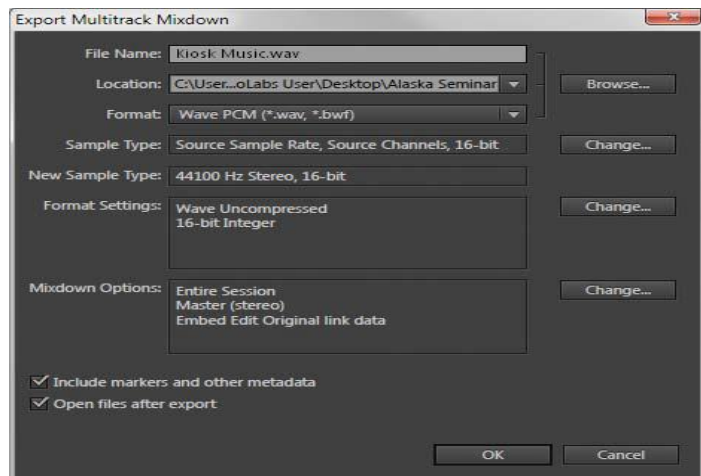
1. Choose the file using the Waveform Editor's drop-down menu.

2. Choose File > Export > Burn Audio CD.

3. Insert a blank recordable CD in your computer's CD/DVD writeable optical drive.

4. Click OK.

5. Choose the desired options from the Burn Audio dialog box.

6. Click OK, and your CD will be ready shortly thereafter.
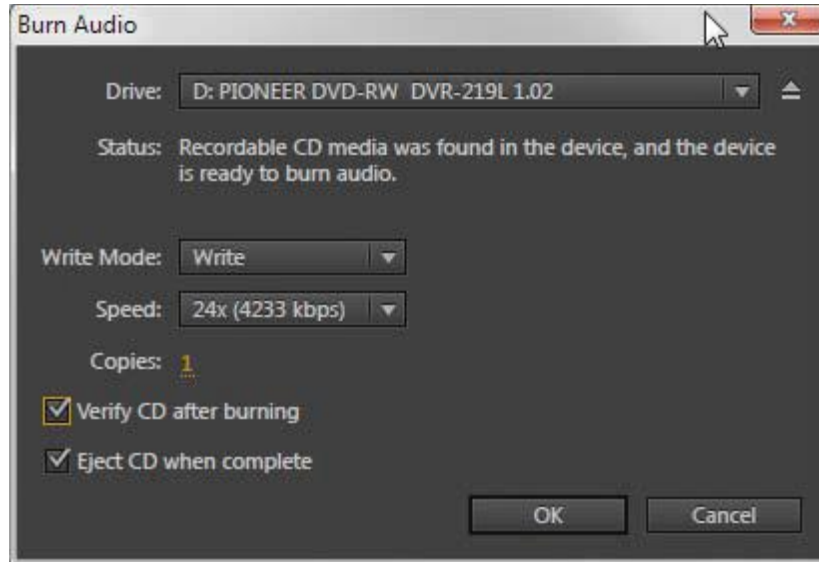
Activities:

- Presentation on Adobe Audition interface.

- Setup inputs and outputs

- Import sound form different sources.

- Edit a file by using all basic editing techniques (cut, extend, shorten, loop etc.)

- Apply different effects to audio clips.

- Improve sound quality of audio by applying relevant effects.

- Improve audio clip by audio restoration as per requirement

- Perform Mastering techniques on audio clips

- Create different sound designs

- Record audio using different editor.

- Produce multitrack audio

- Design track controls

- Apply all editing techniques on different sound clips

- Use sound libraries and create tracks

- Produce stereo output file

- Burn audio CD/DVD

- Publish to different platforms.

Do You Know:

- ➢ Adobe Audition can be used for:

  - Recording audio directly into a computer

  - Editing audio

  - Adding simple effects to audio

  - Creating and mixing multilayer audio projects

- ➢ Audition tools to support audio workflows in video production include Automatic Speech Alignment, Remix, Auto-Ducking, full support for video formats, and more. Audition tools to support audio workflows in video production include Automatic Speech Alignment, Remix, Auto-Ducking, full support for video formats, and more.

- ➢ Remix analyzes and rearranges music to fit the duration of your video without manual editing or complicated cross-fading to get the parts of the song you want, thanks to advanced Adobe Sensei machine-learning technology.

- ➢ Automatic Speech Alignment lets you warp and stretch ADR recordings to precisely match on-camera performance with sample accurate lip sync so you can fix dialog easily and turn around projects faster.

- ➢ Auto-Ducking automatically adjusts soundtrack music around dialog and sound effects to quickly achieve a professional quality mix. Adobe Sensei machine-learning technology scans audio tracks and applies key framed volume envelopes to normalize audio for clips or projects.

- ➢ Adobe Audition has long been a staple for radio production with integrated support for radio-specific metadata and markers, and most radio automation and scheduling services.

- ➢ Custom channelization lets you design your own channel configurations for any audio mix to shape specific sonic environments for video games, installations, or cinema. With Synthesized speech you can type or paste-in text to generate a voiceover or narration track. Use the Frequency Band Splitter to generate copies of an audio clip, each with a different frequency range. The crossover frequencies determine the split points and you can then edit or apply effects to each band separately.

➢ The Sound Remover effect removes unwanted audio sources from a recording. This effect uses source separation to analyze a selected portion of the recording and build a sound model, which is used to find and remove the sound.

➢ Control surface support and parameter automation, lets you mix audio interactively with control surfaces using the Avid EUCON, Mackie MCU and HUI, or Logic Control protocols — or use third-party, tablet-based controllers that support these protocols.

➢ Audition offers music-focused tools, such as guitar suite effect, a variety of detailed reverb controls, and support for VST audio plugins, as well as Audio Units on macOS.

EXERCISE

Select the correct option.

1. How many clips can be sent using the Edit In command?

   a) Two at once   b) Unlimited   c) Five at once   d) One at once

2. What plugins can Premiere use?

   a) None   b) Only its own   d) VST and AU   e) RTAS

3. What does the CC in Adobe CC stand for?

   a) Creative Course   c) Creative Commons

   b) Creative Collection   d) Creative Cloud

4. How many clips can appear in waveform view?

   a) One at once   c) Six at once

   b) Unlimited   d) Three at once

5. Which mode prints an effect down?

   a) Clip mode   c) Envelope mode

   b) VST mode   d) Track mode

6. How would you deal with audio crackle?

   a) By muting tracks   c) With reverb

   b) With the analysis and processing tools   d) With a distortion plugin

7. How do you make sure a track is ready for recording?

   a) Change its colour   c) Press its record arm button

   b) Make sure it is looped   d) Drag it to the top of the list

8. Which mode is best for forensic sound removal?

    a) Waveform   c) Mixing

    b) Spectral   d) Filtering

9. Which apps can you export directly to

  a) Photoshop   c) Premiere and Media Encoder

  b) Premiere only   d) After Effects

10. What term best describes the windowing system

  a) Translucent   c) Rigid

  b) Modular   d) Fixed

1	B	2	D	3	D	4	A	5	A
6	A	7	D	8	B	9	C	10	D

Answer the following Questions briefly.

1. How you can setup the workplace in Adobe Audition?
2. Define Adobe Audition Interface and how we can import files in Adobe Audition.
3. Define basics about Sound effects.
4. What is use of audio restoration?
5. Define the term Equalization.
6. Import file and change colors of it.
7. Define the procedure to save a Audition file.
8. What is mixing? Describe its process.
9. How can you publish mixing on SoundCloud?
10. Write some Audio Effects and define them.

Answer the following Questions in detail.

1. Describe Adobe Audition and testing of inputs and outputs with audition.
2. Import audio file apply different effects and define the whole process of cut, delete, and past audio regions with multiple clipboard.
3. Desribe the concept fo Loop in your own words.
4. How you can manage a preset? Define with example.
5. Write a detailed on Mastering sound.
6. What is sound libraries? Build a rhythm track using percussion, melodic elements, loops and other effects.

CHAPTER 02: ADOBE PREMIERE PRO

After Completing this Chapter Students will be able to:

- define and use adobe premier pro.
- install and set the workspace.
- understand nonlinear editing .
- understand the workflow.
- set up a new project.
- know about importing assets.
- work with the media browser.
- importing images.
- understand media cache.
- capturing the videotape.
- working with bins.
- organize media content in sequence.
- learn to modifying content.
- program monitor controls.
- controlling resolution.

- using markers.
- use of sync lock and track lock.
- find gaps in the timeline.
- learn to move clips.
- extract and delete segments.
- understand transitions.
- edit points and handles.
- adding video transitions
- use a/b mode to fine-tune a transition.
- adding audio transitions.
- working with effects.
- use of composition techniques in your projects.
- video typography essentials.
- four-point editing.
- learn re-timing, replacing clips and footage.
- use of nesting sequences.
- comprehend trimming.
- the multi-camera processes.
- create a multi-camera sequence.
- understand switching multiple cameras.
- setting up the interface to work with audio.
- examining audio characteristics.
- adjusting audio volume/ gain.
- normalizing audio.
- create a split edit.
- adjust audio levels in a sequence.
- work with audio mixer.
- adjusting eq.
- applying effects in the audio mixer.
- clean noisy audio.

- color-oriented workflow.

- learn about color-oriented effects.

- learning exposure, color balance and gradient .

- overview of export options.

- export single frames.

- export a master copy.

- work with adobe media encoder.

Section 1: Introduction to Adobe Premiere Pro

5. Adobe Premiere Pro
5.1. About Adobe Premier Pro

Adobe premiere pro is used for performing video editing tasks to a high-resolution video. It is also the part of the Adobe Creative Cloud. Users can create videos and can also edit the template according to requirements. A simple video may consist of video clips,

In the year of 1991, the adobe premiere was launched. The Adobe Premiere Pro is the successor of Adobe Premiere, and it is launched in 2003. The first user of Abode Premiere Pro was CNN in 2007, it was used to edit films and to add some transitions, effects and audio mixing to films.

Uses

There are many ways to use the Adobe Premiere Pro to create a video accordingly the requirement. Some of the editing tasks are given below:

Multi-Clips to One Video

Premiere pro is a professional tool to adjust and combine the multiple videos at a same time just to make composition. You can edit the video by importing different types of video, graphics, objects, vectors and audio and assemble them in a timeline panel.

Build-Up Effective Transitions

Transition implementation can be done by adding effect between two clips, you can add effect transition from Effects presets. Templates are also available for adding clips in them, Premiere pro have built-in templates but if needed it can be downloaded from different websites.

Color Correction

By help of Premiere Pro, you can set the required percentage of contrast, brightness and color modes by adjustments of keys.

Audio Mixing

Audio Mixing and editing is the process to add up your selected audio tracks to create a professional and unique video with the help of programs features and tools for audio editing.

Export Composition

After completion of editing, you have to add your composition in a render queue. From where video/project can be export in any format with high-resolution.

5.2. Install and set the workplace

- Download the Adobe Premiere Pro CC set-up from the Adobe website.

- Open the **Set-Up** and select the following options and click **Continue:**
    1. Select language
    2. Browse Installation location

- **Note**: Click on Continue after select language and location.

- **Sign-up** with your E-mail to register account.

- Adobe premiere pro **successfully installed.**
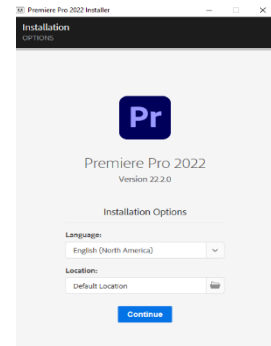
Figure 1: installing
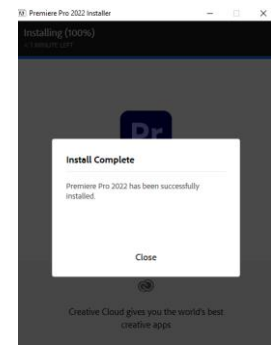
Figure 2: installing

2.3. Understanding Non-Linear Editing

As we know that, editing can be consist of different types. Video Editing is the process of utilize and reorder the clips. This process usually considered as to manipulating the clips to make a whole new project. It is also used as a part of Postproduction Process to show the purpose of working on project. In this process user can perform tasks like change the color of desire object, alignment of different shapes and can also edit the audio and sound mixing techniques.

Video Editing Process consist of different transitions from one clip to another. Clips are meant to be join together with the smooth transition effects. User must focus on the time and conditions of editing process between the media files. Video should be constructed with the equal flow of rhythm, music and tunes.

Editing should be considered as the major part of Media Production and a most necessary task to enhance the work field.

Types of Video Editing

There are two types of Video Editing process to edit your project, which are given below:

- **Linear Editing**
- **Non-Linear Editing**

Linear Editing

The process in which selecting, rearranging and modifying the recorded images and sounds in ordered sequence is known as Linear editing process. The recorded media/films are captured by camera or may produce from graphic machines. By using cut and splice method like magnetic tape on which both sound and picture is recorded can be cut into pieces to rejoin them with another clip to make different compositions.
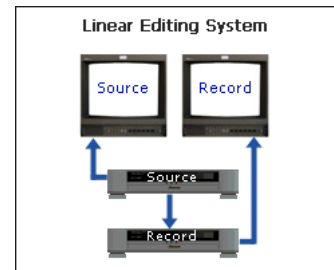
Figure 3: leaner editing

Non-Linear Editing

Non-Linear Editing can be described as process in which uploading a media into a computer machine from a digital tape. This process creates new tape for further editing. By storing all the command from the operator. Non-linear editing allows manager to copy, paste and cut part of video clip as per requirement to make any changes.

In non-linear edit process, editing is done and specified by a video editing software. You can apply different type of modifications to your project by doing specified editing steps. This is process is more reliable to perform editing than to modify the original content directly with the linear editing process.

After execution of this process all the manipulating effects, sound mixing effects implement on a file. The original digital image on the disk is unchanged.

Figure 4: non-leaner editing

This process technique required all assets and data available and imported on video server. Non-linear enable the user to edit each frame of video in a digital clip. It also not required to play or scrub through the footage layer to pick up the desired path.

It is the idea of cut and paste techniques. However, with the usage of NLE systems, the hardship of break the film negatives is become easier to convert into a non-linear editing. User can also view the composition as a video/audio, it can also be known as desktop video.

2.4. Understanding the workflow

Video editing workflow can be explained as that project must go through after shooting and before it released.

A single user manages all the requirements and elements that require to finish a project. Editing consists of transitions of clips, audio mixing, visual effects, color correction and soundtrack selective media file and its placements.

Figure 5: work flow

2.4.1. Steps of Video Editing Workflow

Footage

Collect and gather all the footages together during the filming such as TV shows or films, this is long term project work. There is also a shorter project like music videos and commercials. You video editing work will start as soon as possible footage received.

Footage Formation and Storing Data

After receiving a footage, it must be properly formatted and organized, and cataloged so it can be easily found later.

You must backed-up your data in multiple external drives in a labeled folder. For further assurance use the cloud storages, it will keep your files save in case your personal drives got destroyed.

Assembling Footage

This is up to you how you creatively organize your footages into a composition to give a rough cut which is also known as assemble cut. User got opportunity to experience the visual pacing of final result.

Final Rough Cut

Once you have finished the visual rough cut you must go through your rough cut several times in order to make it more efficient. Just not pay attention to unimportant parts of the project like sound,

effects these all are behind the scene. Mostly look for shot scenes selections, cut points, and the flow of the video how it should be assembled. Must notice the changes you want to make.

Completion of organizing the final data you should "picture Lock" your project. This means committing to not rearranging any clips so you can move on other part where you can edit with the effects and sound mixing without having to re-do.

VFX (VISUAL EFFECTS)

Let come to the next step to add some special visual effects to you project to enhance the look of your project. This could be adding small elements, shapes some virtual world creature to make your project visually supported. Color correction is the main feature in the video because this theory is all about the color sense different object with different tone of color gives odd look, so by setting the levels, saturations and color effects to give a specific feel or mood under the visual effect category.

Sound Mixing

Sound mixing is the last step to play with. You should wait to take a last look on your project to add audio according to the video. You have to ensure that you can hear all the sound elements in the frame. You also have to drop the sound track here after selecting one that fits the mood.

Final Evaluation

Before you send your project into the work field, have a watch-through at least twice. Try to figure out and listen for anything that may be missed or misplaced. This will help you avoid embracing mistakes, like boom mic shadows in the frame or out-sync audio.

Section 2: Project Setup

2.5. Setup your first project

- **Open** Adobe Premiere Pro.
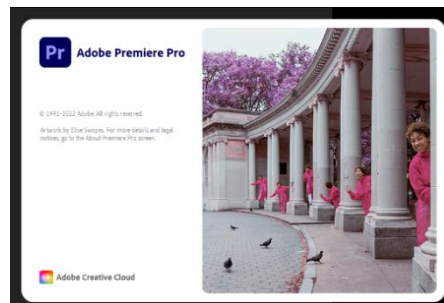
Figure 6: Open Adobe Premiere Pro.

Set the Workplace

- **Create New Project**

    Create a new project or you can also open/import existing one.
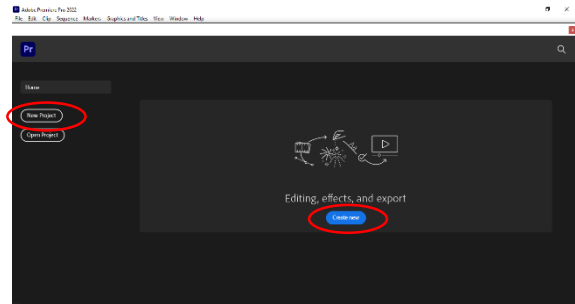
Figure 7: new project
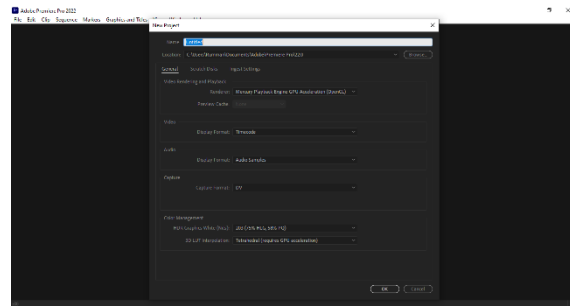
- To start or create a new project, click on the new project/create new in a home panel.

- Choose/select a name, designate a location for save a file/project, and then click OK.

- **Know about Importing Assets**

    To import the clip into the Premiere Pro workspace, browse from your desktop then select the clips by Double click or you can right-click on Import Media File Section.
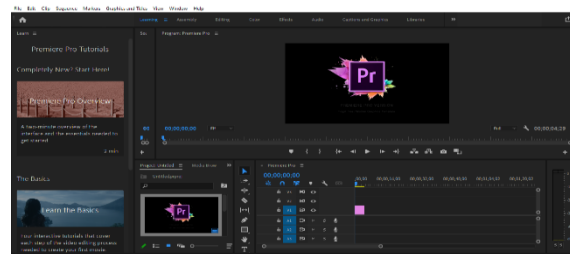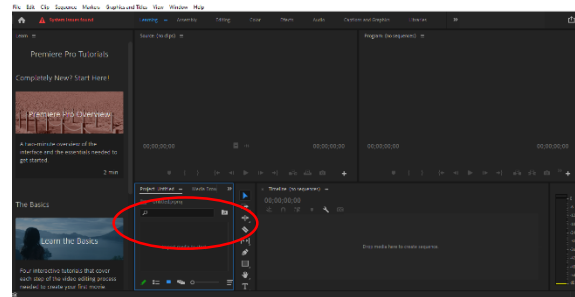
- **Working with Media Browser**

    Once you import your media, drag and drop media file to timeline. Now you can edit your media.

2.6. Understanding Media Cache

After importing a media file like video and audio into Premiere Pro, it indicates versions of the files so it can readily access for the faster performance. This is called **media Cache.** These files are stored in Media Cache Files folder. Database folder also located there which develop link between the media cache files.

By clearing all old and used media cache files will help to maintain the optimal performance of the system. These deleted files recovered when source media requires them.

2.7. Capturing the Videotape

- You capture digital video from a live camera or from tape: you record it from the source to the hard disk. Many digital camcorders and decks record video to tape. You capture the video from tape to the hard disk before using it in a project.

- Use the Capture panel (choose File > Capture) to capture digital or analog video and audio.

- This panel includes a preview, which displays video being captured, and controls for recording with or without device control.

- The Capture panel also contains a Settings pane for editing your capture settings, and a Logging pane for logging clips for batch capturing.

- For convenience, some options available in the Capture panel are also available in the Capture panel menu.

Capture Setting.

- With a project open, choose File > Capture, and select the Settings tab.

- In the Capture Settings pane, click Edit

- In the Capture Settings dialog box, select an option from the Capture Format menu.

- Click OK.

Set Capture Preferences

- Choose Edit > Preferences > Capture (Windows)

- Specify whether you want to cancel capture on dropped frames, report dropped frames, or generate a batch log file.

- If a device controller is installed, Premiere Pro can record the time code supplied by the controller instead of recording any time code written to the source tape.

Set Tracks for Capture

- To open the Capture panel, select File > Capture.

- In the Capture panel, click the panel menu.

- Select Record Video, Record Audio, or Record Audio and Video, depending on the option desired.

Section 3: Organizing Timeline
2.8. Working with Bins

You can use bins in the following ways:

- To store offline clips for batch capture.

- To store main sequences and backup sequences.

- To organize files by type, such as video, still images, and audio files.

How to Create Bin

- In project pane, Click New Bin or

- Right-click inside the empty area of project panel and choose New Bin from menu.

- New Bin is created.

- You can rename it.

- Click outside the Bin.

- Done.
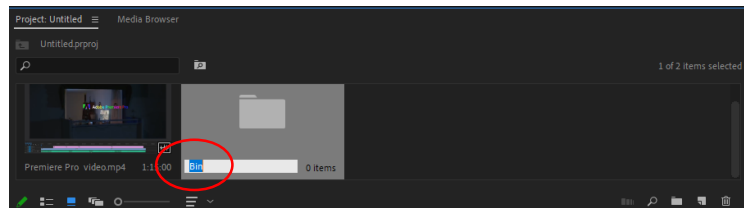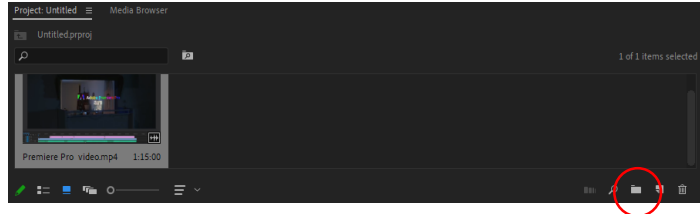
Adding, deleting, and opening bins

- To add a bin, click the New Bin button ▭ at the bottom of the Project panel. You can also use the keyboard shortcut Control+/ (Windows) or Command+/ (MacOS).

- To delete one or more bins, select the bins and click the Delete icon 🗑 at the bottom of the Project panel.

- Double-click to open a bin in its own dock able panel.
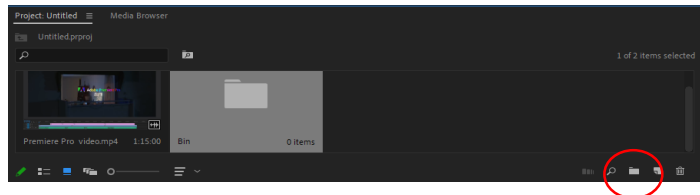
2.9. Organize Media Content in Sequence

User can view bins in the project panel using the following steps:

- **List View:** Bins are listed vertically in the given list. By clicking the arrow bin will be open and view all the files inside each of the bin.

- **Icon View:** Bins are listed horizontally in folders. Click the folder to see the files inside of bins.

- **Freeform View:** This view is used to organize bins and files in any way you like to.

2.10. Modifying Content

- To move an item into a bin, drag the item to the Bin icon.

- To display the contents of a bin, in List view, click the triangle beside the Bin icon to expand it.

- To show the contents of an enclosing (parent) bin when you're viewing only the contents of a nested bin, click the Parent Bin button 🔼 in the Project panel. You can continue to click this button until the top-level contents of the Project panel appear.

- To open or close more than one bin at a time, Alt-click (Windows)

Section 4: Working with Clips and Markers

2.11. Program Monitor Controls

Source and program monitors give you access to view video and edit the files sequences.

Program Monitor plays back the sequence of clips you put together. Your active sequence view in the timeline panel. You can set sequence marks and specify the sequence of points and exit points. Sequence points and exit points define where frames are added or removed from the track.

Each monitor contains both a time ruler and play controls and activates the current source of the source clip or sequence. Set In In and Out points, go to in and out points, and set markers. The Insert and Override buttons are available in Source Monitor, and the Up and Remove buttons are available in the Monitoring System, automatically. Each monitor also contains a Free Export button for static creation from a single video frame.

Customize the Monitor Panel Button Bar

- To open the button editor, click "+" at the lower right of a monitor.

- Add buttons to the button bar by dragging them from the button editor.

- Up to two rows of buttons can be added.

- Spaces to separate groups of buttons can also be dragged to the button bar.

- To remove a button, drag it away from the button bar.

- To turn off all buttons, go to the panel menu and deselect "Show Transport Controls."

2.12. Controlling Resolution

Display Quality

Some formats are difficult to display in full motion play, due to their high compression or high level of data. Low resolution allows for faster motion playback, but with a higher image quality. This trade is most visible when viewing AVCHD and other H.264 -codec-based media. Under full correction, these formats have closed error correction, and are common artifacts during play. These artifacts, however, do not appear in the posted media.

Not all resolutions are available for all types of sequences. According to Standard Definition, such as DV, only Full and 1/2 are available. In most HD sequences up to 1080 frame sizes, Full, 1/2, and 1/4 are available. For sequences with a frame size larger than 1080, such as RED, multiple fractional adjustments are available.

Perform the following steps

- Right click the image in the **Source Monitor** or **Program Monitor**.
- Click the **Panel Menu** icon in the **Source Monitor** or **Program Monitor**.
- Click the **Settings** button in the **Source Monitor** or **Program Monitor**.

Also:

- To set playback resolution, select **Playback Resolution**.
- To set paused resolution, select **Paused Resolution**.
- From the menu, select the resolution desired.

2.13. Using Markers

What are markers?

Tags are tabs that allow you to identify important parts of a video by color or note. In fact, they work just as well as the sticky notes in real life. The feature is ready to keep you organized in Premiere Pro.
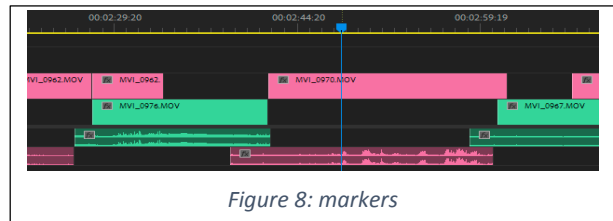
Figure 8: markers

If you use markers, these will not provide your video during export. Therefore, you can use them freely without touching the completed project.

To add a tag to Premiere Pro, tap the M key on your keyboard wherever you have a panel with a timeline selected. You will find a new tag in the playground, which you can label accordingly. You can also use the Add Mark button under any monitor.

If you do any of the above while selecting a particular clip, Premiere Pro will use the tag in the clip itself — not the timeline. This allows you to move a clip while taking the tag along with it.

Use of markers

- The panel titled **Markers**.
- The **Marker Editor** window.

You will find a tag panel near Effects, Metadata, and more. Before doing anything else, access the drop-down menu of the panel by clicking on the three horizontal lines.

This panel is useful because it allows you to view the entire project without interruption. If you see something you want to fix, press M on your keyboard to go back later.

The text field displayed in the zoom glass in the upper left corner of the panel is where you can search your tags to extract what you need. This will make it easier to put your first meeting cut together.

Change markers Label

With a single double click of your tags in the timeline, you will see a Tag Editor window. This is where you can use color labels, and label different activities with different colors.

You can also give each mark a name. Other options include adding metadata and keywords to the comment section, which will help you check your assets. Additionally, you can adjust the duration of the marker.

2.14. Use of Sync Lock and Track Lock

Now that we have two tracks on the timeline, we should talk about Sync Lock and Track Key. Sync Lock is automatically enabled for all tracks and ensures that all tracks are equally affected by certain changes made to any track.

Figure 9: locks

For example, note that the title of St. Basil is found just above the clip of St. Basil, 16 seconds straight to the video a_icon.jpg. If I put in a five-second introduction to V1, I would still want the title of St. Basil is found on top of a compatible clip, and with Sync Lock enabled for both tracks, Premiere Pro will move both clips for five seconds to the right. Perfect; just what we wanted.

To Enable and Disable Sync lock

- Sync Lock is enabled by default. To disable Sync Lock, click the Toggle Sync Lock button A. When you see a line over the Sync Lock icon, Sync Lock is disabled.
- To enable Sync Lock, click the Toggle Sync Lock button A. When the line disappears, Sync Lock is enabled.

To Enable and Disable Track lock

- To lock a track, click the Toggle Track Lock Button A; the lock icon closes, and Premiere Pro displays a diagonal line pattern on the track.

- To unlock a track, click the Toggle Track Lock button; the lock icon opens A and the diagonal line pattern disappears.

2.15. Find Gaps in the Timeline

Just before you release your final sequence to send to your client, you should quickly run this quick tip to make sure there are no hidden spaces (or 'dark frames') in your setup.
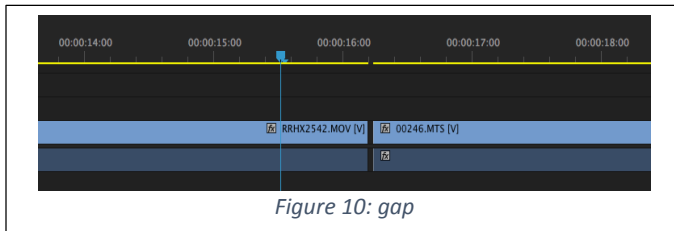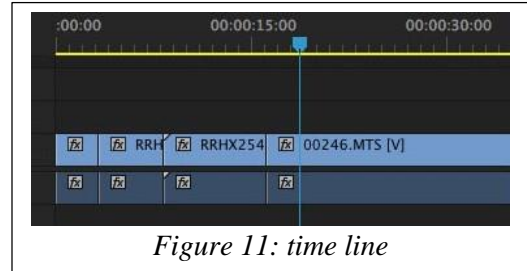
Figure 11: time line

Figure 10: gap

More often than not, it is much easier to tell where the gap in your sequence is because you will see a clear break in the yellow line above the timeline. But if you look at the picture above, you will notice that (at this zoom level) you cannot tell that there is a black gap of one frame in the left layout of the play title.

But the closer we get, the clearer it becomes. But it is unlikely that you will close your timeline as close as possible to hunt for single frames, especially in a long, complex system. Thanks for not having it, thanks to the 'Go To Gap' feature inside Premiere Pro.

To find gaps of any length in your sequence:

- Click on Sequence> Go to Gap> Next in order to get the first gaming title gap.

- As you can see in the picture above, you can also use the SHIFT + G keyboard shortcuts
  in Next Sequence and ALT + G Previous Sequences.
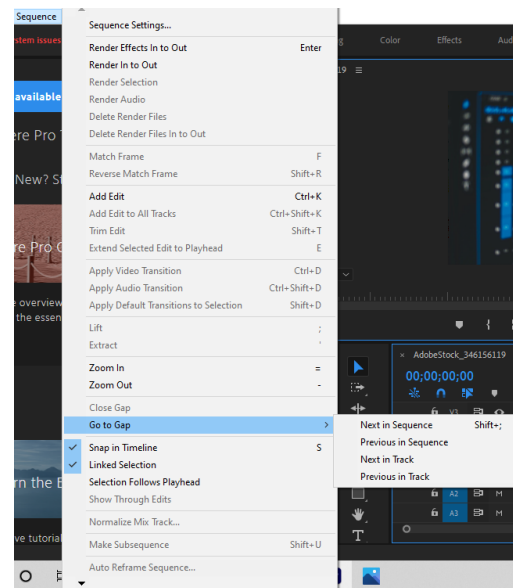
Figure 12: go to gap

2.16. Moving Clips

There are a variety of keyboard shortcuts and tools you can use to move all or some of your clips to Premiere Pro. The simplest is Control + A (Windows). Using this keyboard shortcut with the active timeline panel will

select each clip in your timeline. You can click and drag these clips left, right, up, or down.
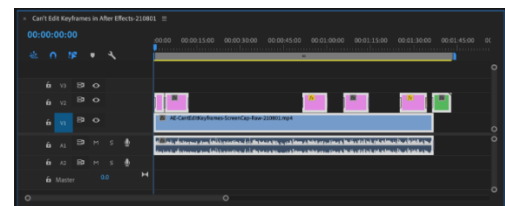
2.17. Extract and Delete Segments

Cutting, obviously, is one of the most important parts of planning. The main function of the editing software is to cut the pieces and arrange them in a certain order to create a story.

Then, after everything has been set up, you may need to cut back even longer and include more videos and audio tracks.

Three distinct ways to manipulate and cut up video on your timeline:

- The Razor Tool
- The "Ctrl + K" Shortcut Splitting
- Ripple and Trim Cutting

There are other cutting methods, such as slide and slide, we will look at some basic editing tools. We truly believe that these editing tools of these tools are an important step in understanding how editing works.

The Razor Tool

The Razor tool is also very useful when working with multiple times with multiple tracks because you can select the clip you want to cut by placing your razor on it. So, if you need to do a lot of cutting in sequence, Razor is a work tool.

It can also be difficult to apply to a separate timeline, and it may cut a few frames that you did not intend to cut. It's not part of my editing process as I basically use the ctrl + K method (we'll get to that next), but everything is in its proper place.

Split the clip at Play-head

The way Play-head Splitting works is that when you enter Ctrl + K while clicking on your timeline, the command separates your selected clip right into the play title tag.

You can also hold shift and Ctrl + K, which will cut all playback tracks, not just selected ones. This is great if you have a lot of tracks on your timeline and need a cut that covers everything on the go

Ripple and Trim Cutting

Whether you are a Razor tool user, whether you are a Razor tool user or a K + K fan, it does not mean that Ripple and Trim tools are useful for cutting or extending the ends of clips.

If you want to cut or extend the end of a clip, move your cursor to the end of the clip and drag it when you see the red block arrow appear. You can also select multiple clips in your timeline that

you will adjust if you try to minimize multiple tracks to a specific location. Like anything, these are just ways to save time.

If you trim the clip and want to "remove the ripple," when the clip next to the cut clip arrives at the editing point, you can achieve this by going to the end of your clip and cutting it while holding the shift. Follower of + K, does not mean that Ripple and Cut tools are useful for cutting or extending the ends of clips.

If you want to cut or extend the end of a clip, move your cursor to the end of the clip and drag it when you see the red block arrow appear. You can also select multiple clips in your timeline that you will adjust if you try to minimize multiple tracks to a specific location. Like anything, these are just ways to save time.

If you trim the clip and want to "remove the ripple," when the clip next to the cut clip arrives at the editing point, you can achieve this by going to the end of your clip and cutting it while holding the shift.

Section 5: Transitions and Effects

2.18. Understand Transitions

Group changes are one of the most important of all videos. If left unmanaged, they can be left astray and lose the right path.

Transition implementation

To create a cross dissolve, search for a feature in the project window. The melting of the cross should occur and all you have to do is drag and drop the result between the two scenes that you want to change. Then you can plan the cross melting of the timeline to make it longer or shorter depending on your needs and preferences.

There are many other changes you can use like page layout, deletion and much more. Just use any change that best fits your video.

Edit points and Handles

One of the areas where Adobe has worked hard to improve Premiere Pro is decisive. Determination fixes the area where the two clips touch; this is also called a "planning point."
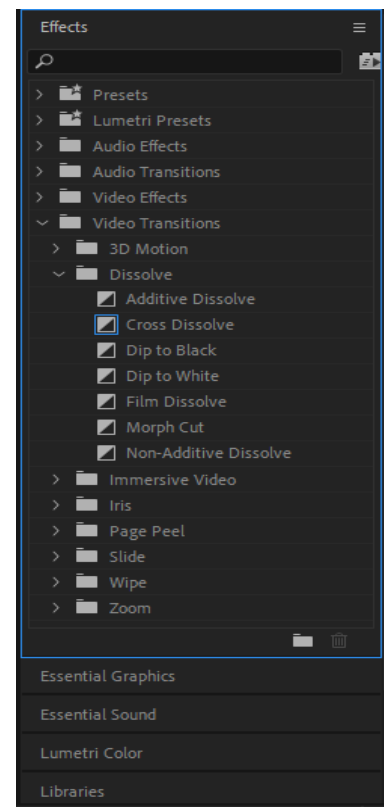
Trimming

Editing is the process of getting all our clips in the right order in the Timeline. Determining is the process of correcting a point where we switch between clips so that both action and story flow smoothly from one clip to the next.

As with all planning activities, there is both a creative decision and a technical ability. While Premiere can help you technically, it can make the technical decision-making process much faster At Premiere, there are five ways we can decide where two clips apply:

- Cut Out

- Cut In

- Ripple the Out

- Ripple the In

- Roll on both In and Out

There are two images we want to edit.
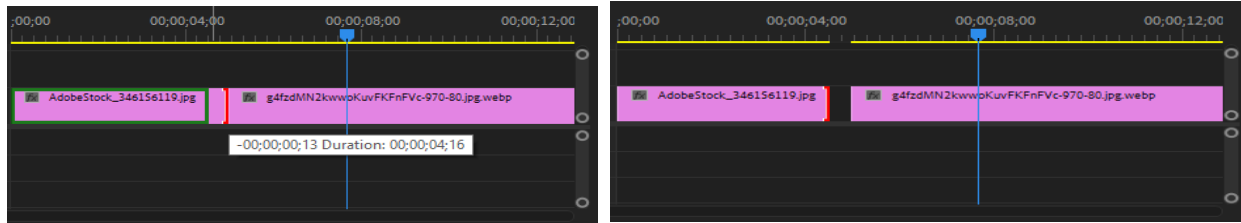
Using a cursor, when we click on a clipboard in the editing area, the edge we click (this time Out) has a red highlight. It means that we decide to go out. However, when we trim, we can only pull the Exit left which makes the clip shorter, not the right, which can make the clip longer. Worse, when we remove the Out, we leave a gap. Spaces cause dark light, and producers are very frustrated when dark light flashes in their system.

2.19. Adding Video Transitions

What are Transitions?

The transformation effects of Premiere Pro are how you can combine two clips together. These are used to speed up your editing or create a visible interest in your clip (which is often used in Vlogs and travel videos).

Changes are added at the end of the unused clip and are transferred to the beginning of your next clip to ensure a smooth transaction from one clip to another.

Steps to Add Transition

To choose an effect in Premiere Pro, simply click on the Effects Panel and either browse for your transition in the selection, or simply search for a specific transition in the search bar.
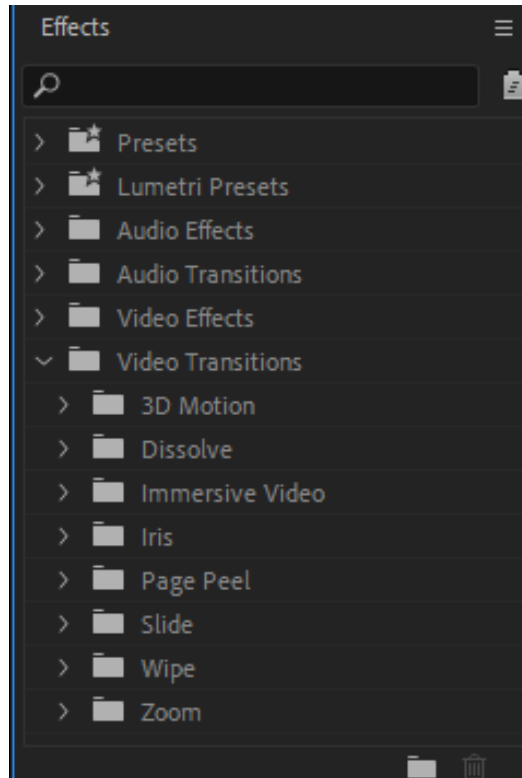
Or, you can right click on the end of the clip and choose Apply Default Transition.
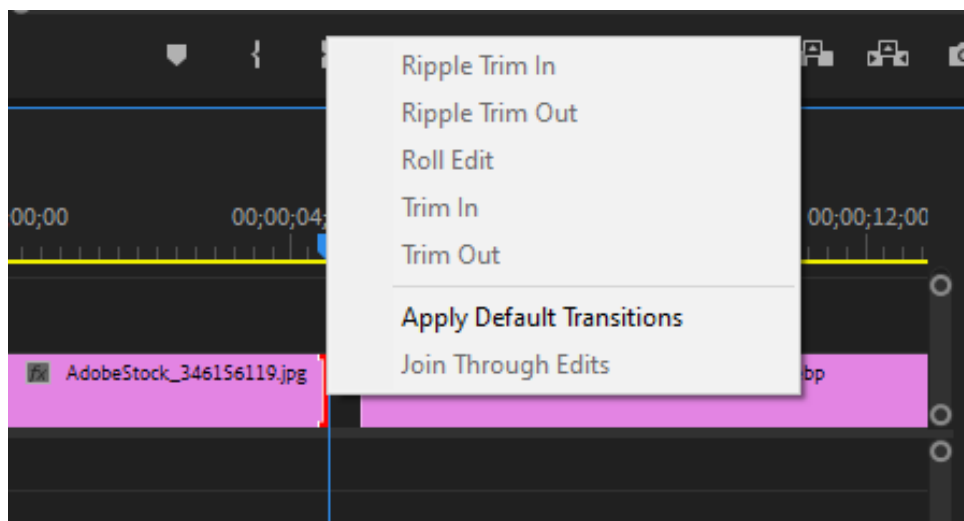
2.20. Use A/B mode to fine-tune a Transition

You can use the Effects Control panel to change the settings of your sequence. Change settings vary for different changes. For more information.

In the Effect Controls panel, transition and clipboard are displayed in A/B format.

A. Play the Transition button

B. Transition preview

C. Edge selector

D. Clip previews

E. Start and End sliders

F. Transition settings

G. Clip A (first clip)

H. Transition

I. Clip B (second clip)

J. Current-time indicator
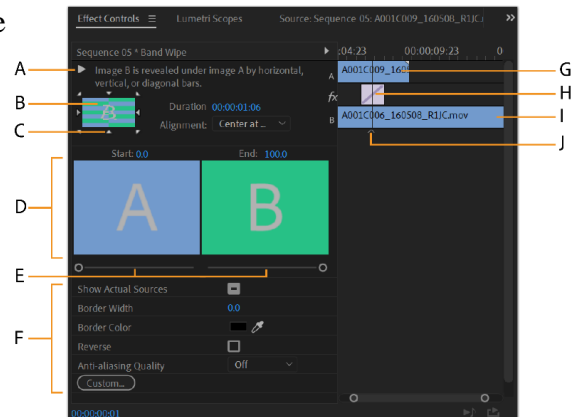
- To open the transition in the Effects control panel, click the transition in the Timeline panel.

- To preview the transition in the Effect Controls panel, click the Play the Transition button. This doesn't affect the Program Monitor.

- To view frames from the actual clip or clips in the Effect Controls panel, select the **Show Actual Sources** checkbox.

Align the Transition

To align a transition using the Timeline panel, do the following:

- In the Timeline panel, zoom in to see the transition clearly.

- Drag the transition over the cut to reposition it.
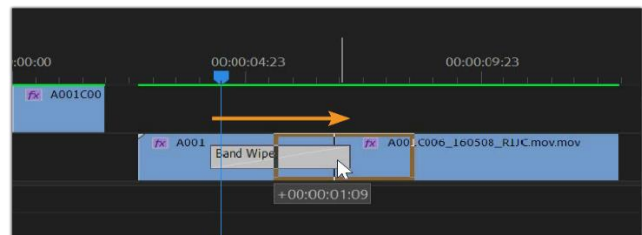
Align the Transition Using Effect Panel

1. To open a transition in the Effect Controls panel, click the transition in the Timeline panel.

2. Do one of the following:

Choose an option from the Alignment menu:

- **Center at Cut or Custom Start**: The transition's start and end points move equally in opposite directions.

- **Start at Cut**: Only the end of the transition moves.

- **End at Cut**: Only the beginning of the transition moves.

In the Effect Controls time ruler, position the pointer over the center of the transition until the Slide Transition icon ⊕ appears. Drag the transition as desired. For finer control, magnify the time ruler.
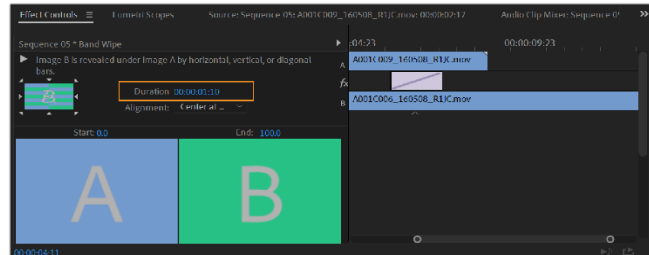
Cut and Transition

You can adjust the location of the cut in the Effect Controls panel. Moving the cut line changes the In and Out points of the clips but does not affect the length of the movie. As you move the cut, the transition moves with it.

- To open the transition in the Effect Controls panel, click the transition in the Timeline panel.

- In the Effect Controls time ruler, position the pointer over the transition, placing it on the thin vertical line that marks the cut. The pointer changes from the Slide Transition icon ⊕ to the Ripple Edit icon ⊹.

- Drag the cut as desired.

Change Duration of Transition

You can set the duration of the change in the timeline panel or in the Effects Control panel. The default duration of the change is initially set to 1 second.

Extending the transition duration requires one or both clips to have enough cut frames to handle the long transition. For more information, see clip handles and changes.

Change Duration of Transition in Timeline Panel:

To change a transition in the Timeline panel, do one of the following:
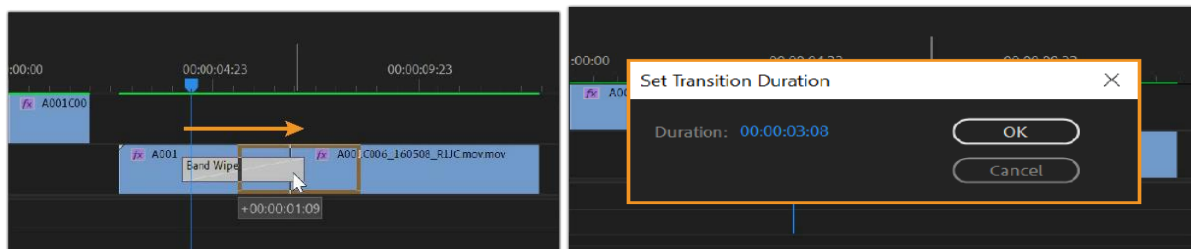
- In the Timeline panel, position the pointer over the end of the transition until the Trim-In icon ⊬ or the Trim-Out icon ⊬ appears; then drag.

- You can also double click the transition in the Timeline. A Set Transition Duration dialog box appears. Drag the Duration value, or select it and type a new value. Click OK.

Change Duration of Transition in Effects Panel

To open the change in the Effects Control panel, click the change in the timeline panel.

Do one of the following:

- In the Effect Controls timeline, place the cursor over the change until the Nqamula icon or Nqamula icon; then drag.

- Drag the Duration Time, or select it and type a new value. How the transition changes in length depends on the alignment option currently selected. For more information, see Adjusting Changes.
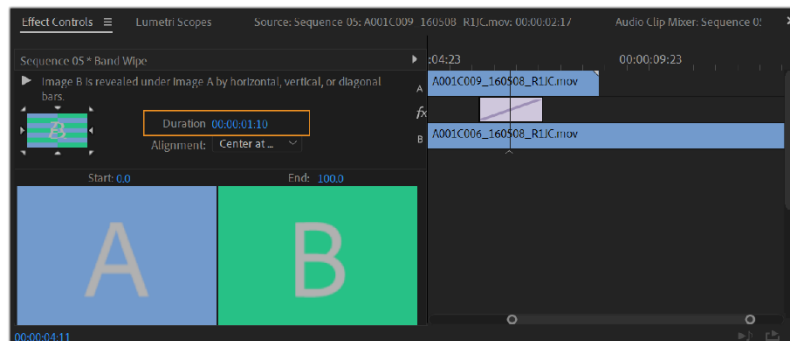
Set Default Duration of Transition

If you change the default duration of a transition, the new setting has no effect on existing transitions.

- Choose Edit > Preferences > Timeline.

- Change the value for the Video Transition Default Duration or Audio Transition Default Duration.

- Click OK.

Change Transition Setting

To open the transition in the Effect Controls panel, click the transition in the Timeline panel. In the Effect Controls panel, adjust settings:

- **Edge Options**: Change shape or change direction. Click the Edge selector arrow on the transition icon. For example, the Barn Doors rotation can be directed vertically or

horizontally. The version does not have Edge options if it is in single mode or if the mode is not active.

- **Start and End Slides**: Set the percentage of changes completed at the beginning and end of the transition. Hold down the Shift key to move the start and end slides together.

- **Show Original Sources:** Displays the first and last frames of the clips.

- **Border Width:** Adjusts the width of your choice for the variant. Default border None. Some changes have no limits.

- **Border Color:** Specifies the color of the transition border. Double-click the color swatch or use the eyedropper to select a color.

- **Undo:** Plays reverse. For example, the Clock Delete version plays the opposite of the clock.

- **Anti-Aliasing Quality:** Fixes a smooth transition edge.

- **Custom:** Changes the settings for change. Most versions do not have custom settings.

2.21. Adding Audio Transition

You can apply crossfades for audio transitions between clips. An audio fade is analogous to a video transition. For a crossfade, you add an audio transition between two adjacent audio clips on the same track. To fade in or fade out, you add a crossfade transition to either end of a single clip. Premiere Pro includes three types of crossfade: Constant Gain, Constant Power, and Exponential Fade.

Specify Default Audio Transition

- Right-click (Windows) either Constant Gain or Constant Power in the Effects panel.

- Choose Set Selected as Default Transition from the context menu.

Specify Default Duration for Audio Transition

- Choose Edit > Preferences > Timeline (Windows)

- In the Preferences dialog box, enter a value for the Audio Transition Default Duration.

Crossfade Transition Effect

If necessary, click the triangle to the left of each track name in a Timeline panel to expand the audio tracks that you want to crossfade.

Make sure that the two audio clips are adjacent, and that both clips are trimmed.

Do one of the following:

- To add the default audio transition, move the current-time indicator to the edit point between the clips, and choose Sequence > Apply Audio Transition.

- To add an audio transition other than the default, expand the Audio Transitions bin in the Effects panel and drag the audio transition to a Timeline panel, on the edit point between the two clips you want to crossfade.

Adjust an Audio Transition

Do any of the following:

- To edit an audio transition, double-click the transition in a Timeline panel and adjust the transition in the Effect Controls panel.

- To customize the rate of an audio fade or crossfade, adjust the clip's audio volume key frame graph instead of applying a transition.

2.22. Working with effects

Add Transition Effect

These are added to the beginning or end of a clip to create a dynamic, animated link to the next clip.

- Locate the point the two clips meet.
- Choose the transition you wish to use from the Effects tab.
- Drag the transition to the point between the two.
- Drag the ends of the FX layer out to create the length of the transition.
- Use the Effects Control panel to adjust your transition.

Add Visual Effect

These are added directly to a clip and can be combined to expand your editing capabilities further.

- Choose the one you would like to use from the Effects tab.
- Drag it to the desired video.
- Use the Effects Control panel to adjust your transition with more precision.

Effect Presets

When FX is used the settings will be automatically, and you will need to adjust them according to your needs. If you wish to use the same one with the same settings for all clips or projects, sometimes it is much easier to use the preset.

- Add your FX in one clip, and adjust all settings according to your needs.
- In the Effects Controls panel select the one (s) you want to return to the previous set. If you select multiple FXs, hold the command / control button on your keyboard and click on each one.

- Right-click and select Save Settings. FX and its settings will be integrated into its own set and added to the Results panel. You can now drag and drop this preset to use it on another part of the project if needed.

2.23. Use of Composition Techniques in your Projects

- Meaningful arrangement of objects (e.g. images, shape, type)
- Your design should tell a story (and without having to explain it)
- Send message by view
- Create impact and attract the attention of viewers

Graphics workspace

- Click Graphics in the workspace bar at the top of the screen or choose Window > Workspaces > Graphics from the main menu.

2.24. Video Typography Essentials

Easily create titles directly to your video using the Type tool in the Essential Graphics panel in Adobe Premiere Pro. Add shapes, text, photos, and videos to layers that you can rearrange and customize with familiar tools.

Select a Motion Graphics template

- Browse in the Essential Graphics panel to the Titles folder and double-click to open the folder.

- Drag the Film Presents Motion Graphics template onto a video track in the Timeline, where it becomes a clip with the default duration.

- Adjust the clip's timing and duration to suit your footage.

- You may wish to add a transition to improve the way the title appears in your sequence.
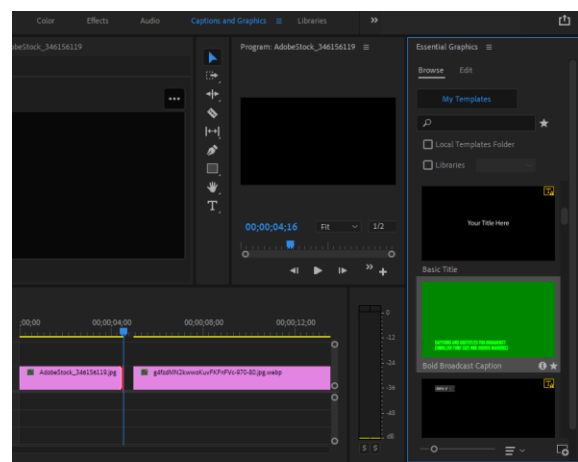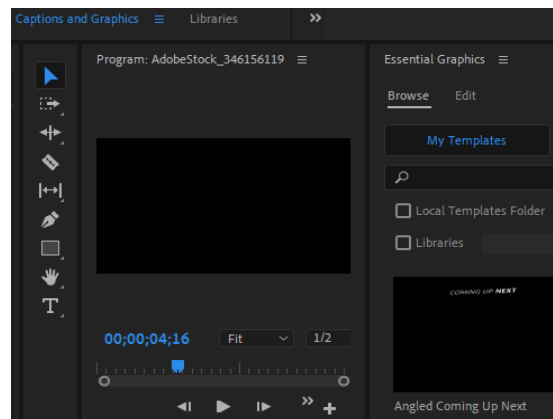
Section 6: Advanced Editing Techniques

2.25. Four-point Editing

Four-point editing will have IN and OUT points in both the clip AND the timeline. However, as you can photograph it is very unlikely that the length of the clip from IN to OUT and the length of the space in the timeline from IN to OUT will be the same.

So, because of these differences, when you hit a point or a full stop (.) To type over a clip in the timeline you get the 'Fit Clip' option box.

This box tells you, 'OK, the IN and OUT clip points will not match the IN and OUT you specified in your timeline so what do you want me to do about it? The default setting is to ignore the sequence point (timeline) OUT and allow the clip to flow down the timeline, but what do you want? '
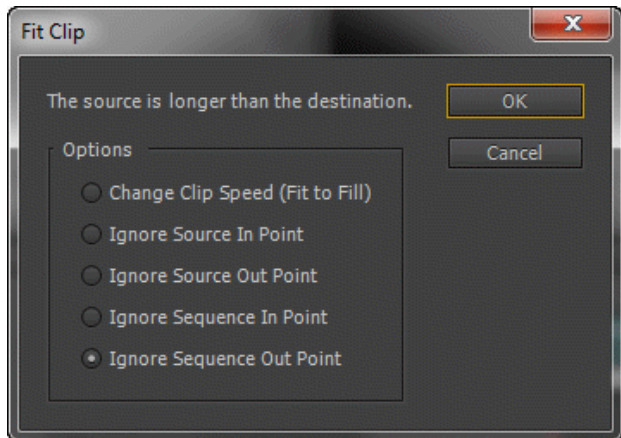
As you can see the options include ignoring both clip and sequence (timeline) points IN or OUT or - at the very top - 'Change Clip Speed (Fit to Fill)'. This option will speed up the clip to fit in an area smaller than the clip length OR reduce the clip if the clip is shorter than the place you want it to go in - which can be a really useful option. One note however, this option will affect the sound of the clip. Therefore, if you keep the clip too fast the sound will be higher and, if you slow down, the sound will decrease which may not be what you want to do (however, you can always release the sound afterwards). truth).

2.26. Learn Re-timing replacing clips and footage

You can replace the source video of the available media clips. Changing the source video of the clip connects it to the new source file:

- Clip conditions are stored in the Project Property panel as well as the timeline for the Expert view, and the corresponding In and Out points.
- All the applied effects are intact.

However, the clip is attached to the image instead of its original video. For example, you can change the recording to a single language song with the same pictures with different languages. All edits made to real images are retained, although the source image is replaced.

- In the Project Assets panel, select the clip for which you want new source footage.

- Select Clip > Replace Footage, or right-click/ctrl-click the clip and select Replace Footage.

- In the Replace Footage dialog box, select the new file and click Open.

- The new footage replaces the old footage. All instances of the old footage are linked to the new footage.

2.27. Use of Nesting Sequences

Nesting should be one of the most useful tools in Premiere Pro. In addition to the organizational benefits of Nesting succession, there are a few other practical reasons for providing very specific needs.

Nesting immediately brings you whatever you have selected with your chosen sequence settings. For example, a 4K video clip will be scaled down to match the 1080 sequence it contains.

The exchange between scenes is also now more controlled. Instead of messing with the gloom of time to get it right, you can just throw one at the end of your nesting sequence and call it a day.

The nesting sequence is also really helpful if you have a complex slug that makes you appear multiple times throughout the project. You can change the world by entering the first once and without worrying about missing an event.

2.28. Comprehend Trimming

Clips can be edited in the Source Monitor, Program Monitor, or on the timeline. You can trim clips by dragging the edge of a clip. A clip's "edge" is a clip's In or Out point or edit point. You can edit multiple clips at the same time. Specialized tools allow you to trim an edit point easily and accurately, reducing the number of steps involved and maintaining the integrity of the sequence.

- Drag and drop the video clip in the timeline to get started with the editing.

- Tap on the Razor tool shown immediately to the left of your timeline. Afterward, from the timeline, click on the exact point of the video where you need to trim from. At this point, the video will be divided into two separate clips. You may place more cuts with the Razor tool to filter out the complete portion of the video that you want to trim.

- Tap on the Selection tool and right-click on the partitioned video clip that you need to remove. From the list of actions, select 'Ripple Delete' to remove this section. A ripple delete will automatically join the surrounding portions of the video to remove any empty space.

- Lastly, you must export this finalized version of the video to make the trim permanent. Go to the 'File' menu and tap 'Export'. Next, select 'Media', enter the appropriate information including the file name and press 'Export' once again.

Section 7: Multi-Camera Editing

2.29. The Multi-Camera Process

Editing with multiple cameras may seem like a daunting task especially because there is a different feel and flow of work in your normal editing processes. However, the design of the Premier Pro Multi-cam is incredibly straightforward!

As the multi-camera and split screen layout are sometimes confusing. In setting up a split screen, you work with multiple clips that are displayed simultaneously. On the other hand, editing happens when you have different angles of the same theme - all recorded at the same time. The process allows you to easily cut and move between angles with a few clicks of the keyboard.

1. Create a Multi-cam Sequence

2. Set up a sequence

    - Find your new sequence in the Project browser, right-click and choose New Sequence from Clip.

    - You'll now have one clip in your timeline, with a single audio track.

    - Go to your Button editor, then select the multi-camera editing icon, Multi-Camera View.

    - Drag the icon and drop it on your button bar.

    - Click OK to close the Button editor, then click on the multi-camera icon in the button bar to open the multi-camera view.

3. Overlay Setting

Adding overlay settings is not necessary, but we highly recommend you do it. Overlay adds a number to each clip that forms your Multi-cam clip. This lighting allows you to use hot-keys to cut between camera angles.

    - Go to the Program Monitor and click on the settings wrench icon, select Overlay Settings.

    - In the setting box, check Enable Overlays during playback, followed by OK.

    - Go back to the wrench icon and select Overlays.

4. Edit & Switch Camera Angles

2.30. Create a Multi-Camera Sequence

- Import your footage into your project.
- In the Project Browser, select the clips that you want to use in the Multi-cam sequence (hold Cmd or Ctrl while selecting multiple clips).
- Right-click one of the selected clips and click Create Multi-Camera Source Sequence.
- Name the project; we will use Intro or Question 1 (choose something that references which source clips are being used).
- Choose your Synchronize Point settings. It's most likely that you'll need to use the Audio option; leave the Track Channel at Mix Down.
- Set the Sequence Preset > Automatic.
- Unless you have renamed your clips during selection, check the Enumerate Cameras box. Click OK, and you're all set up.

2.31. Switching Multiple Cameras

There are 2 ways to edit between camera angles:

- Play through the sequence until you reach a point that you would like the camera angles to change, click on the camera angle in the Program Monitor. Premiere Pro will add an edit, switching to that angle.
- Play through the sequence until you reach a point that you would like the camera angles to change. Using your keyboard, press the number allocated to the camera angle.

To reset the angles of your camera, select Reset cameras. From here, you can easily drag and drop clips to change order. If you want to disable an angle you no longer want to use just uncheck it by clicking the check box. If you have more than 4 angles to handle, you can edit and select cameras on multiple pages, and navigate between them as needed.

With practice, editing multiple cameras can be a quick process, as you can make cuts while the video is playing.

Section 8: Editing and Mixing Audio

2.32. Setting up the Interface to Work with Audio

Although your audio hardware settings are likely to be adjusted automatically, it may be helpful to understand something about how they work. If your sound seems to work well, you can skip this step if you like.

To access these settings,

• Go to Edit> Favorites> Audio Computers.

If you have a stereo speaker setting, your settings should look very similar to the top panel. These settings will vary slightly if you have 5.1 settings, a dedicated sound card or an external audio interface.

PrPro will select your default audio output based on the default audio devices you selected in Windows / MacOS. Those devices selected for automatic release should appear at the bottom of the audio hardware panel. There are 3 options you can change on these devices.
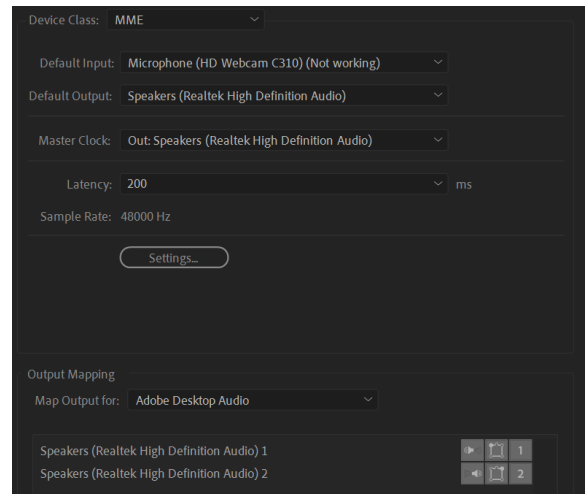
Left speaker icons tell Premiere which speaker is left or right. This is obviously very important but it should be right by default. If you would like to change it, just drag and drop the speaker icon on top of another, it will change the order around.

2.33. Examine Audio Characteristics

In Adobe Premiere Pro, you can edit audio, add effects to it, and combine multiple audio tracks in the order in which your computer system handles you. Tracks can contain mono or 5.1 surrounding channels. In addition, there are regular tracks and flexible tracks.

Normal audio track can deal with both mono and stereo in the same track. That is, when you set your audio track to Normal, you can use recordings with different types of audio tracks on the same audio track.

You can select different types of tracks for different media types. For example, you can choose to have mono clips set only for mono tracks. You can select the mono sound of multiple channels directed to Adaptive track automatically.

2.34. Adjusting Audio Volume/Gain

As you edit sequences, Premiere Pro processes audio in the following order, from first to last:

• Gain adjustments applied to clips by using the Clip > Audio Options > Audio Gain command.

• Effects applied to clips.

- Track settings, which are processed in the following order: Pre-fader effects, pre-fader sends, mute, fader, meter, post-fader effects, post-fader sends, and then pan/balance position.

- Track output volume from left to right in the Audio Track Mixer, from audio tracks to sub-mix tracks, ending at the Mix track.

2.35. Normalizing Audio

- Select the clip that you want to normalize.

- Right-click > Audio Gain

- In Audio Gain Window select Normalize max peak to.

- Set max peak to -3.

- Click OK.

- Notice adjustment in the entire waveform for that clip.
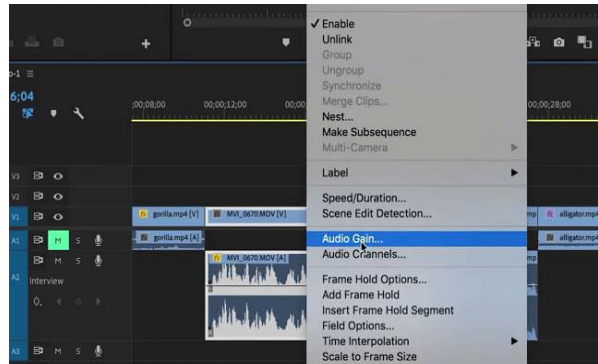
2.36. Create a Split edit

You can simultaneously split two or more layered clips (clips that overlap in the Expert view timeline).

- Switch to the Expert view timeline.

- Click Add media to import the video clips that you want to split. Or, select the video clips, if those are already present, from the Expert view timeline.

- (Optional) Click the Fit to Visible Timeline button or press \ to view all the frames in your video clips. Alternatively, zoom in to the video clips, by dragging the zoom button to the right or pressing =.

- Drag a marquee to select clips, on different tracks, that overlap at a point in time.

- Drag the current-time indicator to the frames where you want to make the split.

- Split the clips by clicking the Split Clip button adjacent to the current-time indicator line.

2.37. Adjust Audio Levels in a Sequence

Although Premiere Pro includes a full-featured Audio Track Mixer, there are times when many of these options are not required. For example, when creating a rough cut from video and audio captured together from DV footage, output to stereo tracks, follow these guidelines:

- Start with the Audio meters and volume fader in the Audio Track Mixer. If the audio is too far below 0 dB or too high (the red clipping indicator appears), adjust the level of clips or tracks as needed.

- To temporarily silence a track, use the Mute Track button in the Audio Track Mixer or the Toggle Track Output icon in the Timeline panel. To temporarily silence all other tracks, use the Solo button in the Audio Track Mixer.

- When making audio adjustments of any kind, determine whether the change is applied to the entire track or to individual clips. Audio tracks and clips are edited in different ways.

- Use the Show/Hide Tracks command in the Audio Track Mixer menu to display only the information you want to see and save screen space. If you aren't using Effects and Sends, you can hide them by clicking the triangle at the left edge of the Audio Track Mixer.

2.38. Work with Audio Mixer

Each Mixed Track Audio Sound is compatible with the timed sequence track and displays Time Line audio tracks by audio console format.

Audio Track Mixer contains a specific number of audio track slides that are directly related to the number of audio tracks available in Timeline. When you add a new audio track to the timeline, a new song is created in the audio track mixer. You can rename a track by clicking on its name. You can also use Audio Track Mixer to record audio directly on successive tracks.
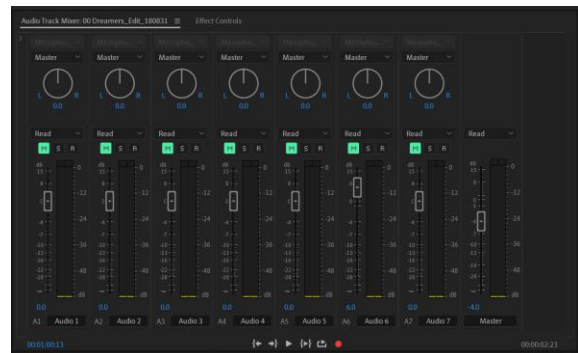
Audio Track Mixer represents tracks by active sequence only, not all work tracks. If you want to create a master project mix from multiple sequences, set the main sequence and insert another sequence within it.

- The Audio Track Mixer is hidden by default in most Premiere Pro workspaces. To open the Audio workspace, click **Windows > Audio Track Mixer**.

Adjusting EQ

When you first look at the EQ panel it looks like all dial and check boxes. Yes, you can really adjust dialing, but this effect
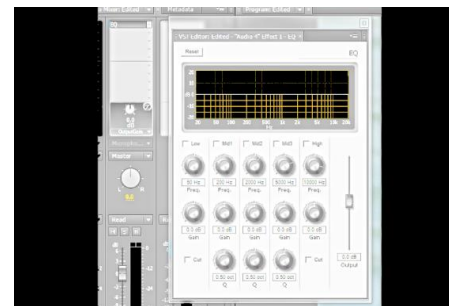
also allows you to click and adjust items in the graphical interface section of the interface.

To find the corrections on a graph we must first check the boxes to see which areas we want to correct.

2.39. Applying Effects in the Audio Mixer

- Certain effects have restrictions, and can be used only on certain track types. (For example, the Balance effect can be applied to stereo tracks only, not mono, or 5.1). The following effects have this restriction:
- Balance (Stereo only)
- Channel Volume (Stereo and 5.1 only)
- Fill Left (Stereo only)
- Fill Right (Stereo only)
- Swap Channels (Stereo only)

2.40. Clean Noisy Audio

Even if you set your film with the potential background sound, chances are that if you play it again your sound will get that unwanted static response. However! Fear not, this is the good part. Here's how to remove background sound using the DeNoiser effect:

- Firstly, open up Adobe Premiere Pro. Select the footage you wish to remove any additional static noise from.
- After selecting the clip go to Window > Effects > Obsolete Audio Effects > DeNoiser (Obsolete). It will then ask you whether or not you want to use the newer version of the DeNoiser. Select no and continue with the DeNoiser (Obsolete).
- Select the DeNoiser effect and then drag and drop it onto the clip you wish to remove the static noise from. Once you have dropped the DeNoiser effect onto the clip go to Effect Controls > DeNoiser > Reduce Noise By.
- Use the sliders on here to reduce the static noise, you usually find it differs from clip to clip in terms of the decibel range to remove it from. We find around -5 to -10 is usually the range you'll be able to reduce to an unnoticeable level.

Section 10: Color Correction and Gradient

2.41. Color-Oriented Workflow

These color tools are available within the Lumetri Color workspace in Premiere Pro. Using these tools, you can adjust the color, brightness, and brightness of your sequences in new and innovative ways. With manual editing and color capture, you can move freely between editing tasks without the need to export or launch a separate grading app.

Color Workplace is designed not only for experienced painters but also for newly acquired color-grading editors. You can use simple color correction or sophisticated Lumetry Looks using slides and precise controls. Or you can easily adjust the cuts or mark the mark using advanced color correction tools such as curves and color wheel.

2.42. Color-Oriented Effects

Premiere Pro provides professional quality Color Correction tools that let you edit footage directly on your timeline. You can find the color and luminance adjusting effects in the Color Correction bin inside the Video Effects bin.

Color correction adjustments are used for several reasons:

- Modify footage so that clips appear to be shot under the same conditions.
- Adjust colors in a clip so it appears to have been shot at night instead of day.
- Adjust the exposure of an image to recover details from the over-exposed highlights.
- Enhance a color in a clip to add graphic elements.
- Restrict colors in a clip to a particular range, such as the broadcast-safe range.

Color Correction effects are applied the same way as Standard effects. Although other effects also adjust color and luminance, the Color Correction effects are designed for making fine color and luminance corrections.

- You can find the color and luminance adjusting effects in the Color Correction bin inside the Video Effects bin.
- The effect properties are adjusted in the Effect Controls panel.
- The Color Correction effects and other color effects are clip-based. However, you can apply them to multiple clips using nesting sequences. For information about nesting sequences, see using multiple sequences.

2.43. Exposure, Color Balance and gradient

Exposure: Adjusting exposure is one of the most common adjustments that you may make to video footage. In this video lesson, I'll show you how to adjust exposure while keeping other factors in balance.

Color Balance

• Color Balance effect

The Color Balance effect changes the amount of red, green, and blue in the shadows, mid-tones, and highlights of an image.

• Preserve Luminosity

Preserves the average brightness of the image while changing the color. This control maintains the tonal balance in the image.
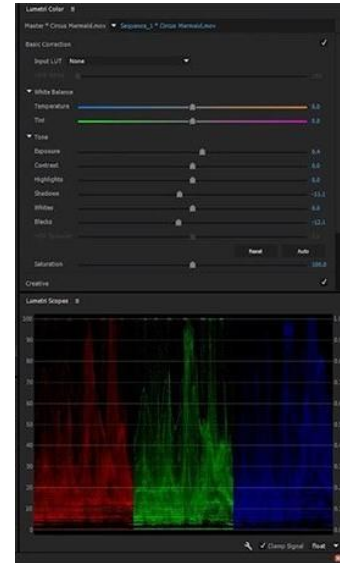
Section 11: Exporting Frames, Clips, and Sequences

2.44. Overview of Export Options

If you have noticed you are repeatedly using a custom setting you can save your export settings as a preset.

• Click the save preset button beside the preset drop-down menu in the export window.

• Name the preset.

• To use the Preset select the name you chose from the drop down menu.

Exporting to tape

You can export a sequence or clip to videotape in a supported camcorder or VTR. You can use this type of export for archiving a master tape, or for delivering rough edits for screening from VTRs.

Workflow

Do one of the following:

• In a Timeline panel or Program Monitor, select a sequence.

• In a Project panel, Source Monitor, or bin, select a clip.

• Click Export in the header bar or choose File > Export > Media to switch to Export mode.

- (Optional) In Export mode, specify the Source Range of the sequence or clip you want to export. Drag the handles on the timeline. Then click the Set In Point button and Set Out Point button.

- To crop the image, specify cropping options in the Source panel.

- Cropping on export is currently only available in Adobe Media Encoder.

- Select the file format you want for your exported file.

- (Optional) Select a preset best suited for your target means of playback, distribution, and audience. Premiere Pro has presets for Twitter, Facebook, Vimeo, and YouTube.

2.45. Export Single Frame

Quick & Simple Way to Export a Frame from Premiere Pro

- Position the play-head on the frame you want to export.

- Press the keyboard shortcut SHIFT + E or click on the camera icon. The icon doesn't exactly leap out at you. Here's where to find it.

- Set export settings. You'll then get a small export frame dialog box.

2.46. Export a Master Copy

1. **Open the Export Window**

- To export a video in Premiere Pro, go to File > Export > Media. You could also press the shortcut key Ctrl + M on PC.

- Make sure the sequence you want to export is selected when you do this.

2. **Choose you Sequence Setting**

- If you want to bypass these custom settings and export with the EXACT settings of your sequence, you can select Match Sequence Settings at the top. That'll change your export settings to match your sequence settings exactly.
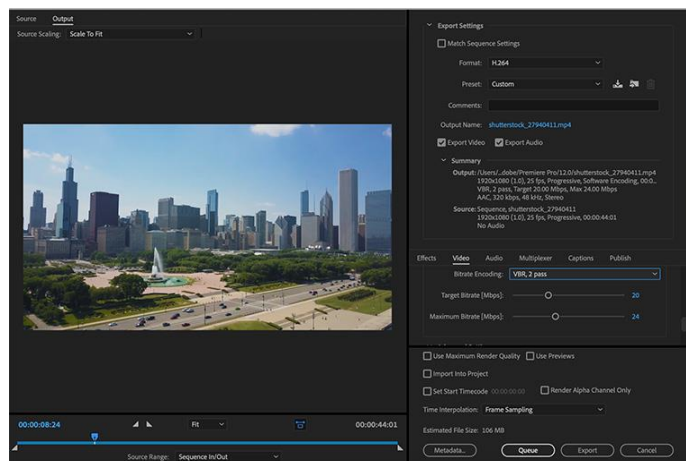
- Although, I don't recommend this because most delivery destinations require codecs other than your standard editing or intermediate codec.

3. Select a Format

The best setting for web playback is the H.264 codec. So, we'll select our format as H.264. That is also the most common codec for video exports through Premiere. For 80-90% of your exports, you'll be using H.264.
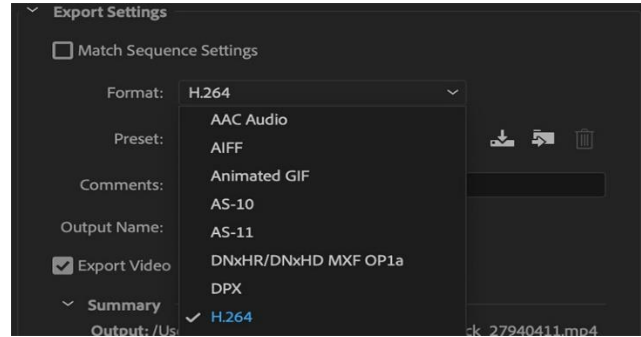
4. Finish Export

- Selecting Queue will send you to Media Encoder, with the sequence added to a queue.

- Then, all you have to do is press the green play button at the top to start the export. This is good if you want to add multiple Premiere Pro sequences to export at the same time.

- This also allows you to continue working in Premiere Pro while Media Encoder exports in the background. This is the method of exporting I use most often, as I feel like Premiere has a harder time handling all of this at once.

- Selecting Export simply exports the sequence right from that window. You won't be able to use Premiere Pro while it's exporting this way.

- You just exported your finished video.

2.47. Work with Adobe Media Encoder

What is Adobe Media Encoder? Adobe Media Encoder is a video processing application that can save editors countless hours of waiting for their videos to export. But how does one use Adobe Media Encoder? We're going to answer that question by exploring how Media Encoder works and why video editors choose to use it in conjunction with programs like After Effects and Premiere Pro. By the end, you'll have all the knowledge needed to maximize your video editing workflow. Adobe Media Encoder is an incredibly easy program to use with After Effects and Premiere Pro. But before you try to use Media Encoder, make sure you have After Effects, Premiere Pro, and Media Encoder installed on your computer. Once you do, follow these steps:

- Take a project in After Effects/Premiere Pro and hit file, export media.

- Choose your export settings/preset, then hit queue.

- Media Encoder will open with the project ready for encoding.

- Hit the green arrow in the top right-hand corner and the video will encode in the designated codec.

Media Encoder is designed to work in tandem with After Effects and Premiere Pro — so you'll be able to continue working on your project while the video is being encoded.

Activities

- Presentation on Adobe Premiere Pro interface

- Import media from different sources

- Organize media in bins

- Create project using monitoring controls

- Use sync locks

- Move and delete clips

- Apply visual / audio transitions and effects to project

- Edit and trim clips as per requirement

- Edit video using Multi-camera effects

- Setup application interface for audio auditing

- Apply different audio settings e.g. volume, gain, levels

- Use audio mixture in given project.

- Use Equalizer (EQ)

- Remove noise

- Enhance video using color correction.

- Export video product for publishing

Do You Know

➤ In Premiere Pro, you can load multiple clips into the Source monitor for editing. Rather than click on the menu to select the next clip, why not use a shortcut key instead. Shift+2 allows you to cycle through each of the clips so that you can make in and out decisions on them a lot easier.

➤ Before you get started, lock any tracks you don't want to be affected and create a blank track for your titles if necessary. Now, select all of your titles in the Project panel, make sure your play-head is before the first marker and click the Automate to sequence button on the lower right corner (to the left of the search icon)

➤ While you can duplicate the title in the Project panel, you can also opt/alt+click and drag a new title instance in the timeline. Make sure not to release the option key until you've

released the copied title or you'll end up performing an insert edit instead. Once you're done, you can update your title without having to worry.

➢ If media is parsed over 2 memory cards, the Media Browser will collapse the 2 clips into one. The Media Browser also allows you to see other Premiere projects where you can bring in not only sequences but any assets as well. By default, when you double-click a file from the Media Browser it opens it in the Source monitor to preview. If you want to bring it into the project simply right or ctrl+click the file and choose import.

➢ Edits to rearrange clips in the timeline is the move-insert edit. It allows you to move a clip in a sequence without leaving any gaps. Simply hold down cmd+opt on a Mac or ctrl+alt on a PC after selecting a clip and position the clip wherever you want. Notice how the adjacent clip will ripple forward and the spot you removed the clip from closes up so no gap is left.

EXERCISE

Select the correct option.

I. In Video Editing, Digital Editing is known as:
   a. Tape to tape Editing
   b. Non-linear Editing
   c. Linear Editing
   d. Basic Editing

II. What is the tool used to trim video and audio clips?
   a. Slice tool
   b. Blade tool
   c. Scissor tool
   d. Razor tool

III. The yellow line from the timeline that can be used to add transition effect?
   a. Playhead
   b. Keyframe
   c. Transition Line
   d. Opacity line

IV. _____is at the center of video production?
   a. Editing
   b. Filming
   c. Scripting
   d. Storyboard

V. Use of Abode premiere pro is:
   a. Color Correction
   b. All of the above
   c. Multi-Clips to One Video
   d. Build-Up Effective Transitions

VI.   There are _____ ways to apply two clips:

    a. Three   c. Five

    b. Six   d. Two

VII.   "RENDERING" in Video Editing is:

    a. Combining clips   c. Putting effects into clips

    b. Video production final step   d. Splitting clips into several parts

VIII.   Bin is located at:

    a. Project Panel   c. Timeline

    b. Effects library   d. None of above

IX.   Digital audio workstation is also compatible with Premiere Pro:

    a. Adobe Lightroom   c. Adobe Audition

    b. Adobe Music suite   d. Adobe Acrobat

X.   Which of the following is not specified by the tracks panel in the sequence dialog?

    a. The number of audio tracks in a sequence

    b. The number of channels in the audio tracks

    c. The master track's format

    d. The instance of the audio track or the clip

ANSWER KEY

1	c	2	d	3	d	4	a	5	b
6	c	7	d	8	a	9	c	10	d

Answer the following Questions briefly:

1. Define use of adobe premiere pro.
2. How to setup a new project?
3. What is bin? And Explain how to use it.
4. How to apply effects on footage?
5. Explain Uses of composition.
6. How to delete a segment?
7. What is four-point Editing?
8. Define nesting.

9. Define multi-camera editing.

10. How to export a file?

Answer the following Questions in detail.

1. Explain project setup and how to import media from different sources?

2. How many types of effect are there? Explain how to apply them on a footage?

3. Describe the use of Multi-camera editing. Also explain video and audio editing in adobe premiere.

4. Describe color correction workflow.

5. Create a footage, import files, apply transition, effects on it, and describe the method how you can export footage in different formats.

CHAPTER 03: MEDIA PRODUCTION - FIELD WORK

After completing this chapter student will be able to

- define radio.

- describe history of radio in Pakistan.

- understand use of audio recording equipment(microphone, storage media and digital audio equipment).

- know about broadcasting(advertisement, news, journalism, talk shows) techniques.

- learn the difference between print and broadcast.

- develop skills techniques and art of radio news through sound and spoken words.

- define news.

- describe history of news in Pakistan.

- understand types of news.

- understand interview techniques.

- understand script, narrations, story boards and shooting script.

- develop techniques and art of news through sound and spoken words.

- understand process of reporting.
- describe types of tv channels(religious, sports, entertainment, news, cartoon and educational).

- understand role of production houses for different channels.

- learn about advertisement creation for tv channel.

- describe effects of documentary.
- identify idea and location for documentary.
- perform all media tools to create a documentary.

Section 1: Radio Programs

3.1. Radio

Radio is a communication device over long distances that uses technology to convert sound into electromagnetic waves and sent it to the receiver for retransformation into sound. Listening to music in cars is an example of radio. Radio signals move in to and from motion at high speed. The antenna is used for transmitting radiations and the receiver to receive and decode them.

Figure 13 Radio

The radio signal is an electronic current moving back and forth very quickly. A transmitter radiates this field outward via an antenna; a receiver then picks up the field and translates it to the sounds heard through the radio.

3.2. History of Pakistan radio

"Radio" was used in the 20th century with rapid and vast radio-based technologies in that era. The word "Radio" is derived from the Latin 'radius', meaning 'ray' or 'beam'.

Figure 14: Mustafa Ali Hamdani

When Pakistan came into being on 14th August 1947, Radio-Pakistan was named 'Pakistan Broadcasting Service'. This medium was used to announce the Independence of Pakistan from Britain on 13th August 1947 at 11:59 pm. Mustafa Ali declared Lahore's independence in English and Urdu. The announcement was heard as follows:

السلام علیکم

پاکستان براڈ کاسٹنگ سروس ۔ ہم لاہور سے بول رہے ہیں تیرا اور چودھ اگست ، سنہ سینتالیس عیسوی کی درمیانی رات ۔ بارہ بجے ہیں ۔ طلوع صبح آزادی ۔

The English translation of this announcement is as follows:

Greetings from Pakistan Broadcasting Service. We are speaking from Lahore. The night between the thirteenth and fourteenth of August, year forty-seven. It is noon. Dawn of Freedom.

Where Abdullah Jan translated this announcement from Peshawar into the Pashto language.

When Pakistan came into being there were three radio stations:

1. Lahore (1928)
2. Peshawar (1935)
3. Dhaka (1938)

Later, more stations were established in different cities:

- In 1972, Radio Pakistan was converted into **Pakistan Broadcasting Corporation.**
- At the national level, Radio Pakistan reaches 80 percent of the total area of the country.
- Its Population-wise reach is 96.5 percent.

It was a major turning point in the technological field that helped the youth of the time showcase their talent. It was the first step toward revolutionizing Pakistan. Today, Pakistan expanded its broadcast in 34 different languages including:

Urdu, Punjabi, Sindhi, Balochi, Seraiki, Potowari, Pashto, Hindko, Kohistani, Khowar,

Kashmiri, Gojri, Burushaski, Balti, Shina, Wakhi, Hazargi, Brahvi, English,

Chinese, Dari, Persian, Hindi, Gujarati, Tamil, Sinhala, Nepali, Russian, Turkish, Arabic,

and Bengali.

3.2.1.1. Uses of Audio recording equipment (Microphone, Storage media and digital audio equipment)

"Microphone" is an electronic device used for translating sound vibrations into electronic signals. These devices help record different communication means like music, speech, or news. Where **"Storage Medium"** is used to receive and store that electronic data for different applications and users for data mobility. Storage mediums majorly called storage media can be a part of the computer or an external device.

Storage media can be arranged in different ways, depending on workload requirements. Some of the systems include:

1. redundant array of independent disks (RAID);
2. network-attached storage (NAS); and
3. storage area network (SAN)

Digital audio systems not record and store audio signals electronically but are also used for security messaging for broadcast, editing monitoring, and playback. These are the devices used for combining, routing, and changing audio signal levels. Signals are arranged in a specific order for

audio distribution. The channel can either be stereo or monaural depending on audio distribution settings. The amplification factor is used to buffer and control signals. These devices also use a potentiometer to adjust sound amplitudes before final signals mixing. When these signals from different channels are put together generate the main mix signal. This is how the final digital audio signal is produced.

Types

There are many types of digital audio systems.

- Digital voice recorders:

Digital voice recorders are high-quality functionality devices with slide control switch operation and are widely used for data and sound recording.

- A digital audio home theater system.

A digital audio home theater system is used as a consumer audio application with disc changer and stereo monitoring facility.

Features

These systems receive input signals through assigned input channels, and provides input signals to produce digital output after processing. Digital audio systems work as playback systems and maintain long lists of music in a music library.

Applications

Digital audio systems are can be used in television and film post-production. Also, in recording audios, automobile stereos, and in sound reinforcement systems.

3.3. Broadcasting (Advertisements, news, journalism, talk shows) Techniques

Advertisements

An advertisement commonly said "ad" is the promotion of a product, brand or service to a general public in order to attract interest, engagement and increase sales. Advertisements can be an interactive video, poster or any visual and verbal promotion.

Advertising has three main objectives: to inform, to persuade, and to remind. Informative Advertising promotes brands, products, services, and ideas. It helps new products and programs and can educate people about specific feature and benefits of new or established products.

News: News refers to the information about any current events. It can be in form of different media: word of mouth, printing, postal systems, broadcasting, electronic communication, or through the testimony of observers and witnesses to events.

Journalism: Journalism is the practice of gathering, assessing, creating, and presenting news and information.

Journalism can be differ from other activities and products by some specific characteristics and practices. It is not just communication it makes it indispensable to democratic societies. History reveals that the more democratic a society, the more news and information it tends to have.

Talk shows: A radio or television program in which usually well-known persons engage in discussions or are interviewed and often answer questions from viewers or listeners are known as talk shows..

3.4. Difference between print and broadcast

Print is something in hard copy printing, like a newspaper, a magazine, or a book. Whereas, Broadcast is of two types: radio and television.

Television and radio are the primary broadcast media with all online advertising referred to as digital media. Collectively, these media categories form what are commonly referred to as traditional advertising media.

3.5. Skills techniques and art of radio news through spoken words and sound

A generic radio news bulletin is about three minutes. An editor puts an interest for audience by putting every story in 540 words, and every bulletin starts with tough decisions making stage about what to include – there might, for example, be room for only five stories out of a choice of many. After choosing stories it needs to be precise and short.

To achieve this, broadcast writers have developed a pared-down style, packed with facts, that mimics natural speech. Each story is studied and jawed down into its key essence: the latest development, background information and additional detail. These are placed in a structure that conveys the information as simply and clearly as possible. Every word has to be present for a reason. Wasted words that don't add to the overall message are called passengers. They can affect the quality of bulletin. Vocabulary is kept simple for general public. The writer must consider who the script is aimed at: their age, location, background. Each of these are the criteria for choosing words.

Where Sentences for the printed page can be long and contain lots of sub-clauses. On radio, the newsreader has to have somewhere to breathe. That's why radio script-writers speak the words out

loud as they are written. It doesn't matter what it looks like on the page, the key question is – does it sound right?

Activities

- What gets lost in the edit?

- Are there 'passenger' words that you cut easily?

- How do you retain the drama of the event?

- 2. Radio News is always written against the clock. Imagine a celebrity has been caught drunk driving near a local school. How fast can you create three sentences of accurate, attention grabbing news copy?

- Not all written material sounds right when it is read out aloud. Pick a topic from today's newspaper and read it out aloud. How would you adapt it for the radio? Which words are 'wrong'?

Section 2: NEWS Channels

3.6. NEWS

News is useful information about current events. It can be from any means: word of mouth, printing, postal systems, broadcasting, electronic communication, or through the testimony of observers and witnesses to events. Common debates for news reports include war, government, politics, education, health, the environment, economy, business, fashion, and entertainment, as well as athletic events, quirky or unusual events. Government proclamations, concerning royal ceremonies, laws, taxes, public health, and criminals, are also included. Technological and social developments, often driven by government communication have increased the speed with which news can spread, as well as influenced its content

3.7. History of Pakistan NEWS

The military ruler and president, Ayub Hahn, took the first step in introducing media law into the country with the promulgation of the Press and Publishing Ordinance (PPO) in 1962. Under these laws, Ayub Khan nationalized most of the media and took over one of the two largest news agencies. Pakistan`s radio and television, founded in 1964, were also under strict government control. Since 2002, Under General Pervez Musharraf, Pakistan's media connected to Pakistan's electronic media boom and faced important development that has reached a peak to earn political furlantuts .

The new liberal media law broke the monopoly of the state on electronic media. Military motives to liberalize media licenses, Pakistan's media enhances national security and can be used to enhance national security to cancel all perceived threats from India Based on it. The justification was a desire to cancel the media power of India as a wish to set the right to "free" in a liberal society. The military can still control the media, and use it if it believes in the national interest and extends it according to its political agenda. Media has become an important factor in the process connected to MUSHARRAF and its system.

3.8. Types of NEWS

There are two types of NEWS:

- Hard NEWS
- Soft NEWS

Hard NEWS

- Event oriented.
- Centered on "What, when, where and why."
- Major thrust of newspaper is hard news.
- Hard news covers news on serious crime e.g. terrorist attacks
- Politics and business
- Disasters e.g. an earthquake
- Foreign affairs.
- Hard news journalism refers to the-minute news about serious, timely, or hard-hitting topics that are timely and urgent, usually based on facts and rigorous research.

Soft NEWS

Soft news are about human interested stories, entertainment, less serious crime, lifestyle, culture, art, sports and celebrity coverage etc.

3.9. Interview techniques

Common interview techniques

Interviews can be of many forms and achieve different goals, so there is no simple interview. When you think of a job interview, you probably imagine a candidate having a one-on-one interview in the office. This is a common interview format but includes group interviews, information interviews, and telephone interviews. To master an interview, it is important to identify and prepare

for the particular type of interview you will be attending to maximize your chances of success. Below is a summary of the most common interview techniques.

Phone interview technique

Upon employment, a telephone interview is probably the employer's second contact following an email contact. In a telephone interview, your employer (often a hiring manager or hiring manager) calls you to confirm your position and feel if you are fit for the job. It's not uncommon to have multiple phone interviews before being asked for a face-to-face interview.

Video interview technique

As video software becomes more efficient, more and more employers are looking for video interviews to quickly screen candidates. The video interview consists of a video of the applicant calling the employer and discussing the position. Video interviews help employers better understand a candidate's specificity, motivation, and appearance than a telephone interview. Employers are also increasingly dependent on pre-recorded video interviews, where candidates answer interview questions and record themselves. This gives your employer the convenience of being able to watch the video at any time.

In-person interview technique

Face-to-face interviews usually consist of a candidate meeting with the employer in the office. The employer then interviews the candidate to see if the candidate is suitable for the job. In personal discussions, employers can better appreciate two things. Your employer can personally assess whether you are fit for the climate and culture of your office. And personally, the employer keeps an eye on your enthusiasm for the role, so you can know if you want the job. Remember that employers aren't just looking for salaries, they're looking for passionate people.

Group interview technique

A group interview is when the employer interviews multiple candidates together. Group interviews are very efficient for employers because they can significantly reduce the time spent on interviews. Companies also conduct group interviews to assess how well candidates can work together. Group interviews can be particularly difficult for candidates, as they tend to be stressful. However, good performance shows employers that they are efficient in stressful situations.

Panel interview technique

Panel interviews are a twist on traditional interviews. Panel interviews consist of candidates who are interviewed by multiple interviewers at the same time. Employers conduct panel interviews for

a variety of reasons. Like group interviews, panel interviews are often stressful and show your employer how well you are under pressure. Panel interviews also show employers how to navigate group settings well and deal with different personalities.

STAR interview technique

The STAR format stands for Situation, Task, Action, Result; each word describes an experience that respondents can remember when faced with a qualitative or quantitative interview question. Here is a quick guide to each word in the STAR technique

Situation: Event, project, or challenge

Task: Explain the task you had to do

Action: A step or step is taken to mitigate or correct the situation

Result: Conclude with the result of your efforts

In short, STAR techniques are a great way to structure your thoughts and responses when creating answers to instant questions.

3.10. Script, Narrations, story boards and shooting scripts

Script

A script is a written model of a play or film. Script comes from the Latin "scrībĕre", meaning "to write," and all its meanings need to do with something written. Your handwriting is your script. The written model of what you`re speculated to say, whether or not for a marriage toast or a play, is a script.

The script is described because the written phrases of a play, film, or display, or a fashionable message to supply on the smartphone or in person. An instance of a script is the screenplay for the film Chinatown. An instance of a script is the greeting that's spoken while making a telephonic call requires a call center.

Narrations

Narration is typically a method of any form of explaining or telling something. It is generally utilized in connection with storytelling. If you have ever watched a TV display where one character's voice talks immediately to the audience, then you have heard narration. You will frequently discover narration occurring in songs where the singer is telling the tale of the way something happened — just like the day he misplaced his guitar, his truck, and his wife, and commenced making a song the blues.

Story Boards

A storyboard is a pictorial illustration of the way your video will unfold, shot by shot. It's made of some squares with illustrations or snaps shots representing every shot, with notes approximately what is occurring with inside the scene and what is being stated with inside the script in the course of that shot.

Shooting Script

A taking pictures script is a key piece within side the manufacturing of a movement photo. It's a model of a screenplay that consists of specified cinematography commands laid out within side the order that they will be needed, which include positive digital pictures, props, and locations. "I suppose it's the principle motive you've got a taking pictures script."

A taking pictures script is a report used in the movie and movement photo industry that suggests how exclusive scenes in a film break down. This is largely a screenplay that has been adjusted via way of means of the director and different participants of the movie group to be used as a report to plot out exclusive pictures and days of filming. The pages of a taking pictures script are numbered, as are the personal scenes and pictures that want to be filmed. This report additionally consists of notations and commands on how scenes may be filmed, with indicators of various pictures which include near ups and the angles to be able to be used.

3.11. Techniques and art of NEWS through sounds and spoken words

News continues to be the most important element of spoken-word radio. In the early days of radio, newspaper owners tried to limit news sources and broadcast times or to enter the scene on their own, as broadcast news inevitably had an impact on the industry. In addition, in areas where broadcasts were commercialized, the press was concerned, as radio competed for advertising revenue and radio was able to tell stories in front of newspapers in most cases. However, there is no evidence that Radio News has reduced the circulation of newspapers. Some even claim that radio has stimulated listeners' desire for news and increased newspaper sales. However, television seems to be harming daily newspapers, as well as weekly and monthly magazines. Long before television overtook radio, broadcasters hired reporters, and special and foreign correspondents to complement the services of news agencies. Some radio reporters are public figures in their own right.

3.12. Process of Reporting

News coverage is about discovering all the relevant facts, selecting and presenting important facts, and weaving a comprehensive story. News reporters should follow the steps below

1. Reporters need to understand the importance of a solid reputation for credibility.
2. Reporters must be able to pick up the news and write in the language of the newspaper.
3. The local newspaper reporter occupies a unique position, he is very popular with his city`s people. He reports local events, functions, fairs, socialists, etc., and approaches the social life of the city. Reporters should follow certain professional ethics in their work.
4. Reporters may be asked to write a short paragraph about local intelligence or city news. For this, he needs to keep his eyes and ears open and stretch his nose for local news.
5. He needs to develop the system so that he doesn't miss any interesting news. He also needs to contact the fire department for more information on the local fire. All reporters are required to keep an engagement diary.

Section 3: TV Channels:

3.13. Types of TV Channels

Following are the types of TV Channels:

* Religious channels,
* Sports channels,
* Entertainment channels,
* News channels,
* Cartoon channels and
* Educational channels.
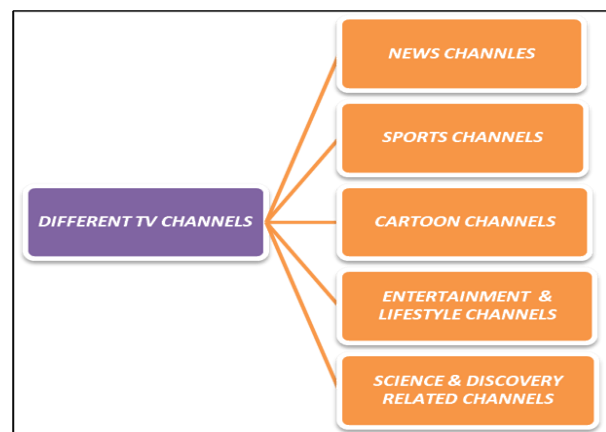
Figure 15: Types of TV channels.

3.14. Role play of houses for different Channels

A Production Company, production house, production studio, or production team provides the physical foundation of work in the fields of performing arts, new media art, film, television, radio, comics, interactive art, video games, websites, and music. A production company is an organization that produces movies. It`s a team of people with different talents, pooling resources and using them to create the best artwork. They also provide the funding needed to make the film.

A movie production unit usually consists of:

- **Producer** — He's the captain of this team and is responsible for handling the entire production from start to finish. The project takes shape as he/she imagines, and he/she is also responsible for completing the screenplay of the movie and drawing out the best of all the other team members.

- **Director** – The role of a filmmaker's director is to provide direction for filming. Directors usually need to work with other artists and technicians to bring the screenplay of a movie to life on the screen.

- **Scriptwriter:** We all marvel at the astonishing dialogues that our favorite heroes or villains say on screen. But the role of a scriptwriter is much more. He/she has to give shape to the different events that are happening in a movie by ensuring that transitions happen in a fluid manner.

- Costume designers give our heroes and heroines an amazing look they have on screen. They help to bring out the person's character through his/her clothes and the appearance in general.

- The art director takes care of the settings in which the film will be shot. He/she arranges for the props, decorates the set and makes the set appear to be in conjunction with the storyline.

- The cinematographer or the director of photography

- The editor organizes the visuals so that the film appears to be one seamless journey to the viewer.

Finally, there are the actors who act and the music directors who render us with wonderful music.

3.15. Advertisement creation for TV channel

Creating effective ads can seem like a daunting task, but it can be done one step at a time.

1. **Select your target audience**. Targeting your custom audience allows you to develop the right marketing strategy by focusing on the best ad design, message, and platform.

2. **Market Research:** To get a feel for your target audience, it's important to do market research to develop the right campaign goals.

3. **Select your platform and ad format.** After completing your market research, Social media, television, radio, podcasts, newspapers, and search engines are all arenas for advertising. In addition to knowing your target audience, you'll want to research the cost

of various platforms and formats—print ads, video ads, and audio ads are all priced differently

4. **Brand awareness or product awareness**: choose an ad platform and ad format that will appeal to your target audience. In addition to knowing your target audience, you also need to investigate the cost of different platforms and formats. If the off display is mainly a specific seasonal product, the campaign intention is to create an affinity of the long-term brand with extended stories, aesthetics, or intention. A campaign is a place where they seem to develop over time.

5. **Craft a memorable message**: One way to get your attention to advertising is to highlight the unique benefits of products that your competitors don`t offer. Video ads usually require long copies. Online and print ads may also require custom images. Usually, you hire a graphic designer to create your images and stock photos.

6. **Create custom videos:** For online and television ads, the content creator's internal team may be able to create the video, but it's also common to hire external resources to help create the content.

7. **Memorable message**, eye-catching visuals help you get the attention of your ads. Add striking visuals to your ads with all the design tools in the arsenal.

8. **Include a call to action:** Make sure your asset contains a subpoena (CTA) so that potential customers can do more than just see your ad.

9. **Include relevant information:** Depending on the purpose of your advertisement, you may include important information about a product, service, or event. For example, if you've created the most visually exciting concert ad you've ever created, but don't include the date and location of the event, it won't help anyone watching it.

10. **Develop a tracking system:** For all business owners, especially those who launch new products, it's important to have a system for tracking ad performance. Many online advertising platforms already have a data tracking system that can monitor ad conversion rates and engagement statistics.

11. **Analyze data and make changes**: Once you've launched your ad, use your tracking system to analyze your data and make changes that can be applied to your next ad campaign.

Section 4: Documentary:

3.16. Effects of documentation

The resources available to assess the social impact of problem-based documentaries are increasing in the digital age. Nevertheless, determining the research methods (and tools) used to study the social impact of storytelling is within the ecosystem of creators and strategists who work to track storytelling for social change. We will explore the groups of branded media impact tools currently available and analyze their underlying research approaches and how they work best to tell a story about the social impact of storytelling. But for those who do, understanding research approaches and tools and properly identifying them not only in the final stages of the project but also in the early stages of the project is invaluable for capturing social impact.

Clarifying the core issues of impact can be used strategically as part of targeted advocacy activities for individuals and organizations that create documents for social impact, and appropriate investigative methods. . Some documentary projects aim to change attitudes and behaviors at the individual level and show specific methods of impact research:

AUDIENCE SURVEY	**What It Does:** Examines individuals' perspectives (attitudes, beliefs, knowledge, behavior) associated with media exposure; can be used to assess short-term and long-term effects depending on exact research design. **Limitations:** This quantitative approach does not show the impact of a media project on media discourse (media content about a social topic or media project).
CONTENT ANALYSIS	**What It Does:** Examines the presence of particular portrayals or frames in media content; can be used to examine media content and portrayals at one time or over a long time period (i.e., to examine shifts or trends) in order to show the impact of a media project on the public agenda and media discourse around an issue. **Limitations:** As a quantitative content study approach, it does not examine the ways in which audiences and individuals respond to a media project.
EXPERIMENT	**What It Does:** Examines audience response to a particular type of content or portrayal compared to another, can establish the impact of directly experiencing one media project vs. experiencing a different one, or experiencing a media project vs. not experiencing it at all. **Limitations:** Quantitative laboratory conditions and lab-produced media content are not always fully reflective of a real-world experience with media (with some exceptions).
IN-DEPTH INTERVIEWS & FOCUS GROUPS	**What They Do:** Gather nuanced qualitative data about audience response or attitudes about media portrayals of particular content and topics; this approach does not offer numerical conclusions, but the methods can also reveal nuances that are not yielded from multiple-choice (quantitative) audience surveys. **Limitations:** This qualitative approach provides anecdotal and case study information about the personal impact of a media project on an individual, but it does not reveal the full numerical scope of the impact.
ETHNOGRAPHY	**What It Does:** Reveals the nuanced, often insider, in-depth cultural norms, perspectives and behaviors of a particular group of people; researchers employ classical observation or "join" sub-groups to perform participant-observation as insiders. **Limitations:** The findings from this qualitative method are not generalizable to other groups or a wider population.

Together, the studies techniques which are capable of capturing a spectrum of "impact" in issues-centered documentaries – from character to public hobby to institutional – may be captured in 4 principal categories:

- Digital and Media Coverage Metrics
- Audience Impact

- Content and Cultural Impact
- Institutional impact

Importantly, and as many a successful movie case research has illustrated, including "The End of the Line" and "Budrus," amongst others, studies techniques also can be layered for a complete view of a movie and campaign`s impact. Layering studies techniques can be the precise state of affairs for maximum initiatives to be able to seize a complete tale of impact.

3.17. Identifying idea and location for documentary

The key to locating your ideal documentary concept includes a piece of ol` fashioned soul searching.

A French movie director, Robert Bresson said:

"Make visible what, without you, might

perhaps never have been seen."

The point of that quote is to say that each one of us is a unique individual with a unique set of experiences and viewpoints. No one in the WHOLE world has exactly what you have.

So with that in mind, let's go through some questions to help you pinpoint some ideas:

- What subjects do you locate yourself considering or speak to me approximately time and again?
- Are you baffled via way of means of why something is the manner it is?

Another manner to locate first-rate documentary thoughts is to take note of the news. When seeking out thoughts (mainly if that is your first mission), go searching you at the "low hanging fruit".

What are the first-rate memories inside your family or community? Maybe the tale is YOU, the bottom placing fruit of all! Need to assist in locating a concept?

Research

Learn everything about your documentary topic. The storyline may or may not be obvious. Do a lot of research and follow the clues. This is where you wear the reporter's hat. Gather facts and look for interesting characters and story clues. The jewels in your story are sometimes deep and buried invisible.

Make a plan

 Plan about how to tell your story. What is the structure and the style? Do you have any existing footage or photos to help tell the story, or do you need to shoot them all from scratch? Who is your hero? What are your important story points? What are the elements of the story that make you "crouch" in a compelling and/or conspiracy? How can you give your audience this appeal? Is there a situation where you can shoot, or do you need to create that moment? Detailed plan:

- Documentary budget template
- Documentary proposal template
- Find documentary money

3.18. Perform all media tools to create a documentary

1. Share Grid

What we like approximately this web website online is that enables you to discover tools primarily based totally on your location. This is remarkable for brief shoots, or closing minute rentals.

The web website online enables you to lease cameras, lenses, drones, and other video devices from human beings around you. You`re renting from peer-reviewed renters, and Share Grid insures all rentals. It additionally helps you to proportion your very own device and make a small profit.

2. Kit Split

Kit Split is remarkable for a pair of reasons:

1) You're renting from people now no longer simply apartment homes so fees can be negotiated and

2) You can discover proprietors renting their tools throughout the country.

 As the so-called "Air BnB for cameras," the concept of a peer-to-peer apartment platform makes overall sense.

3. Parachute

Parachute offers an inexpensive subscription-primarily based provider and may be well worth it in case you lease often. For a month-to-month fee, you could pick out from a catalog of digital camera and lens kits. Once you are completed with a kit, alternate it for a brand new one.

 The cool issue approximately this web website online is that they've you fill out a photographer profile. Your solution queries approximately your talent stage and what you need to accomplish, and that they suit you with the best tools.

4. Lens Rentals

This isn't always on the lowest for any specific reason. This might be one of the maxima dependent on online apartment services. The most effective huge distinction is you are managing an extra hooked up employer so their stage provider isn't always constant with Share Grid's network values or startup leniencies that now and again include smaller companies. Also, in contrast to the others, you cannot lease for some hours, your minimum apartment needs to be one day.

They provide a big choice of cameras, maximum notably, Sony, Canon, Nikon, Fuji, and Leica, with antique and more recent fashions to be had.

 Of route you could constantly visit a neighborhood manufacturing apartment employer, however now and again websites are useful for a smaller budget, and general efficiency.

Speaking of efficiency, let's bounce into a few useful hardware to hold shoot days walking smoothly.

5. Scandisk Ultra Micro SD Cards

Much of your paintings as a movie manufacturer entails a flood of virtual information on your computer. Make positive you've got sufficient garage area!

If you want extra disk area however don`t need to lug around an outside power, we advocate a leave-in Micro SD for your computer. The Micro SD card will seem like power, and could right away be to be had for use. It`s essentially like having an invisible outside power with none of the desired electricity consumption.

 We advocate the SanDisk Ultra collection for overall performance and reliability. SanDisk`s Micro SD playing cards vary from eight GB to 2 hundred GB.

6. BASE QI

If you`re on a Mac book, we endorse additionally selecting up Base Qi`s Ninja Stealth Drive, an aluminum Micro SD adaptor that suits snuggly into the SD card slot for an extra "seamless" brushed aluminum end that blends in.

The Ninja Stealth Drive adapter is simply low-priced however you`ll additionally want to shop for an SD card.

7. Intro circuit Power Monster

Unfortunately, please do not lose your laptop battery. This is a problem for producers that rely on their trusted laptops to manage production software and documents for that set.

We used some of a few external batteries in our test (almost lucky), our favorite is Incrocive Circuit Power Monster. We saw that it almost doubled the lifetime of the laptop battery when it was inserted into this little guy. If you speak with a Mac book, you must have one of these cables individually.

8. NOMAD ROAD TRIP CAR Charger

An expedition is a unique car socket charger with an external battery for loading. The idea is that you connect it to your expressway and connect your phone to the other end. When you move to the settings, load the mobile phone first and then fill the 3,000 mAh battery. When you get to your place, unplug the charger from the car and bring it with you to keep your phone charging.

9. Mophie juice pack

The smartphone is a manufacturer's Swiss Army knife. You can answer calls, send emails, check weather and traffic conditions, scan documents, take pictures, and become a team's WiFi hotspot. Battery life can quickly become an issue. MOphie is an electronic telephone house with essentially rechargeable batteries. It adds a mass, but it is a small victim to keep your iPhone runtime almost twice. MOphie and others also provide some external battery options that can simply plug in to receive boosts as needed.

10. Apple Smart Battery Case

When on iPhone 11 Pro, Apple received its version of Mophie called iPhone 11 Pro Smart Battery Case. Mophie is still our top pick because of its long battery life and a little lower cost.

A Short Quiz Based on Frozen Planet Documentary

This short quiz is based on the frozen planet documentary: Many creatures live in areas of earth that are at times sub-zero. If you are wondering about these fascinating beings, give this quiz a try. How long do they live, what is their "overcoat" like, are they on land, sea, or air? They could be very small or breathtakingly large. Give it a try and see! By watching this documentary

Activities

- Demonstrate a role play of broadcasting a radio commercial.
- Demonstrate a role play of broadcasting a celebrity interview.
- Conduct news for any incident.
- Conduct a panel discussion on any topic.
- Make ad for brand/product promotion.
- Make a short documentary on skills development.

Do you know

➢ Even three-minute video commercials can take hours to get perfected. Cutting together takes, changing angles and adding in music and sound take not only time but talent.

➢ Before you ever pick up a <u>video camera</u> it is important to have a plan. Creating a video takes a lot of prep work that you may not have considered yet.

Not only do you need to create a script, but it's also helpful to storyboard out the script to know what shots you're aiming for. Once you've determined a shot list, you can start getting ready to shoot.

Having a guideline for the project from the prep work is essential to creating quality footage.

➢ Did you know that video is becoming more popular than ever? In fact, when visiting webpages most users would rather watch a video than read an article? No matter where people encounter a video they want it to appeal to them visually.

➢ Get a feel for editing videos by playing around with software or consider taking a class. There are many online editing classes available to learn how to edit videos.

➢ Since you've already learned that editing is the most complicated aspect of video production, developing your talents could pay off in the long run and you could turn your talent into a career.

EXERCISE

Select the correct option.

1-Which of the following is the news source for radio?

    A. News Agencies   C. Correspondents

    B. Reporters   D. All of these

2-News writer has to keep in mind the precise details of

       A. Entertainment   C. Fame

       B. Time Limit   D. Stagger

3-Which of the following is not the function of Radio?

       A. Information   C. Entertainment

       B. Education   D. Fragmentation

4-Where does radio news are stored?

       A. Archives   C. Blogs

       B. Studio Gadget   D. templates

5-How many TV channels are operating in Pakistan?

       A. 116   C. 118

       B. 117   D. 119

6-Pakistan first Private Channel was?

       A. STN   C. ARY NEWS

       B. GEO NEWS   D. 92NEWS

7-Who does the voice-over in a documentary?

       A. The speaker   C. The narrator

       B. The reader   D. None of these

8-Which Pakistani film has been nominated for the Best Documentary Film award at the prestigious Regina International Film Festival (RIFFA) 2018?

       A. He named me Malala   C. A girl in the river

       B. Indus Blues   D. Abu:father

9-A shot which reveals extreme detail of the subject is.

       A. big Close-up   C. master shot

       B. close- up   D. medium shot

10-The two different locations and sets of action together called

       A. Parallel editing   C. Montage editing

       B. Simple editing   D. Linear editing

Answer the following Questions briefly.

1. Define Radio.
2. Define NEWS.
3. Enlist media tools which use in documentary.
4. Enlist types of NEWS.
5. What is storage media?
6. Define skill techniques.
7. Define advertisement.
8. Define script.
9. Define TV Channel.
10. What is the role of production house?

Answer the following Questions in detail.

1- Explain History of Radio in Pakistan.
2- Explain types of news and process of Reporting.
3- Explain types of TV channels (religious, sports, entertainment, news, cartoon and educational).
4- Explain effects of documentary with identification of idea and location. Explain the procedure adopt for the creation of advertisement.

CHAPTER 04: SOCIAL MEDIA CONTENT

After completing this chapter student will be able to:

- define social media.

- understand to create social media content.

- define media content (images, audio, video and graphics etc.).

- know how to create epic content.

- describe tools/software for content creation.

- define audience and targeted audience relevant content production.

- understand to find inspiration.

- define your focus.

- know about tags.

- know how to change your thinking perspective.

- know the list of platforms used to publish content.

- facebook.

- instagram.

- twitter.

- linkedin.

- snap chat.

- pinterest.

- youtube.

- understand business page setup.

- know about page promotion.
- understands different content for social media like.

- graphics.

- photography.

- gifs.

- videos.

- blogs & vlogs etc.

Section 1: Introduction to social media:

4.1.1. Social media

All kinds of social media are digital platform that users to quickly create content and share it with the general public. Many social media companies impose some restrictions, such as removing images depicting violence and nudity, but they can be shared by someone more than other media outlets such as newspapers, radio stations, and television channels. Social media is the interaction between people who create, share, and exchange information and ideas in virtual communities and networks. Social media platforms allow users to talk, share information, and create web content.

4.1.2. Understand to create social media content

The term social content was recently coined with the advent of social media and generally refers to anything that someone has posted or shared with others. Pew polls explain that content creation is about creating "materials that help people contribute to the online world." Content posted on social media has the power to make your brand a generic name and turn your followers into fans. To be prominent on social media, you need to identify specific goals, create valuable posts that target those goals, and publish your content on the right platform.

Social marketers' top goals for social

70% Increase brand awareness

59% Sales/lead generation

48% Increase community engagement

46% Grow my brand's audience

45% Increase web traffic
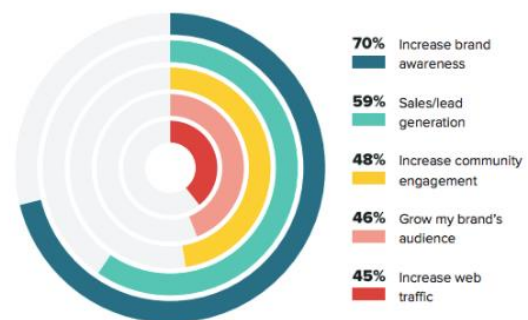
Identify and set goals

The primary step for a long-term sustainable social media strategy is to define your content goals. Setting goals will helps in planning different types of content to create.

This procedure includes mining deep into your product values as well as exploring your audience. Get a clear idea of your overall marketing goals and decide how this content marketing strategy will serve your goals. The more definite your marketing goals are, the better you will be able to modify your social media content to achieve those goals. For example, let's assume that your marketing goals are to generate more sales from social media. So your approach must include posts that encourage people to the main landing page or added fragment of your marketing funnel.

Plan your social content

When you're clear on your objectives, it's time to proceed with a social media content audit on the material you've created so far. Find out the posts that did well, those that didn't, and what you had posted on each platform. If you're working on a social media management platform like Sprout Social, you got a chance to observe all of your social media data and analytics in one place.

Even if you don't have access to a social media tool, you may examine your data by exporting the analytics from each network into a spreadsheet. You can export your post and page analytics directly from Facebook, Twitter, Pinterest, Business, and LinkedIn Business accounts.

What you're looking for in the audit should be directly related to your content objectives. If one of your objectives is to raise brand awareness, for example, examine your follower count on each network and determine which posts resulted in new followers. Now you know what types of material can help you expose your brand to new people who want to follow you on social media. With quantifiable data on how each post performs, a content audit will help you validate what you think is performing effectively. You can discover a discrepancy between what you think should function well and what does.

Examine the wording and tone you're using on the underperforming material in this scenario. You may have drifted from your brand's true voice. Those posts may be perceived as inauthentic or irrelevant by your followers, resulting in a drop-in engagement. The second most common reason for customers to unfollow firms on social media is because irrelevant messages.

4.1.3. Define Media Content (images, Audio, Video and graphic etc.)

Media content includes video, streaming material, webcasts, podcasts, blogs, online forums, and chat rooms, as well as **any data, text, sounds, pictures, graphics, music, photos, or adverts.**

Any digitally distributed media, from newspaper articles and blogs to music and podcasts, is considered new media. Any internet-related form of communication, from a website or email to mobile phones and streaming applications, can be termed new media.

Content Regulation.

The Communications Act of 1934 established the Federal Communications Commission, which is responsible for regulating interstate and international communications. Under the Communications Satellite Act of 1962, they are granted the authority to make legal choices and judgments concerning regulating material, including cable television operation, telegraph, telephone, two-way radio and radio operators, satellite communication, and the internet. The FCC aids in the regulation of numerous areas, including fair competition, media responsibility, public safety, and national security.

Governments all across the globe are attempting to regulate the media by enacting content limitations that violate the right to freedom of expression guaranteed by the Constitution. The editing constraints imposed by content, medium, and legislation help to eliminate unsuitable content. Depending on the country, the sorts of regulations and the enforcement that comes with them differ. There are measures in place to assist regulate and removing material as a result of the limitations. This might contain "non-mainstream" opinions or information with a certain moral norm. Around 48 nations have enacted legislation or implemented administrative measures to control technology businesses and the material they produce. They aim to address social concerns such as harassment and extremism that occur online, as well as to better safeguard individuals from fraudulent activities, exploitative business practices, and violations of human rights.

At least 24 nations have sought to approve or introduce new legislation or policies governing content on internet networks. Include provisions that mandate the removal of illegal content, the imposition of sanctions, the appointment of legal representatives to oversee state demands, and more transparency. Politics, religion, sexual or gender identity, and ethnicity are among the issues that have been subjected to greater restriction. These themes might be exploited to oppress minority populations and ideas expressed on the internet. These laws are being implemented by the government to regulate and monitor the material that circulates in the media.

Due to the erosion of internet freedom over time, users' online actions are constantly being regulated. These controls were implemented to counteract online violence, which might include prejudice and oppression. Some of the laws in existence are intended to restrict information related

to the government as well as content that is damaging to people. Artificial Intelligence (AI) was required by the government to eliminate information related to political, social, and religious expression. People must be able to freely express themselves in the digital arena, according to democratic governments. Content-control has been implemented over time to safeguard and enhance human and digital rights.

Section 2. Content Production

4.2.1. Know how to create epic content

Epic content entices people to put down their devices to read, share, and link to it. It's the kind of stuff you promote. It's quite practical, encouraging, well-written, and entertaining. It's the perfect combination of content marketing and brand usefulness.

When you curate material, you're taking the greatest stuff from all around the internet and placing it in context for your users. You use your knowledge to direct them to the most reliable sources of information on your subject (besides you, of course).

That can entail looking for blogs on home furnishings and style, reading a few of the entries, and compiling a list of the finest with a brief description of each. It will save you a lot of time when it comes to writing while also providing your consumers with an enjoyable, simple, and beneficial read.

Whatever material you're producing, there's a good chance you can reuse it into at least one other piece, which will not only increase its reach but also offer you a break.

4.2.2. Describe tools/software for content creation

Material creation platforms assist in the process of creating, editing, and collaborating on content (whether written or graphic)... These tools may also include content analytics software to track how well marketing content is doing.

Businesses may use content creation tools to develop material for their marketing campaigns. Written material, photos, infographics, videos, and quizzes are all examples of content items. Content creation solutions assist organize, measuring, and managing actions by both internal and external parties engaged in the generation of content, promoting collaboration and cohesiveness among marketing team members (including authors and editors).

Content production software can assist with content strategy, marketing content development, or both. Content planning tools help marketers prepare for content creation by allowing them to

establish buyer persona profiles, create a content calendar, conduct content subject research, and more. Material creation platforms assist in the process of creating, editing, and collaborating on marketing content (either written or visual). Freelance platforms, which feature talent marketplace capabilities around identifying and hiring content producers as well as managing the content production workflow, can enable firms that don't have a dedicated crew to develop marketing content. User-generated content software, unlike content production software, assists firms in gathering visual product or company references from social media and other sources to repurpose for marketing purposes.

Other content marketing tools, such as content experience software and content distribution software, are used in conjunction with this sort of software. Content marketing teams may also take advantage of material duration tools to find and share third-party content. These tools may also include content analytics software to track how well marketing content is doing.

4.2.3. Define audience and target audience relevant to content creation

Let's start with a grasp of what a target audience is. In its most basic form, a target audience is a set of people who are most likely to be interested in your product or service. And the members of this group have a lot in common.

The targeted audience or readership of a magazine, commercial, or other communication geared exclusively to that intended audience is referred to as a target audience. It is a specific group of customers within a defined target market who are recognized as the targets or recipients of a certain advertisement or message in marketing and advertising. Businesses with a large target market will focus on a specific target audience for certain messaging, such as The Body Shop's Mother's Day ads, which were directed at women's children and husbands rather than the entire market, which would have included the women themselves.

A target audience is made up of the same criteria as a target market, but it is more precise and more subject to outside influences. The marketing of the USDA's food guide, which was designed to appeal to young people aged 2 to 18, is an example of this. Nutritional demands of growing children, children's knowledge and attitudes about nutrition, and other specific information were among the issues they had to consider outside of the normal marketing mix. This narrowed their target market and allowed them to focus on a certain demographic. Common variables for target audiences may narrow the target market to details like men aged 20–30 years old, living in Auckland, New Zealand' rather than men aged 20–30 years old.

However, just because a target audience is specialized doesn't imply the message being conveyed won't be interesting to and received by others who aren't in that group. Failures to target a certain audience can also arise when information is delivered wrongly. A botched campaign's side effects, such as a campaign backfire and 'demerit products,' are widespread. Demerit products have a bad social reputation and suffer the consequences of their image being at odds with widely held social standards.

The distinction between a target market and a target audience is determined by the distinction between marketing and advertising. Business methods target a market, whereas commercials and media, such as television shows, music, and print media, are more effective at appealing to a target audience in marketing. Toys might be advertised during morning children's TV shows rather than the evening news broadcast as a possible tactic to attract a target population.

Section 3. Brainstorming Techniques

4.3.1. Understand to find inspiration

Most current definitions of inspiration consider it to be an entirely internal process that is strongly reliant on external stimuli to ignite, or spark, the creative process. The closest definition I could find to what I consider inspiration was on the Macmillan dictionaries website (and not just because it's my namesake, though there's something to be said for the comfort of the familiar!):

"A sudden feeling of enthusiasm, or a new idea that helps you to do or create something".

Inspiration is neither a science nor an art, but it may surely serve as a springboard for research in both! There is no one-size-fits-all solution for most of the productivity-related indefinables we explore here at Liberty (see also: motivation, willpower). Inspiration is a very personal experience. – Some of the stuff that motivate me would probably put some folks to sleep! But that's the beauty of inspiration: one person's garbage is another's treasure, so we can keep surprising our self with where we find it and being startled by other people's sources of inspiration. It appears that taking care of your body and mind, engaging in your hobbies, and making room in your life for inspiration to find you – because it can and will – at any moment is the secret to remaining motivated.

Consider the following: See what comes up when you Google "inspiration." I've done this several times over the years, and while the content varies, the flavor of what I see remains consistent – a mix of definitions (such as "inspiration" being "suddenly stimulated by an idea") and pages of "inspirational quotes," occasionally videos of commencement speeches and athletic feats, mixed

with nature shots and cute cats doing cute things. "Come to our website/store to be inspired!" I see adverts say. As I go over these pages, the general sensation I get is... well, it's not inspiring.

4.3.2. Define your focus

What is focus?

A focus group is a gathering of people who have been pre-screened to offer information about a product, service, or outcome. A question guide is used by a skilled moderator to concentrate the direction of the questions. The moderator also pays attention to nonverbal clues and actions, which she captures in her observations.

How to use it?

Focus groups are frequently employed in the creation of new products or services. They might be used as part of a market research campaign to gather needs or offer insight into consumer perspectives, expectations, desired benefits, underlying assumptions, and shared viewpoints, among other things.

1. Establish your goals or desired outcomes for the focus group.
2. Create a discussion guide that gives the group a purpose while still allowing for some open talks that aren't steered by the moderator.
3. Locate a capable moderator. To lead the group, you could choose to employ a professional moderator. At the very least, your moderator should have the following credentials:
4. The capacity to be open, courteous, nonjudgmental, and adaptable. He or she must stay on subject, ask open-ended questions, and moderate the discussion so that it is fruitful rather than contentious.
5. He or she should have a basic grasp of the new product or service, but no financial stake in its success.
6. Decide whether to record the meeting using video, audio, or a note-taker.
7. Plan the meeting's arrangements, including the time, place, date, and length.
8. Make a list of the people who will be attending and invite them. You should aim for a diverse group of possible end users and consumers.
9. Thank everyone for coming to the meeting at the beginning.
10. Go over the meeting's purpose again.
11. Go through the meeting's flow, guidelines, and ground rules for participation, among other things.

12. Use open-ended questions to start a subject and closed-ended questions to acquire clarification during the conversation.

13. Ensure that everyone is involved. You may need to contact a few folks for comments.

14. Summarize facts, ask follow-up questions if required, practice active listening, and get feedback on replies.

15. Before moving on and ending up the meeting, ask if there are any further comments or suggestions.

16. Thank the attendees for attending.

17. Analyze the data for patterns, themes, surprising results, and any new questions that have arisen.

4.3.3. How to change your thinking process?

Recognize that you can pick your viewpoints. Recognize that you are the only one who can change your perspectives and how they evolve. This will assist you in taking more active actions to improve your attitude.

Knowing that you can shape your ideas may be liberating and provide you with a sense of security as you go forward in life.

For example, if you have a propensity to be negative, you may actively take measures to alter your viewpoint into a positive one by only seeing the positive and letting go of negativity and bad influences.

- **Educate yourself.** Educating oneself by considering a wide range of sources and viewpoints is an important part of reformulating any perspective. You can't grow or develop without information, and broadening your education will enable you most successfully reformulate your viewpoints.

  To educate yourself, you can utilize a number of resources. Taking classes, reading, traveling, or even simply conversing with another individual might offer you fresh information that can help you shift your viewpoints.

- **Take classes or participate in continuing education activities.** Take classes, attend lectures, or receive extra professional training to continue your education and training throughout your life. Developing your intellectual abilities will expose you to a variety of viewpoints and may even help you modify your own.

- o You have the option of attending classes, lectures, seminars, or other continuing education activities in person or online. Many universities now make their lessons or lectures available to the public online.
- o Training and the kind of growth that comes from hands-on experience can also help you shift your perspective.

- **Read a wide variety of media and sources.** Reading a range of newspapers will expose you to a diversity of viewpoints. This might assist you in reformulating your viewpoints.
- Make sure you look at a variety of sources, including newspapers, periodicals, websites, and books.
- Make sure the sources you read represent a range of viewpoints. To see all sides of an issue or dispute, read something from a liberal politician or news source, then read something from a conservative politician or news source.
- **Travel as much as you can.** Take advantage of the opportunity to travel and see as much of the globe as possible. This will teach you that the world is multi-faceted and has many diverse opinions, even if it's only a local town, which will help you modify your own thoughts.
  - o While visiting foreign nations is the finest method to observe things from different angles, local travel is also a great approach to do so.
  - o **Engage in politics.** Politics is naturally a forum for people to voice their differing viewpoints. Participating in politics or the political process exposes you to these many viewpoints and can help you modify your own.
  - o Participate in the politics of many parties to ensure that you are exposed to as many viewpoints and ideas as feasible.
- **Volunteer or help others.** Simple acts of kindness and assisting others may make a huge difference in your mood. It may help you not only put things in perspective in your life, but it can also divert you from troubles and make you feel more cheerful in general.
  - o Volunteering in a hospital or a soup kitchen is a good idea. Realizing that you are healthy and have the financial wherewithal to sustain yourself can help you put things in perspective. This can also assist you in actively choosing to modify negative aspects of your life.
  - o Assisting friends and family members might help you shift your viewpoint since you're making someone else happy, which makes you happy.

o Giving and receiving love and support can help you to have a more optimistic outlook on life.

- **Incorporate new information as well as the perspectives of others.** Make careful to include everything you've learned via education, experience, and talking to others as you begin to create your new viewpoint. Without this crucial information, you won't be able to grow or modify your opinions.

  o As you assimilate this new information, keep the larger picture in mind and concentrate on forming well-rounded perspectives.

  o Recognize that you don't have to agree with everyone's point of view. Based on what you've discovered in your investigation, you may pick and choose which of their viewpoints you favor.

- **Express and enact your new perspective.** You're now ready to completely explain and use your new perspective in your life. This will not only serve to cement your new perspective, but it will also alert others to the fact that you have changed.

  o Act on fresh insights to make good changes in your life.

  o Make a physical reminder of your new perspectives by writing them down on a piece of paper.

  o You may put your new thoughts into action in a variety of ways, from integrating them in discussions to improving the environment around you.

  o If you choose to have a positive outlook on life, you may start doing so right now by keeping your relationships with others and even yourself pleasant.

Section 4. Social Media platforms:

4.4.1. Your Blog

The first place to publish content for most businesses is on their blog.

Your business does have one, right?

A blog lends credibility and authority to your website, draws visitors in, and offers you material that, when correctly disseminated, creates extra traffic from many

Figure 16 Blogs

sources throughout the web. Most businesses' main problem is that they don't publish frequently

or regularly enough. Publishing on an irregular basis or once every X number of weeks will be ineffective. Instead, make it a point to post at least once a week.

Furthermore, it is usually suggested to include a Featured Image in each post, such as the one at the top of this one. This not only increases blog engagement and lowers bounce rates (i.e., visitors stay longer, which encourages Google to send more), but the picture may also be used to promote and/or republish your content elsewhere, including on social media

4.4.2. Facebook

Add a Facebook update whenever you publish anything new on a channel like your blog to aid with content amplification.

Use teaser content in a blog post, such as the opening paragraph or so, to entice readers to return to your topic.

To optimize interaction and draw as many eyeballs as possible, use a picture from the content, such as the

Featured Image from the blog article.

Figure 17: Facebook

The simplest method is to have a picture inserted automatically via your social meta tags, so make sure they're set up correctly (here's how).

Because organic reach on Facebook is now very restricted, try paying for more exposure and tracking your outcomes.

Do the following to get the most out of a paid ad:

o   Integrate opportunities for visitors to opt-in to your list.

o   Use a Facebook Pixel when posting a link to your blog so you may establish an audience of your readers and advertise to them in the future (such as an opt-in offer).

Even if a company does everything listed above, the majority of them make the error of just doing it once. They could, for example, promote a fresh blog article once on Facebook and then forget about it.

Instead, develop a system for sharing the material again so that you can get the most out of your efforts.

4.4.3. Twitter

The same may be said about Twitter. Don't just send out a single Tweet announcing your fresh material and then ignore it. After all, only a small portion of your audience will see a single Tweet at any one moment.

Despite this, the majority of companies on Twitter do just that. If they have new stuff, they will only Tweet about it once.

Instead, spread your message out over time by sending many Tweets, such as once a week for twelve weeks. Of course, it doesn't have to be the same Tweet as the previous one, and it probably shouldn't be. Each Tweet may focus on a different aspect, with hashtags altering as appropriate.

You'll be doubling the results you'd obtain otherwise, just like on Facebook. And the effects grow much more profound over time when done as part of a continuous practice. Use sponsored marketing to extend the reach of your Tweets and grow your audience.

4.4.4. LinkedIn

Unless you're seeking to target customers who suit LinkedIn's demographic, LinkedIn is more useful if you're a B2B company rather than a B2C company (which tends to be relatively affluent well-educated professionals).

As a result, if LinkedIn is a good fit for your company, the quality of traffic you may get from it is rather high.

Publish an update with a link to your new material and a teaser paragraph or two, similar to how you might on Facebook.

However, if you add a link that keeps people on LinkedIn

Figure 18: Linked in

rather than redirecting them to an external website, you're more likely to get more organic reach. You may accomplish this by repurposing your material on the LinkedIn Publishing Platform (see information below) and linking to that article instead (and do so in a way that still helps build your list or otherwise directs interested visitors to your own website).

On LinkedIn, you're likely to have a personal profile as well as a Company Page.

So, instead of publishing via your profile, consider publishing via your company page and then sharing the update with your profile. Alternatively, it might be the other way around.

As with the other social media networks mentioned previously:

- Use paid marketing to increase the visibility of your content—on LinkedIn, you may accomplish this with sponsored updates.

- Create a repeatable procedure to ensure that your material is shared several times.

- Increase your LinkedIn followers to expand your reach (here's how).

4.4.5. YouTube

YouTube, which is owned by Google, is the world's second biggest search engine and the world's second most popular website, according to Alexa (Google is first, followed by Facebook and numerous Chinese-language sites).

That means having a presence here is almost mandatory, and reusing material from your blog should be a key goal. And of course once you have videos on YouTube, you can show up for these on Google Search, in addition to the original post.

Many firms, rather than using a blog, employ videos as their primary content channel, perhaps recycling videos into blog articles and other material.

But how can you approach it if your principal online content channel is text-based, such as a blog?

One approach is as mentioned above in the section on Slide Share, at least if you're in B2B. Once you've created a Slide Share presentation, it's quite simple to turn it into a video and add your creative touch.

This might include pictures of different slides inside the presentation as well as someone on camera running through it.

Alternatively, someone might just refer to the blog post as a guide while speaking to the camera, going through the important themes covered in the post.

4.4.6. Instagram

Instagram is only second to Facebook in terms of daily usage, with 1 billion monthly active users in June 2018.

Because the site has a significantly greater degree of engagement than Facebook, it is popular among advertisers. Even better, as this graph from Yotpo demonstrates, this engagement continues when visitors arrive on your website, with visitors from any other social channel engaging more.

4.4.7. Pinterest

Some Pinterest statistics may be of interest—and presumably should be:

- They have 333 million monthly active members and are one of the top seven social networking networks.
- The majority of users are from high-income families that make more than $75,000 per year and are well-educated (source)
- They are purchasers.

Simply pin the Featured Image for your blog article each time you publish it and link back to it if you want to start utilizing Pinterest for your business quickly.

However, if you're ready to take things a step further, check out our beginner's guide to utilizing Pinterest for marketing.

4.5. Understand business page set up

Because Facebook Business Pages are indexed by Google, the text you publish on your profile can help you rank in both global and local search engine results. When you establish a Facebook Business Page, you'll receive recommendations to help you fill out all of the information on your page. If you need to make changes, go to the about tab of your page and select Edit Page Info.

The fields to fill out are as follows

- **Username** – using a username instead of a string of randomly generated digits in your URL (Facebook.com/Your Username) makes your page simpler to discover.
- **Description** – In 255 characters or less, tell readers what your page is about.
- **Categories** - Categories can aid in the discovery of your page. You have the option of selecting up to three categories.
- **Contact Information** — include your business phone number, website, and email address here.
- **Address** – If you have a physical location, include it here. A service area might also be included.
- **Hours** – If you're only open at certain times of the day, list them here.
- **More** — include a list of your items, a price range, and a link to your privacy policy in this section.

All of these characteristics will display in the about part of your Facebook Page, where you may add even more details about your company, such as its history, accolades, menu, and so on.

4.5.1. Add collaborators to your page

If you want to delegate your Facebook marketing responsibilities to a group, you'll need to allow access and assign roles to different people. Go to the Page Roles section of your page settings to add collaborators. Any Facebook friend or individual who has liked your page's page can be typed in. You may also fill in an email address linked to your Facebook account. You must be Facebook friends with everyone you add as a collaborator in either case.

The following are some of the available roles

- **Admin -** Full and unrestricted access to everything.
- **Editor -** Can modify the page, send messages, and publish as the page, as well as build Facebook Ads, see who made a post or remark, and get insights.
- **Moderator** - Can react to and remove page comments, send messages as the page, check who admin authored a post or remark, add advertising, and view insights.
- **Advertiser -** Can check who made a post or remark, generate advertising, and monitor analytics.
- **Analyst –** View insights and see which admin authored a post or remark.

4.5.2. Optimize your Facebook business page

After you've filled out the essentials, you may use customization options to improve your page. Select Edit Tabs from the more drop-down menu while on your page. You may then choose from a variety of themes that appeal to various sorts of businesses, such as non-profits, shopping, services, restaurants and cafes, and so on.

Setting Up a Facebook Page

Log into your Facebook login and select the Home icon next to your name to create a Facebook page for your company. Then, under the Explore part of the left-hand sidebar of your profile home page, pick the Pages tab.

You may browse top page suggestions, explore invites to other pages, view pages you've liked, see the pages you're already managing, or start a new page by clicking here. You'll select Create Page from the drop-down menu.

For your new business page, you'll then select a page type. There are six possibilities:

- Local Business or Place
- Company, Organization, or Institution

- Brand or Product

- Artist, Band, or Public Figure

- Entertainment

- Cause or Community
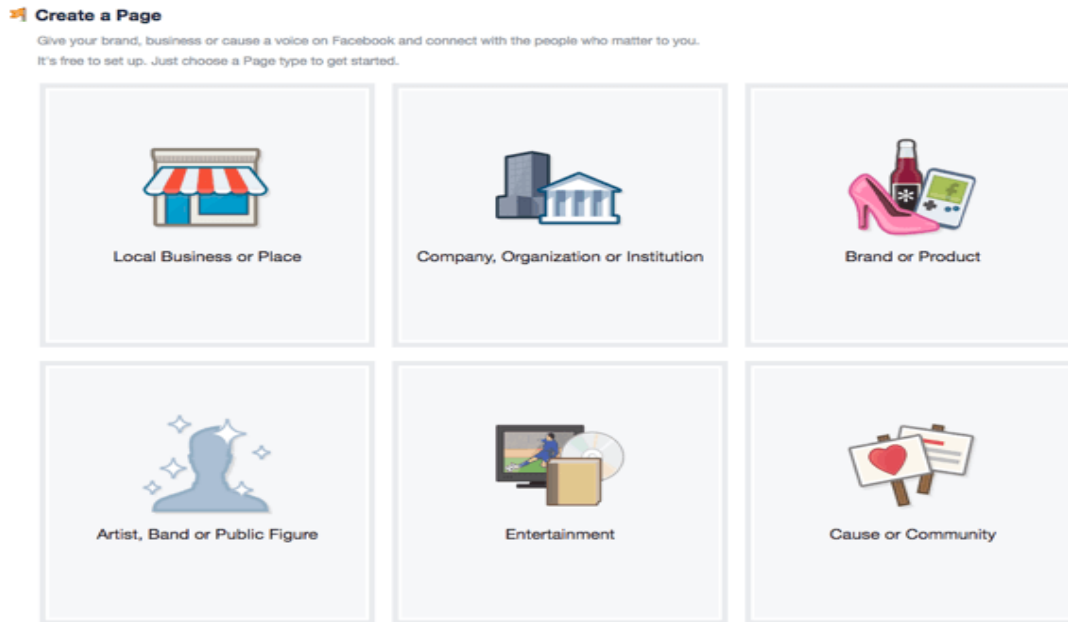
Figure 19: creating a page.

Carefully select the kind for your Facebook Page. A drop-down menu with a large number of categories is available for each page type.

Choosing the proper page type for your business may appear simple at first, but after looking over the categories, you may discover that your company belongs to a different page type then you expected.

Remember that each page type has its own category options, and each category option has its own set of characteristics, so don't rush this step; find the appropriate match. Consider the benefits that each type and category of the Facebook page has to offer.

Choose the Facebook page type and category that would be the greatest option for now after viewing the page type categories. You may always alter the category once the page has been published if you change your mind. Fill in the name of your new page, as well as any other required fields, then click Get Started to be directed to your new page!

Create a profile picture for your Facebook page and upload it.

Your company page's profile photo may be anything you want it to be:

- A photograph of an actual item you sell
- If you're the face of your company, a professional photo of yourself
- Your logo

Whatever you choose, **keep the composition simple** so it's easily recognized.

Create and Add a Cover Photo for Your Facebook Page

You'll follow the identical steps as before to generate a cover photo, except for adjusting the measurements; the dimensions for a Facebook cover photo are 828 x 315 px.

Keep in mind that the mobile-friendly region is inside the 560 x 315 px space, so if you want to use a text overlay to add phrases to your cover photo, make sure it will be seen on all platforms.

When you've finished editing your image, click the Add a Cover button in the upper-left corner of the Cover Photo box, then click Upload Photo. You may drag the image about to get it in the right place, and then click the Save button when you're finished.

After you've uploaded your cover photo, click on it to edit the description. This is a significant piece of page real estate, so make the most of it by including a slogan or a pricing point, as well as a link to your website or a product landing page.

If someone clicks on your cover photo, they may learn more about the page or your company.

Write and Add a Description to Your Facebook Page

Tell visitors what your page is about in the Description field. The more details you provide to potential new followers, the more likely they are to stay.

Because your description is restricted to 155 characters and appears in search results, consider how potential followers can find your page online by searching for your product or service.

To summarize the topic of your website or company, click the Add a Short Description option and write one to two sentences, incorporating keyword terms where necessary.

4.6. Types of social media content

4.6.1. Social network

Examples: Facebook, LinkedIn

A social networking site is a type of social media site that allows you to meet others with similar interests and backgrounds. Three of the most popular social networking websites are Facebook, Twitter, and Instagram.

We can connect with our friends, family, and even companies through these platforms. Users may express their ideas, upload images and videos, and join interest groups on most social networking sites.
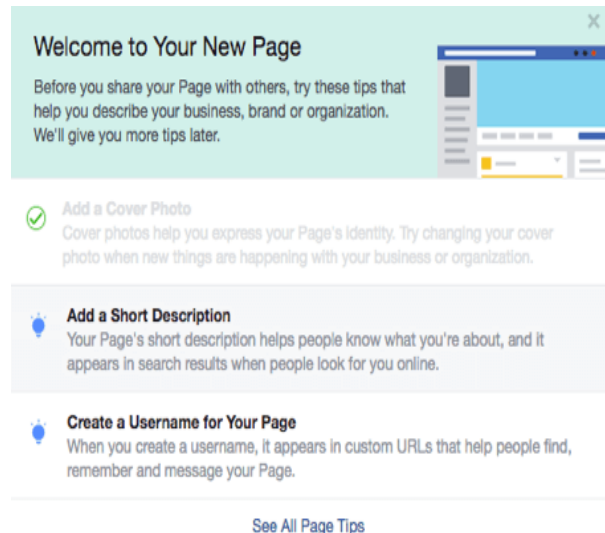
4.6.2. Bookmarking Sites

Examples: Pinterest, Flipboard, Diggs

Users may collect and organize connections to a variety of online resources and websites using bookmarking tools. The capacity for users to "tag" links, which makes them simpler to find and, usually, share with their followers, is a fantastic feature of these platforms. A prominent example of a bookmarking site is Stumble Upon.

4.6.3. Social NEWS

Examples: Digg

Users can upload news links and other stuff to external articles on a social news site. Users then vote on the things, with the items with the most votes being presented first. A good example of a social news site is Reddit.

4.6.4. Media Sharing

Examples: Pinterest, YouTube, Vimeo

Users can share several forms of media on media-sharing websites, the two most popular of which are image sharing and video hosting services.

Most of these sites also have social aspects, such as the ability to establish profiles and the opportunity to comment on the photographs or videos that have been submitted.

These platforms primarily promote user-generated content, in which anybody may produce, curate, and share original material that speaks to them or sparks discussion.

4.6.5. Microblogging

Examples: Twitter, Facebook

These are exactly what they sound like: websites where users may post short written entries that may include links to product and service websites as well as other social networking sites. These are then shared with everyone who has subscribed to that user's account's 'walls.' Twitter is the most popular microblogging platform.

4.6.6. Blog comments and forums

An online forum is a website that allows users to participate in discussions by posting and replying to messages from the community. A blog comment site is similar, although it's a little more specialized. The comments are generally focused on the associated blog's special topic. Blogger, Google's popular blogging platform, is well named. However, unlike the universal appeal of general social media sites, there appear to be an infinite number of blogging sites. This is due to the fact that many of them are niche-based.

4.6.7. Social review sites

Examples: TripAdvisor, Yelp, Foursquare

When you're looking to buy a new product or try out a new restaurant, what's one of the first things you notice? If you're anything like us, the first thing you'll do is look at the reviews.

4.6.8. Community Blogs

Examples: Medium, Tumblr

Sometimes all you want to do is publish a single message, and not everyone on the internet wants to invest in the time and effort required to run and maintain a blog from a self-hosted website. This is where platforms like Medium, which allow individuals to share their opinions and voices, come in.

Section 5: Types of social media contents

4.7.1. Graphics

The visual component of every social media post, generally in the form of photographs, gifs, and videos, is known as social media graphics. There are a lot of things that go into making visually appealing visuals for social networking.

4.7.2. Photography

When shooting photographs, the photographer should always consider the platform on which the image will be shared to generate an image that is appropriate for that platform.

Make a Statement with Your Photographs — your photographs are your creations. They speak for you, therefore you must know how to make the most of them. The photos you provide on social media are meant to attract attention and create an impression on your followers in the hopes that they will act.

Take Photos with Placement in Mind – Framing, composition, angles, and lighting for social media differ slightly from other mediums. When it comes to framing and composition, the basic 'Rule of Thirds' may not be applicable to social media. It'll work for your Facebook cover photo, but not for Instagram, where the perfect image isn't broad enough. It won't work for profile pictures or most other social media networks since the images should be narrower. Similarly, there are additional developments that photographers must adapt to in order to make their photographs presentable on other platforms.

Content/Storytelling it is no longer sufficient for photographers to just submit nice photographs and expect results.

Photography Should Tell a Story — Storytelling has long been an important aspect of effective marketing. We can use stories to give our brands a personality and connect with customers. Because of the personal connection they were able to build, good tales personalize your brand and drive people to remember what they witnessed. A beautiful image may communicate a narrative far more powerfully than a five-paragraph summary of events. Photography is a genuine medium that can communicate a narrative in an instant. And, because to advances in technology and digital new media, the content we use is more aesthetically appealing than ever before. Overall, strong material is essential for increasing visibility.

4.7.3. Gifs

When you use GIFs on social media, you want to make your audience feel something and desire to do something about it. According to research, individuals are more influenced by emotional responses, particularly comedy and enjoyment, than by real substance. Here are four ways your company may utilize GIFs on social media while considering emotions.

- Highlighted Products GIFs are a terrific method to showcase your items. In a brief 15-second movie, demonstrate how to use it, style it, and more in a way that will keep your audience engaged.

While there are plenty of GIFs available, there will be instances when producing your own would have a greater effect.

Here are three resources for making GIFs:

1. You can produce GIFs from YouTube videos or personal videos with Giphy's GIF creator. Simply add a video link or upload your own onto their site, then select the section of the movie you want to change. This will be saved to your Giphy library and is completely free to use.

2. Boomerang is a smartphone app from Instagram that lets you record video into a GIF. The final result will be saved to your camera roll, making it simple to share on any of your company's social media platforms.

3. Photoshop may also be used to create GIFs. Simply import a movie into Photoshop and use the timeline tool to pick the desired duration. When saving, choose "Save for Web" and make sure "looping" is set to "forever."

Transform your material into a GIF to easily bring it to life. Using GIFs, your brand may express emotion, educate customers, and remain memorable to your target demographic.

4.7.4. Videos

Video content is becoming increasingly important, and it's especially common in social media marketing. Video content is increasingly an important part of marketing tactics geared at younger generations, and when properly targeted, it can produce amazing results.

Here are a few reasons why video content is presently dominating the social media marketing landscape as the primary emphasis, as well as offering significant potential.

Brands may use the video material to communicate a story, with the added benefit of possibly selling a product.

Framing communication as a tale aids in the development of an emotional connection, which may have a significant impact on client retention. Brands can combine their messaging with interesting and educational material by communicating through storytelling, making it significantly more likely that customers will give up their valuable time to watch it.

4.7.5. Blogs and Vlogs

A blog is a website that displays its information in reverse chronological order (newer content appears first). Entries or "blog postings" are common terms for blog material.

A single person or a small group of individuals usually runs a blog to deliver information in a conversational approach. However, there are now a plethora of corporate blogs that provide a wealth of educational and thought-leadership material.

What is The Difference between Blog Posts and Pages?

WordPress is a robust content management system and the most popular blogging platform. It comes with two content kinds by default: posts and pages. Beginners frequently get mixed up between the two.

Because blog entries contain current material, they are shown in reverse chronological order (newest to oldest) on your blog page. This implies that your viewers will have to dig deeper to see previous articles.

Static pages are material that is only used once, such as your about page, contact page, product or service landing page, home page, and so on. See our beginner's guide on the difference between posts and pages for more information.

Pages are commonly used to establish the structure and layout of a website. Pages may be added to blogs as well (See our list of important pages that every blog should have).

Activities

- Group discussion and presentation on social media

- Create content to publish on social media channels

- Enlist the names of tools/software used to create a media production content

- Discuss and research latest social media trends for media production

- Prepare a presentation on social media platforms

- Post a designed intro video content of your school on Facebook, Instagram, Twitter and LinkedIn as per dimensions of social media platforms.

- Group class presentation on types of media contents for different platforms

Do you know

➢ To put that figure into perspective, the entire global population is around 7.67 billion – that means over half of the entire world's population is on social media.

➢ If we look specifically at the 16-64 age range, a whopping 98% of people access social media, and 90% of them actively engage or contribute to social platforms.

➢ Note, though, that this doesn't necessarily mean active social accounts. Many of the social accounts people have are dormant.

➢ The average user spends nearly 2.5 hours on social media.

➢ Somewhat surprisingly, social media is still popular even in a work setting. The majority of employees (66%) will communicate with their colleagues via social media, but email still dominates as the primary form of workplace communication (92%).

➢ Measuring ROI has long been one of the biggest challenges facing social marketers, but this year, it came second to identifying and reaching their target audience. If this is one of the biggest hurdles facing your SMM efforts, you're not the only one.

EXERCISE

Select the correct option.

1-After WhatsApp, which social media platform introduced disappearing feature of message?

    A. Facebook Messenger   C. Snapchat

    B. Twitter   D. Telegram

2-Which social media giant launched a new tool 'Business Suite' to help small businesses?

    A. Twitter   C. TikTok

    B. Facebook   D. We Chat

3-Which country has banned free internet services for accessing social media?

    A. China   C. Pakistan

    B. Bangladesh   D. North Korea

4-Today the most popular social networking site is

    A. MySpace   C. Weibo

    B. Twitter   D. Facebook

5-Following is the term updates by Twitter users.

      A. Tweets   C. Twinks

      B. Tweats   D. Posts

5- How many phases are there in brainstorming?

      A. Two   C. Four

      B. Three   D. All of these

7-What kind of thinking is also considered using your "common sense?"

      A. Practical   C. Creative

      B. Analytical   D. Critical

8-Analytical thinking can help you do which of the following?

      A. Make Decisions   C. Form Bonds

      B. Take Risks   D. Brain Storm

9-Identify the platform for social media marketing?

      A. Instagram   C. Facebook

      B. Twitter   D. All of the above

Answer the following Questions briefly.

1. Define Social Media.
2. Define Media Content (images, audio, video and Graphics).
3. How can we create an Epic Content?
4. Write the list of platforms use to publish content.
5. What will be the content for Graphics?

Answer the following Questions in detail.

1. Describe Tools/software for content creation.
2. Differentiate between audience and target audience relevant to content production.
3. Write a detailed note on Inspiration. Define focus, tags.
4. Describe the procedure to change your thinking perspective.
5. What is business page setup? Explain page promotion.

CHAPTER 05: BLENDER

After completing this chapter students will be able to:

- define 3d modeling.
- define rigging.
- describe scope of 3d modeling.
- learn about use of 3d modeling tools (blender, maya, 3d studio max etc.).
- define blender.
- understand use of blender and interface.
- understand camera setup.
- learn properties of transformation (translate, rotate, scale, mirror, edit, duplicate, delete).
- learn about node, mesh, and vertices.
- learn about pivot point adjustment.
- understand about shapes (cube, rectangle, circle, cone editing etc.).
- understand about materials and uv mapping.
- comprehend lightning concept.
- understand about physics.
- learn about animation insertion.
- learn about key frames.
- understand 3d view, timeliner, graphic editor, job sheet.

Section 1: Introduction to 3D Modeling and Rigging

5.1.1. Define 3D modeling

3D modeling is a computer graphics technique for creating 3D digital representations of objects or surfaces. The artist uses special software to manipulate points (called vertices) in virtual space to form a mesh. This is a collection of vertices that form the object. These 3D objects can be created automatically or manually by deforming the mesh or manipulating the vertices. 3D models are used in a variety of media such as video games, movies, architecture, illustration, engineering, and commercial advertising. The 3D modeling process is an integral part of character animation and special effects, as it creates fully animated digital objects. The core of the model is the mesh. Meshes are best described as a collection of points in space.

Figure 20: 3d Modelling

5.1.2. Define Rigging

Rigging is a technique used in skeletal animation for representing a 3D character model using a series of interconnected digital bones. Specifically, rigging refers to the process of creating the bone structure of a 3D model. This bone structure is used to manipulate the 3D model like a puppet for animation. Pretty much anything can be rigged. A spaceship, a soldier, a galaxy, a door, it doesn`t make any difference what the object is. You can freely animate each object by adding bones. Rigging is most common in animated characters in games and movies. This technique

simplifies the animation process and improves production efficiency. Once the skeletal bones are provided, you can manipulate and transform 3D objects as needed.
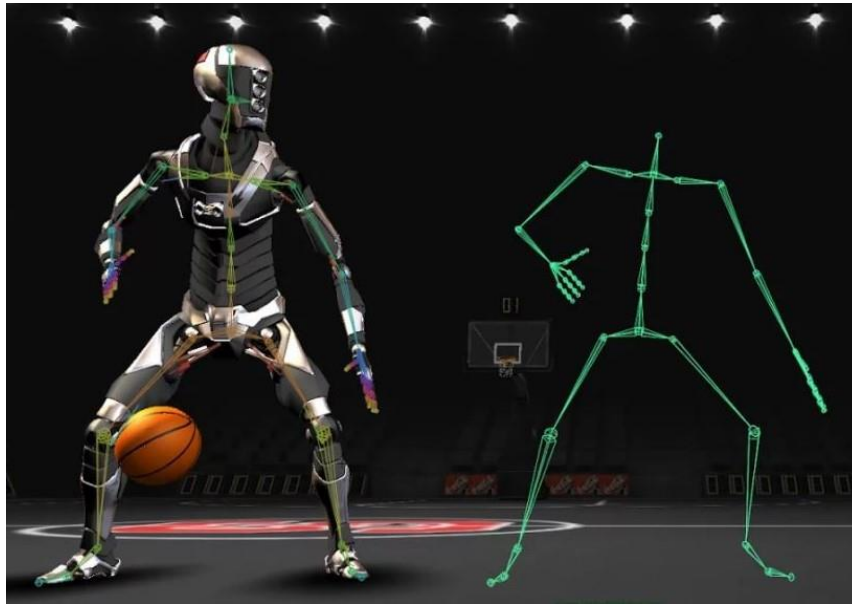

Figure 21: rigging

5.1.3. Describe Scope of 3D Modeling

3D modeling is a term used to describe the process of creating a 3D image model using specialized 3D software. The images created are accurate representations of specific shapes, textures, and sizes. 3D modeling helps you create realistic representations of existing things, but it also helps you visualize fictitious things. 3D models are built with points, lines, and surfaces and use a coordinate data system to identify vertical and horizontal point positions concerning a particular reference point. This allows you to view 3D images from different angles.

- **Architectural 3-d modeling**: Architectural 3-d modeling consists of developing 3-d fashions and 2D sketches of all architectural designs. It consists of developing an indoors and outdoors layout and considering of building.

- **Advertising 3-d modeling:** 3-d fashions are greater appealing and modern to symbolize something and maintain a long-lasting effect. 3-d modeling caters to marketing and marketing areas via way of means of making practical characters and entities.

- **Mechanical 3-d Modelling:** With 3-d modeling, the mechanical engineering area has the possibility to construct strong machines and equipment. The 3-d version offers a clean picture of what without a doubt the product is and the regions for improvement. Machine

layout, unique elements, and meeting all may have a 3-d version that determines the real product and complexity involved.

- **Electronics 3-d Modelling:** Electronic merchandise also is a complicated structure. 3-d fashions of electronics assist decide the large-scale integration strategies and new viable layout horizons.

- **Gaming characters and property 3-d modeling:** Gaming is an amusing crammed pastime that calls for increasingly more modern ideas. 3-d modeling for gaming property and characters creates nearly actual figures that make gaming seem like a stay world.

- **Furniture layout 3-d modeling**: In the latest times, the furnishings designs have modified loads with sturdy and snug merchandise to users. This is a present of 3-d modeling that creates a 3-d version and assists producers examine the layout for adjustments and acceptability

- **Branding and Logo Design:** A properly designed emblem speaks for the logo cost in itself. 3-d modeling for manufacturers and symbols makes use of the innovative ability in maintaining it crisp and beautiful.

- **Films and media:** These days' movies use 3-d modeling as a key associate in developing lively stunts, actions, activities, and scenes. This is the sector that makes use of 3-d for a maximum of its duration.

- **Healthcare services and products 3-d Modeling**: This is a growth in the fitness care industry. 3-d modeling is used to look at organ functions, illnesses, and their effect on individuals. Most of the surgical treatment practices and research are carried out on 3-d fashions.

- **Developing CAD fashions**: Various software like AutoCad, ZBrush, Sculptris, Revit, 3-d`s Max, SketchUp, and Blender are properly versed with the state-of-the-art strategies to present you the first-rate designs and animations. Each of those can be utilized in one or greater offerings, however, the precision and perfection that those equipment have is the maximum critical factor. A top 3-d Modeling offerings employer will harness this kind via way of means of having 3-d modelers or designers who recognize the heartbeat of that equipment in addition to the client`s requirements.3D modeling is a term used to describe the process of creating a 3D image model using specialized 3D software. The images created are accurate representations of specific shapes, textures, and sizes. 3D modeling

helps you create realistic representations of existing things, but it also helps you visualize fictitious things. 3D models are built with points, lines, and surfaces and use a coordinate data system to identify vertical and horizontal point positions concerning a particular reference point. This allows you to view 3D images from different angles.

5.1.4. Learn about use of 3D Modeling tools

3D replicas are a common form of technology, but which industry is using 3D modeling? Many industries use 3D modeling for a variety of purposes. Some concepts are:
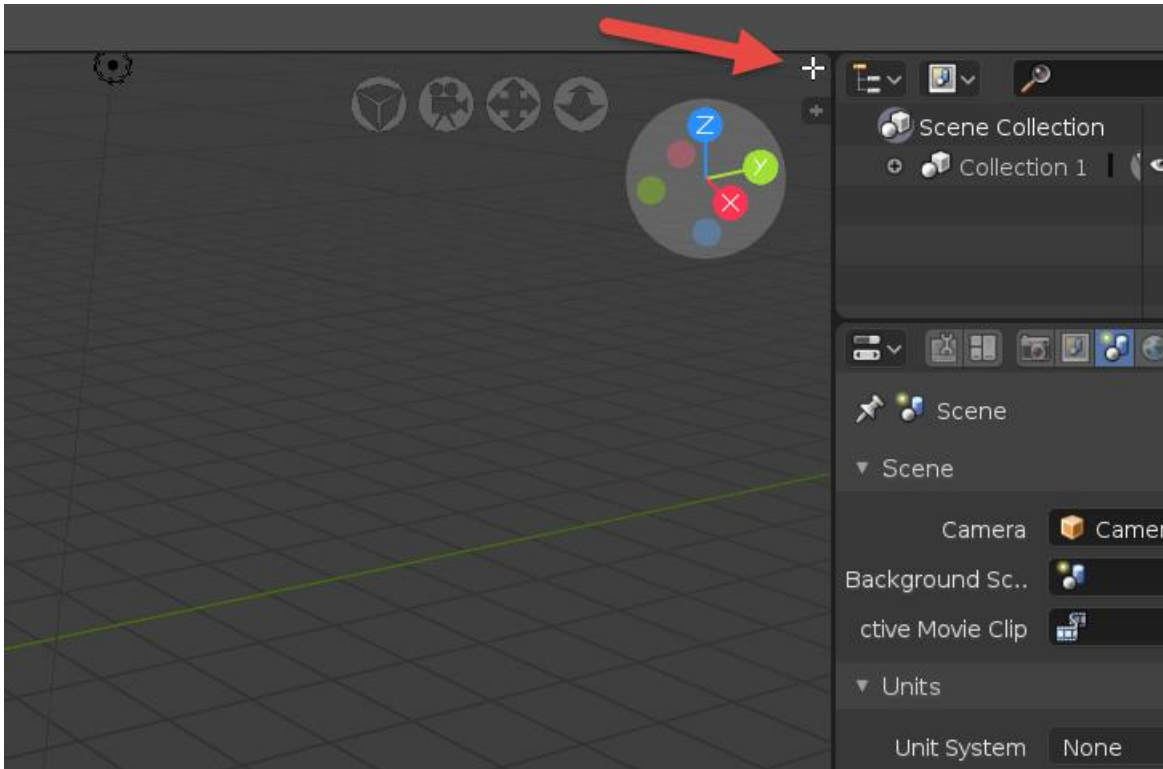

Figure 22: axis

- Planning a building using architectural visualization.
- Take a 3D tour of real estate.
- Creating video games and movies.
- Conducting academic research.
- Models have many uses in construction, and new technologies are constantly emerging.

Here's how to use a 3D model in your design:

MACHINE CONTROL

3D modeling enables more accurate, efficient, and cost-effective machine control. Instead of using traditional survey stakes, machine operators can see the site on screen while in the cab. The sensor

system controls the machine based on the measurements of the 3D model. Equipment such as excavators, backhoes, and bulldozers are equipped with computers, and signs and shovels include GPS devices. You can place a GPS base station on your site or subscribe to a GPS service. No matter what type of system you choose, it will communicate with your machine's receiver.

SITE LAYOUT

3D models are also useful for communicating the layout of your sites, such as utility locations and landscape features.

For example, you can map the location of electronic devices. This may include connectors for electrical equipment panels, street light posts, signs, kiosks, ornaments, and other electric items. 3D models help electricians make these connections quickly and accurately.

PROGRESS REPORTS AND AS-BUILTS

3D models are also useful for communicating the progress of a project and for creating a finished product that is a revised drawing submitted after the project is completed. You can collect new data during the task to create an updated 3D model that shows what your site will look like now. Created after the project is complete, the 3D model can be used throughout the asset lifecycle for maintenance, operations, asset management, and more.

5.2. Basic Concept of Blender

5.2.1. Define Blender

Blender is a free open-source 3D creation suite. It supports the entire 3D pipeline, including modeling, rigging, animation, simulation, rendering, compositing, motion tracking, and even video editing and game creation. Advanced users use Blender's API for Python scripts to customize their applications and create their own tools. In most cases, these will be included in future versions of Blender. Blender is ideal for individuals and small studios who benefit from a unified pipeline and a responsive development process. Many Blender-based project examples are available in the showcase.

Blender is cross-platform and works equally well on Linux, Windows, and Macintosh computers. The user interface uses OpenGL to provide a consistent experience. To ensure specific compatibility, the list of supported plates shows the plates that are regularly tested by the development team. As a community-led project under the

GNU General Public License (GPL), the general public is allowed to make small and large changes to the code base, resulting in new features, responsive bug fixes, and usage. Ease is improved. Blender doesn't have a price tag, but you can invest and participate to help drive a powerful collaboration tool. Blender is a unique 3D software.

5.2. Understand Use of Blender and Interface

Blender is a free open-source 3D creation suite that supports a complete 3D pipeline from object modeling to texturing, rigging, animation, rendering, compositing, and even video editing. You can also use Blender to create interactive applications, including web-based applications.

A blender is a cross-platform software that works equally well on Windows, Linux, and macOS platforms. The

The blender interface consists of several windows. The number and type of windows displayed on the screen are not strictly defined and can be changed manually by the user or by selecting a preset from the screen layout menu at the top of the screen. When you first open

Blender, you'll see what's called the default user interface. Blender's interface is so flexible that you can stretch and reshape it as you like. The screenshot below shows Blender's default UI:

5.2.3. Properties of Blender and interface

These are the properties of blender:

Resizing windows

To resize the window, you need to hover your mouse pointer between the splits. When the cursor changes to a double arrow, you can left-click and drag to resize the window as shown in the screenshot below:
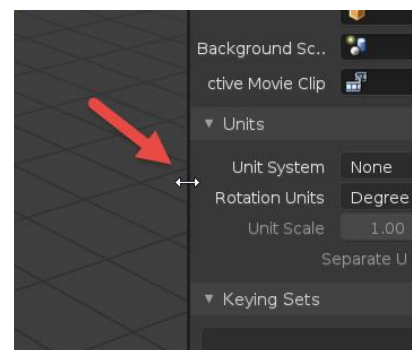

Figure 23: resizing

Managing windows

Once you learn how to use the corners of an existing window, the process of creating a new window in Blender is very simple. Each of the four corners of the window serves as a reference for splitting or merging windows.
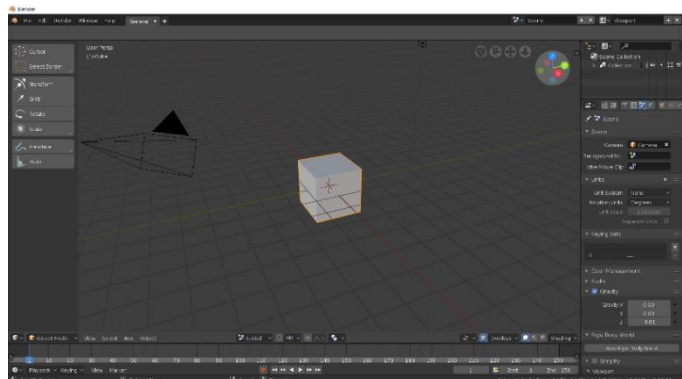

Figure 24: Window management

If you move the mouse pointer to the corner as shown in the upper right, the mouse pointer will change to a cross, as shown in the screenshot below.

There are two options for splitting the window:

- Move Up / Down: Creates a horizontal split.
- Move left or right: Create a vertical split

Merging windows

There are some simple rules you need to follow to successfully merge two windows. Both must have the same edge. The common side must be the same size.

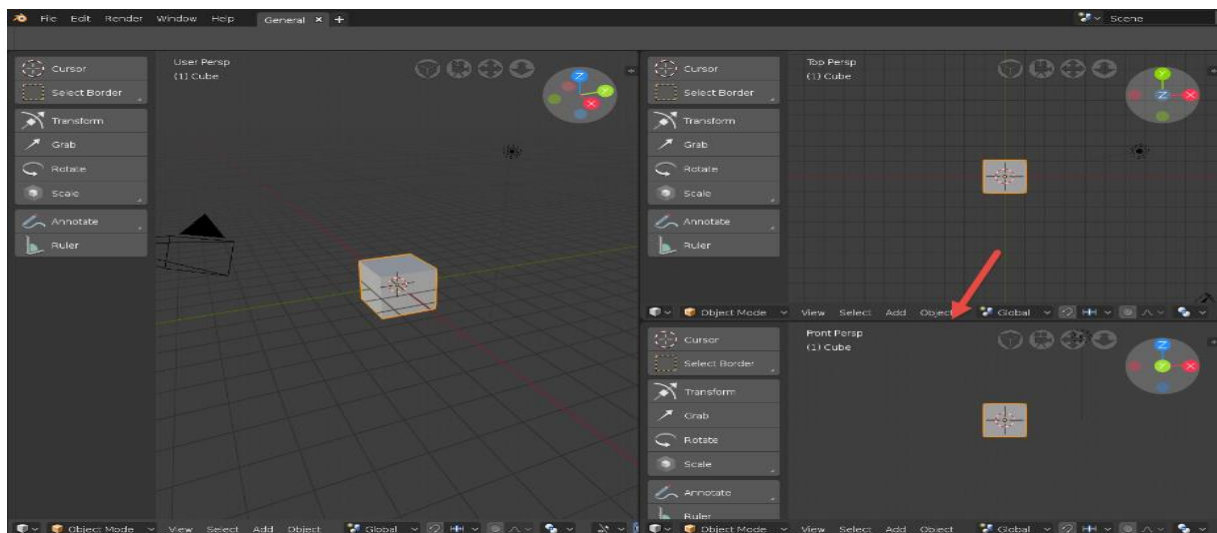This is an example of two windows sharing the same edge.

Figure 25: Window merging

Active window and shortcuts

At this point, you already know how to work with windows, so you can move on to Blender's next core concept, active windows. Why is it important? It's closely related to another aspect of Blender, keyboard shortcuts.

Blender has many keyboard shortcuts, which can save you a lot of time on simple tasks. The relationship between windows and shortcuts is that you can use the shortcuts in each window to choose where to launch the tool. Always control and use the tool in the active window. But what is the active window? This is the window where the mouse pointer is placed the moment you call the hotkey.

It is important to understand this concept as you can accidentally press a key when the wrong window is active.
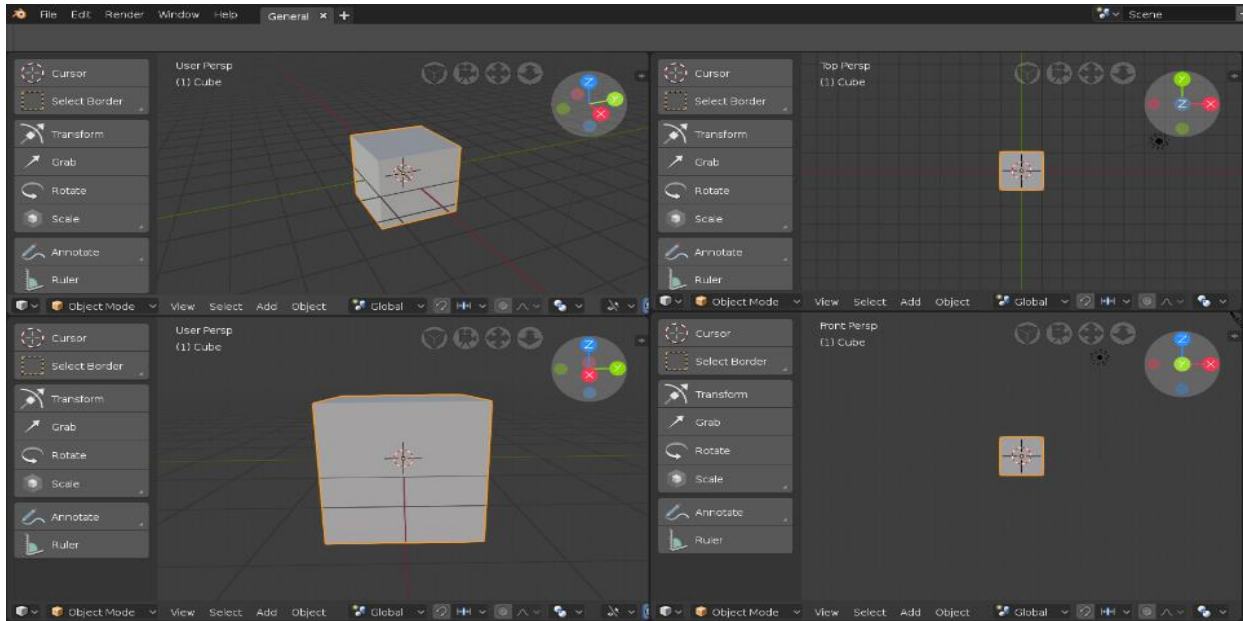
Figure 26: Window activation

Selecting objects

The next step to learn more about Blender is how to select objects and convert them to 3D. To select an object, right-click on the object in the 3D viewport. This is the window you use to view all objects in 3D, manipulate them, and do most of your visual work. An orange frame appears around the selected object.
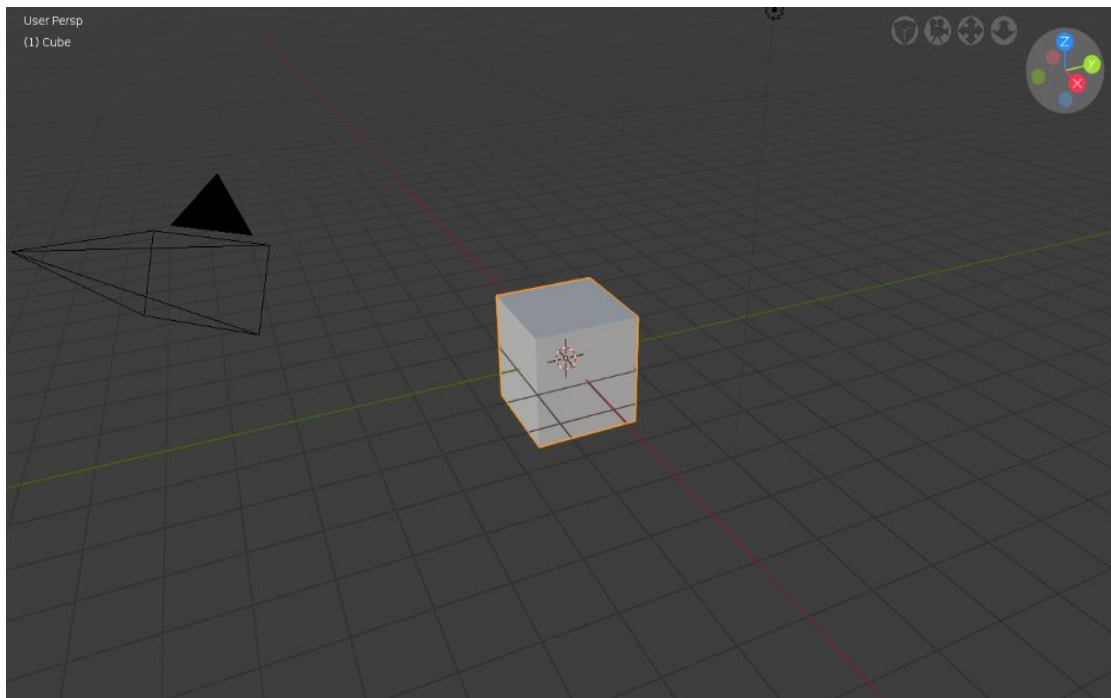

Figure 27: Object selection

To deselect an object, hold down the Shift key and right-click the object, or use keyboard shortcuts. The keyboard shortcut for deselecting an object is Alt + A. If you hold down the Shift key and right-click on another object, Blender will add them to your selection. You can click on any number of objects.
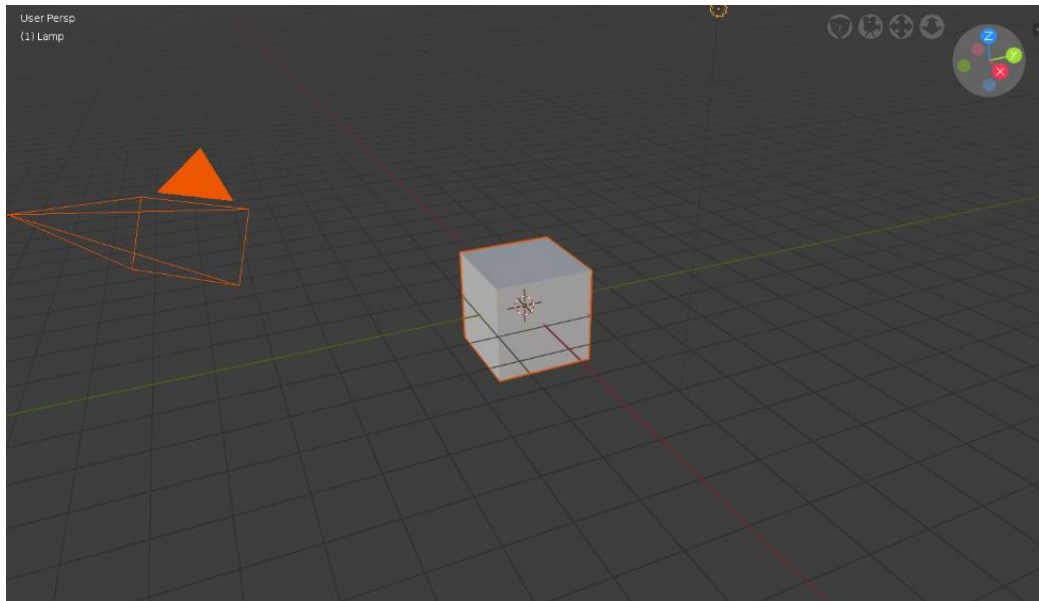

Figure 28: object moving

Use the Edge Select tool to select multiple objects in Blender. This tool can be activated using the B key or the toolbar icon on the left side of the 3D view.
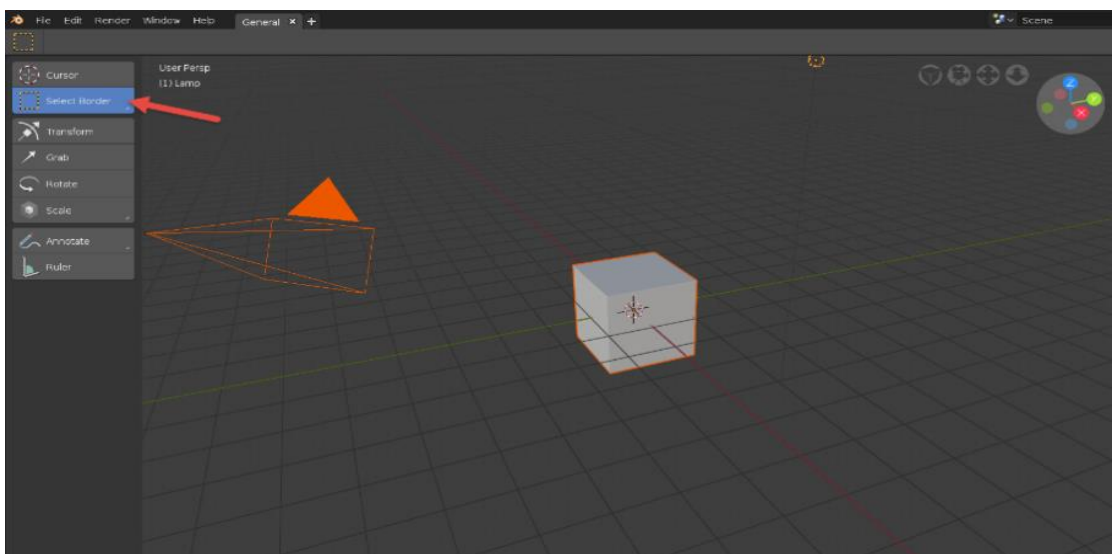

Figure 29: object selection

Transforming objects

In 3D software like Blender, conversion plays an important role in the everyday tasks that artists perform in the software. Use it for everything from 3D modeling to animation.

The three basic conversions available are:

- Grasp
- rotate
- Scale

Blender allows you to apply these transformations in a variety of ways. The easiest way to implement them is to use a transform gizmo. You can activate the gizmo using toolbar options.
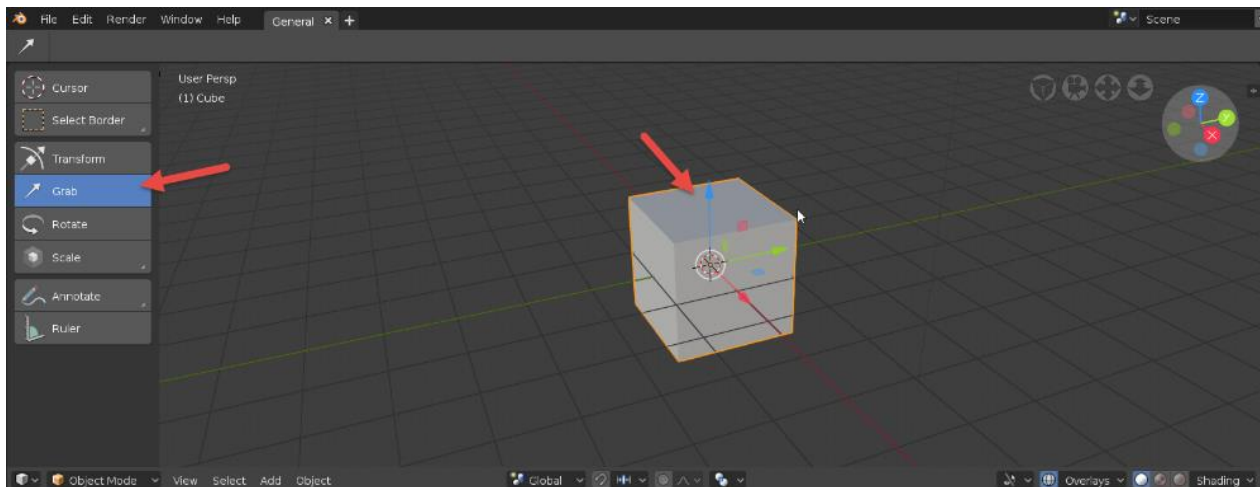
Figure 30: object transformation

Moving objects

Let's start with the second option, the grab tool. Select an object (right-click) and press the grab button to see a transform gizmo with multiple arrows.

Each arrow has a color code that indicates:

- Red arrow: Move along x-axis
- Green arrow: Move to y-axis
- Blue arrow: Move in z-axis

Now you can left-click any arrow and drag the mouse while holding down the mouse button. You will be able to move the object. Blender limits movement to the axis of the arrow you click:
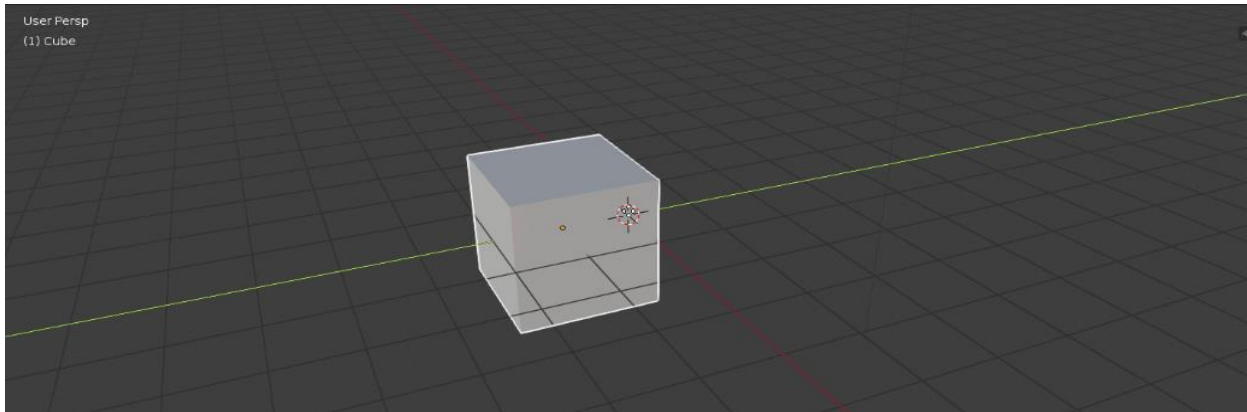
But you will notice something different about the G key. It does not constrain the movement of objects to any axis. You can move it freely. You can also limit the movement operation to one axis by pressing the key corresponding to that axis immediately after pressing the G key. For example, if you press the G key and then the X key immediately, the movement to the x-axis is restricted.

Blender provides a list of suggested tools and options in the status bar at the bottom of the interface. There you will see a list of all the shortcuts possible with a particular tool:
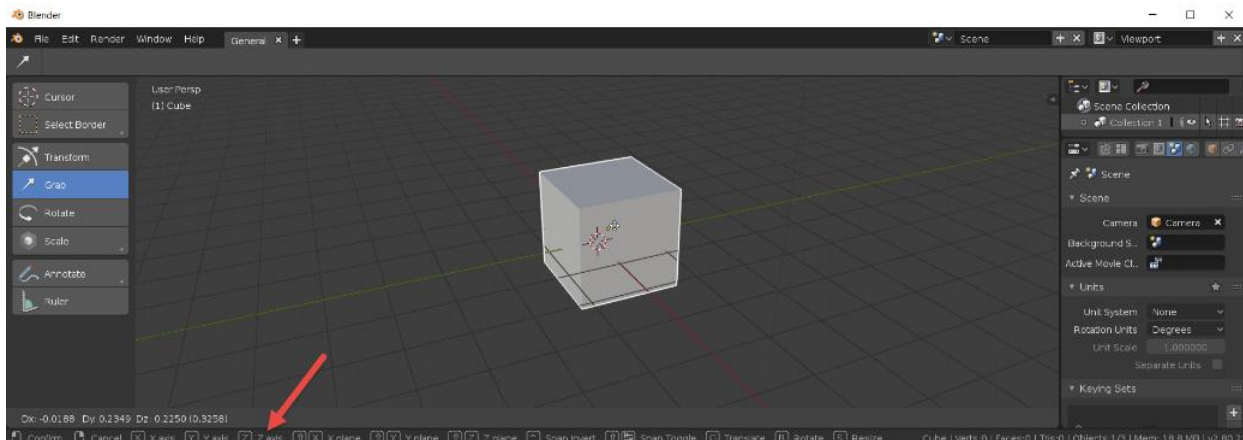
Rotating objects
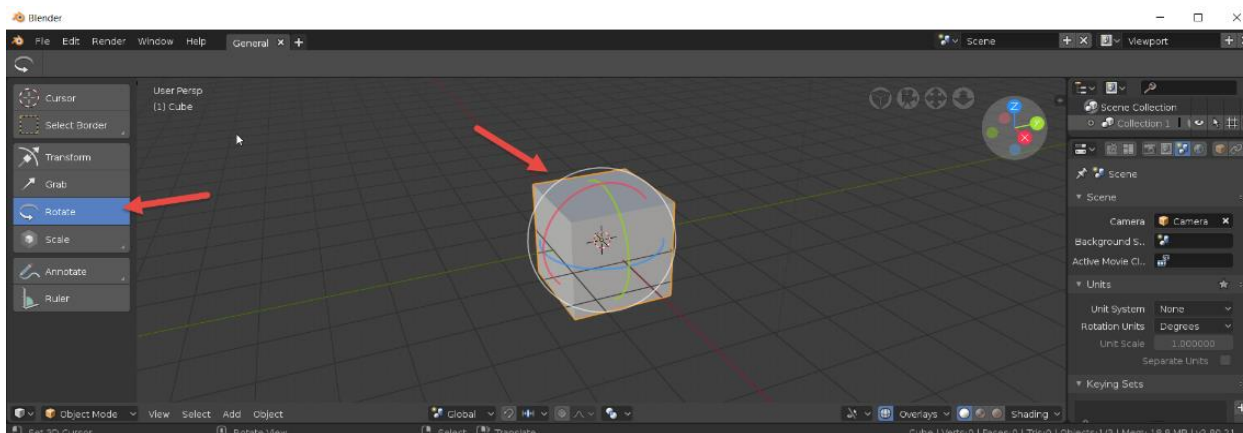
You can use either toolbar buttons or hotkeys to rotate an object using the same principles you already know about conversions. Press the R key to start rotating the object. However, you will notice that the gizmo used for rotation is different from the gizmo used for moving objects. If you replace the arrow, you'll see an arc with the same color code on each axis.

Right-click and drag each arc to rotate the object. This limits the transformation to a single axis. You can use the

 R key to get the rotation of an object without an axis reference. Like the move tool, there are additional rotation options in the status bar. Press the X, Y, or Z button immediately after pressing the R button to limit the rotation to a single axis, as shown below.
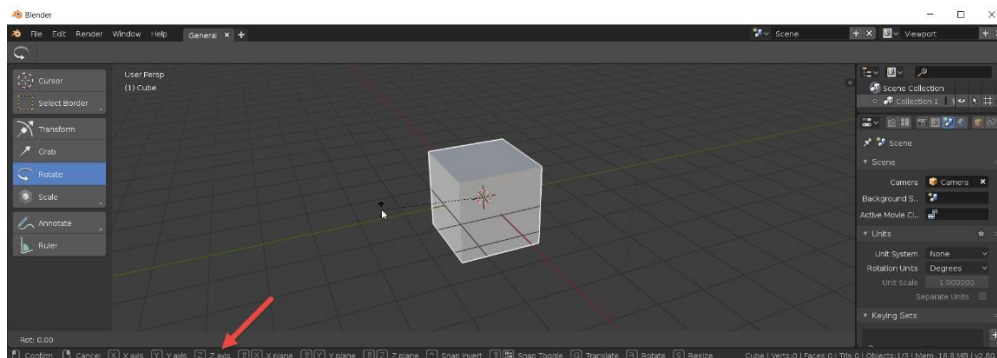
5.2.4. Understand Camera Setup

The camera view shows the current scene from the perspective of the currently active camera. You can use the camera view to virtually create shots and preview what your rendered scene will look like. The rendered image contains everything within the dashed line.
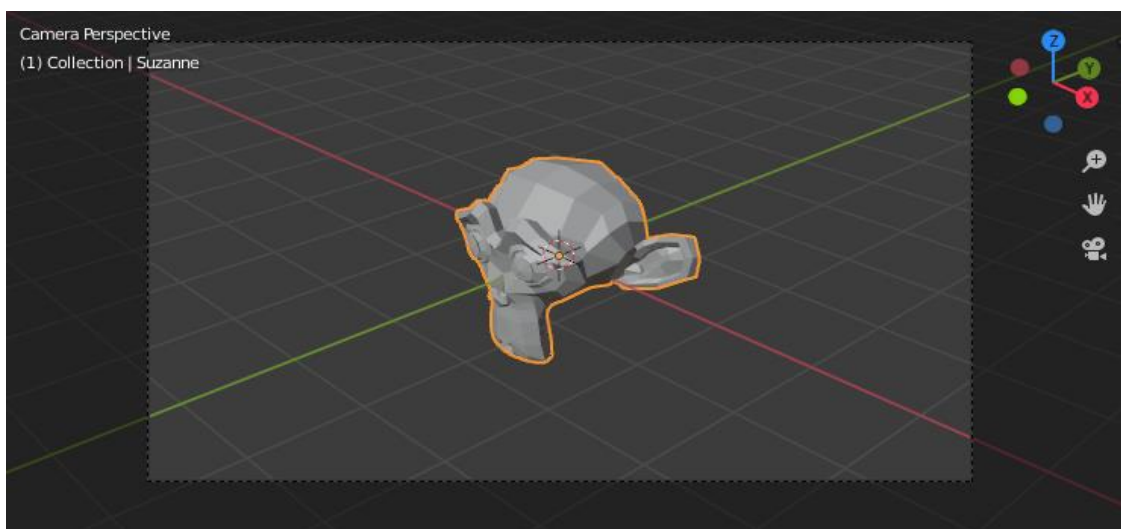
Figure 31: Camera set up

Active Camera View

> • Mode: All Modes

> • Menu: View ‣ Camera ‣ Active Camera

> • Keyboard Shortcut: Numpad0

This will switch the view to the active camera. When active, the triangle above the camera will be shaded.

Active Camera Settings

• Mode: Object Mode

• Menu: View ‣ Camera ‣ Set Active Object as Camera

• Shortcut: CtrlNumpad0
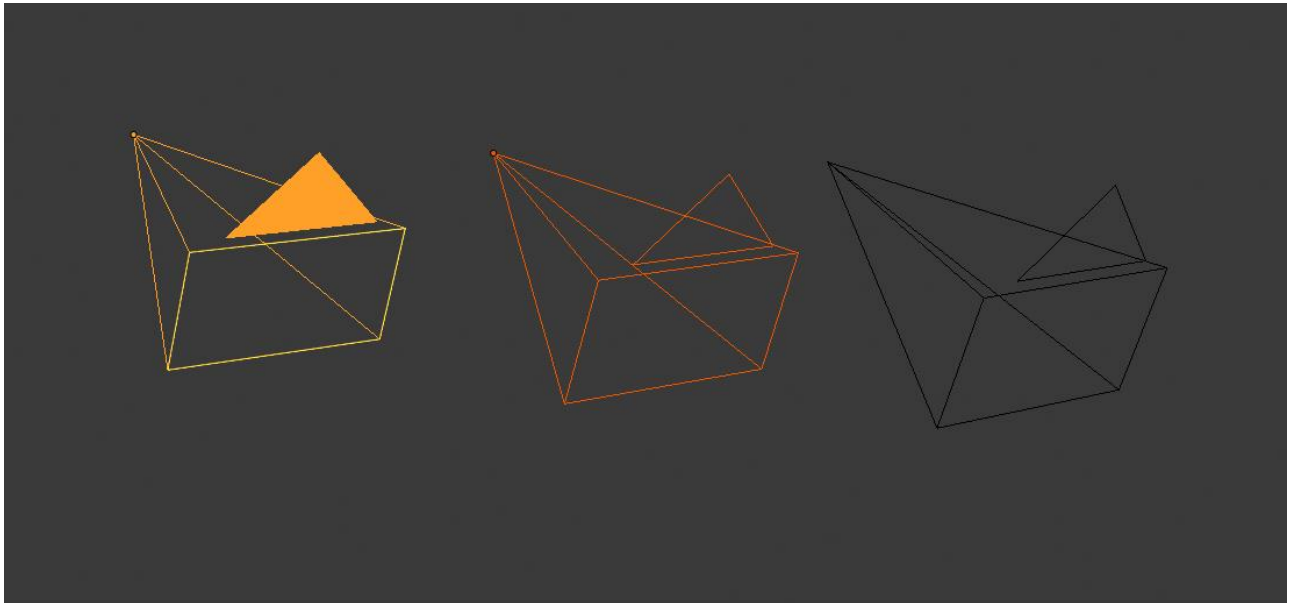
Figure 32: camera setting

This is the camera currently used for rendering and viewing from the camera.

This sets the currently active object as the active camera and switches to the camera view.

The active camera can also be set on the Scene tab of the properties.

Animation Camera Changes

By default, the scene contains one camera. However, you can have multiple cameras in your scene, but only one of them can be used at a time. Therefore, you only need to add a new camera if you want to create a cut between them. See camera animation.

Frame camera boundary

> • Mode: All modes

> • Menu: View ‣ Camera ‣ Frame camera boundary

> • Shortcut: Home

Center the camera view within the screen area of the 3D viewport so that it fits within the area. Resize the view to fit the border.

This is the camera currently used for rendering and when viewing from the camera.

Camera Navigation

There are several ways to navigate and position the camera in your scene, some of which are described below.

You can zoom in and out in this view, but you need to move or rotate the camera to change the angle of view.

Move Active Camera to View

- Mode: Object Mode

- Shortcut: Ctrl-Alt-Numpad0

Camera View Positioning

There are several ways to navigate and position the camera in your scene, some of which are described below.

You can zoom in and out in this view, but you need to move or rotate the camera to change the angle of view.

Roll, Pan, Dolly, and Track

To perform these camera movements, you must first select a camera to apply the conversion operation. The following actions also assume that you are in the camera image. This allows you to interact with the camera using the same tools you used to transform the object.

- **Roll**

Press R to enter object rotation mode. By default, the camera rotates around the local Z-axis (the axis orthogonal to the camera view). This is the definition of a camera "roll".

- **Vertical pan or tilt**

This is just a rotation along the local X-axis. Press R to enter object rotation mode, then press X twice (first press selects the global axis, second press selects the local axis, which works for any axis. See Axis Locks page).

- **Horizontal pan or yaw**

This corresponds to rotation around the camera's local Y-axis. Press R and then Y twice.

- **Transport Wagon**

To move the camera, press G and then MMB (or Z twice).

- **Lateral tracking**

Press G to move the mouse (use X or Y twice to move horizontally only horizontally or vertically).

To perform these camera moves, the camera must first be selected so transform operations apply to it. The following actions also assume that you are in camera view. Having done so, you can now manipulate the camera using the same tools that are used to transform any object:

5.4. Learn Properties of Transformation

5.4.1 Translate

5.4.2 Rotate

The object's local orientation, relative to the global axes and its own origin.

Rotation Mode

Method for calculating rotations, additional information can be found in the manual's appendix.

Euler

The gizmo handles are aligned to the Euler axis, allowing you to see the discreet XYZ axis underlying the Euler rotation, as well as possible Gimbal Lock.

Axis Angle

The X, Y, and Z coordinates define a point relative to the object origin. This point and the origin define an axis around the W value defines the rotation.

Quaternion

X, Y, Z and W correspond to the Quaternion components.
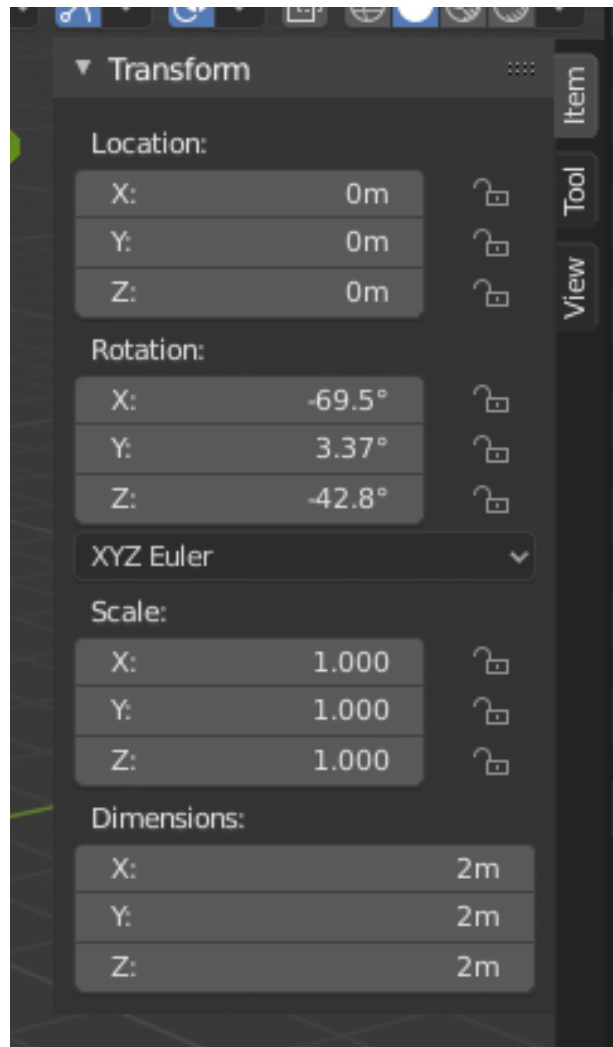
5.4.3 Scale

The object's relative scale along the local axis (e.g. the *Scale X* value represents the scale along the local X axis). Each object (cube, sphere, etc.), when created, has a scale of one unit in each local direction. To make the object bigger or smaller, you scale it in the desired axis.

Mode:	Object and Edit Modes
Panel:	Tool Shelf ‣ Tools ‣ Transform ‣ Scale
Menu:	Object/Mesh/Curve/Surface ‣ Transform ‣ Scale
Hotkey:	S

Scaling means changing proportions of objects. Pressing S will enter the *Scale* transformation mode where the selected element is scaled inward or outward according to the mouse pointer's location. The element's scale will increase as the mouse pointer is moved away from the Pivot Point and decrease as the pointer is moved towards it. If the mouse pointer crosses from the original side of the Pivot Point to the opposite side, the scale will continue in the negative direction and flip the element.

5.4.4 Mirror

The Mirror tool mirrors a selection across a selected axis.

The Mirror tool in *Edit Mode* is similar to Mirroring in Object Mode. It is exactly equivalent to scaling by -1 vertices, edges or faces around one chosen pivot point and in the direction of one chosen axis, only it is faster/handier.

After this tool becomes active, select an axis to mirror the selection on entering X, Y, or Z.

You can also interactively mirror the geometry by holding the MMB and dragging in the desired mirror direction.

Pivot points must be set first. Pivot points will become the center of symmetry. If the widget is turned on it will always show where the pivot point is.

In Fig. Mirror around the individual origins. the pivot point default to median point of the selection of vertices in Edit Mode. This is a special case of the Edit Mode as explained on the pivot point page.
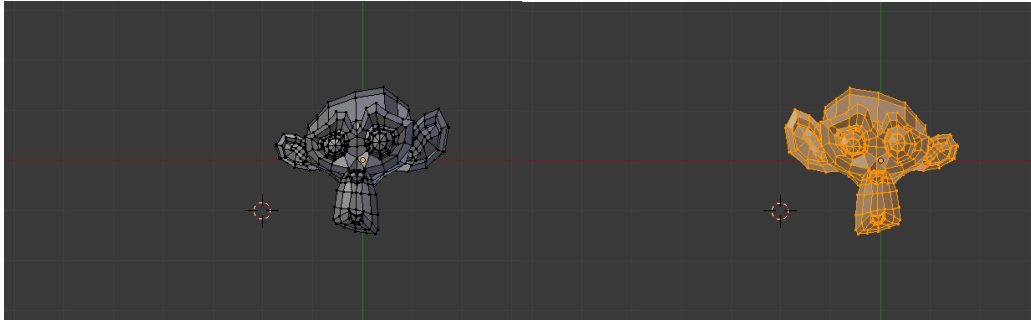
5.4.5 Edit

Once you have a selection of one or more elements, you can move $\boxed{G}$, rotate $\boxed{R}$ or scale $\boxed{S}$ them, like many other things in Blender, as described in the Manipulation in 3D Space section. To move, rotate and scale selected components, either use the *Move*, *Rotate*, and *Scale* buttons, the transform gizmos, or the shortcuts: $\boxed{G}$, $\boxed{R}$, and $\boxed{S}$ respectively.

After moving a selection, the options in the Adjust Last Operation panel allow you to fine-tune your changes, limit the effect to certain axes, turn Proportional Editing on and off, etc. Of course, when you move an element of a given type (e.g. an edge), you also modify the implicitly related elements of other kinds (e.g. vertices and faces).

Pressing $\boxed{G}$ twice enters either *Edge Slide* or *Vertex Slide* tool depending on the selection. You also have in *Edit Mode* an extra option when using these basic manipulations: the Proportional Editing.

5.4.6 Duplicate

This will create a visually-identical copy of the selected object(s). The copy is created at the same position as the original object and you are automatically placed in move mode. See the examples below.

This copy is a new object, which shares some data-blocks with the original object (by default, all the materials, textures, and F-curves), but which has copied others, like the mesh, for example.

This is why this form of duplication is sometimes called "shallow link", because not all data-blocks are shared; some of them are "hard copied"!
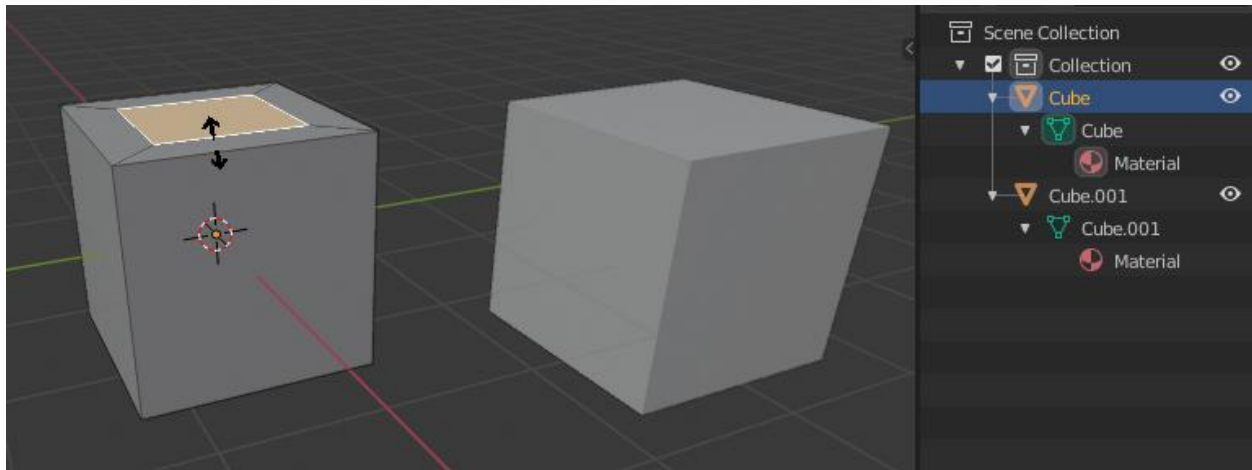
The object Cube was duplicated, using Shift-D . Both these cubes have separate meshes with unique names: Cube and Cube.001 .

- The original left cube is being edited, the duplicated right cube remains unchanged. The mesh data has been copied, not linked.
- Likewise, if one cube is edited in Object Mode, the other cube remains unchanged. The new object's transform properties or data-block is a copy, not linked.
- When the cube was duplicated, it inherited the material of the original cube. The material properties were linked, not copied.

5.4.7 Delete

Delete the selected objects from the current scene.

Mode

Object Mode

Menu

Object ‣ Delete

Shortcut

X or Delete

5.3. Blender Practices

5.3.1. Learn about Node, Mesh and Vertices

5.3.1.1. Node

In Blender, you can not only create a material as described above using all the settings in the All Materials panel but also create a material by passing a basic material to a set of nodes. Each node performs an operation on the material, changing its appearance when applied to the mesh and passing it to the next node. In this way, very complex material optics can be achieved.

This node map is created by working in the node editor. Contents of this section:

5.3.1.2. Enabling Material Nodes.

- Node editor, its basic controls, and node operations.
- Certain types of nodes that can be used for materials.

5.3.1.3. Accessing the Node Editor

First, launch the node editor and make sure the material node button (sphere icon) is pressed in the node editor, not the compound or texture node button.

5.3.1.4. Enabling Node Materials in the Material Buttons

Get the base material and try clicking the Node button next to the material name in the Materials panel or Node Editor. The changes appear in the Materials panel.

If you use Ctrl Left to switch to the composite screen, the node editor will appear in the upper half of the screen if you are

Figure 33: Enabling Node Materials in the Material Buttons

viewing the standard screen. When you activate the material node, the material node and exit node are automatically added to the node editor.

You can also split the 3D view into two parts on the standard screen and turn one of them into a node editor.

Note that you can add new materials (which you can edit and modify like any other material in the Materials panel), add materials that have
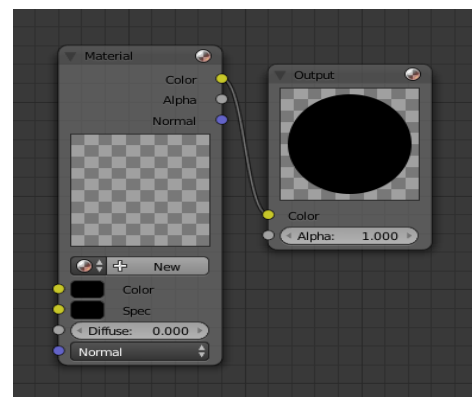
Figure 34: Material nodes

already been created, or attach materials from another mix file. You can create a node tree using the materials you are using.

5.3.1.5. Color Nodes

- Gamma Node

- Hue Saturation Value Node

- Invert Node

- Mix Node

- RGB Curves Node
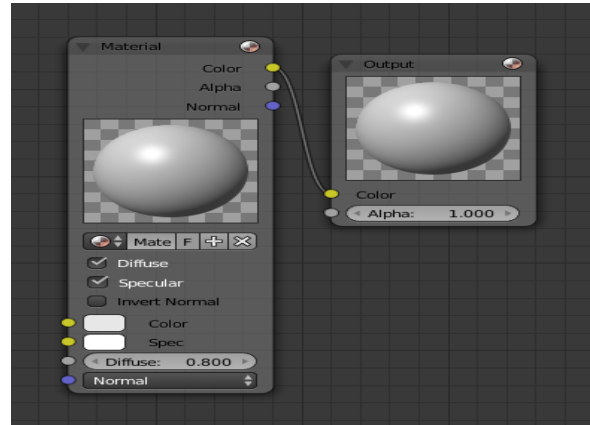
Figure 35: Material

5.3.2. Learn about Pivot Point adjustment

Every 3D object has a point to rotate or scale. This is usually where the 3D manipulator gizmo pops up. In Blender, this point is called the origin.

This point is at the top of the selected book. But maybe I want to move it down so I can put it in a better position. Let's see what happens. Complete this tricky mission with a mysterious 3D cursor.
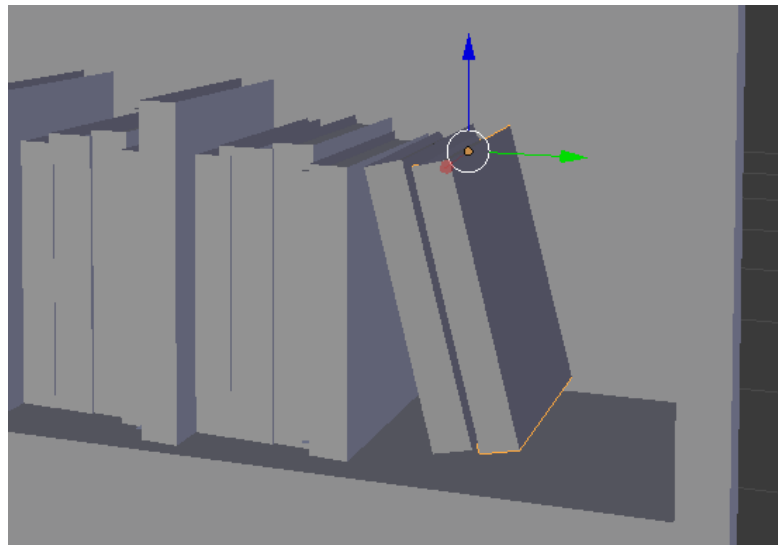
Figure 36: Pivot adjustment

First, let's switch to edit mode with the object selected. Select the part of the object where you want to place the origin. I'm using the bottom page, so my origin is in the center of the bottom of the book. You can also select edges or vertices as needed.
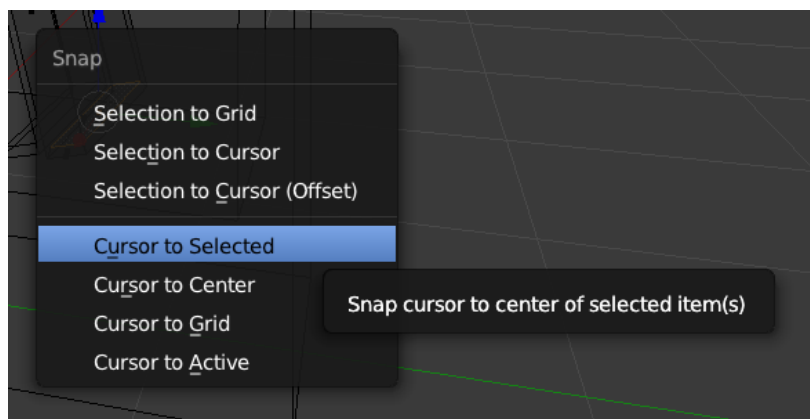
Once selected, move the mesh-snap-cursor to select or press Shift + S to bring up the snap menu. This will move the 3D cursor to the selection.

Go back to object mode and check the cursor (red/white circle) that will be the future origin and the current origin indicated by the gizmo. Then press CTRL + ALT + SHIFT + C to display the origin menu. This menu is also available in the Tools section on the left.

Select the origin as the 3D cursor and watch the gizmo change location.

5.3.2.1. Quick Pivoting

If you don't want to change the origin of an object and want to quickly pan something else, you'll love the pivot menu. This is useful if you want to model and process a small portion of an object instead of changing the origin of the entire mesh.

To use this feature, select something (whole object or part of edit mode) and then find the next pivot menu (left side of manipulator selection, bottom of default layout).
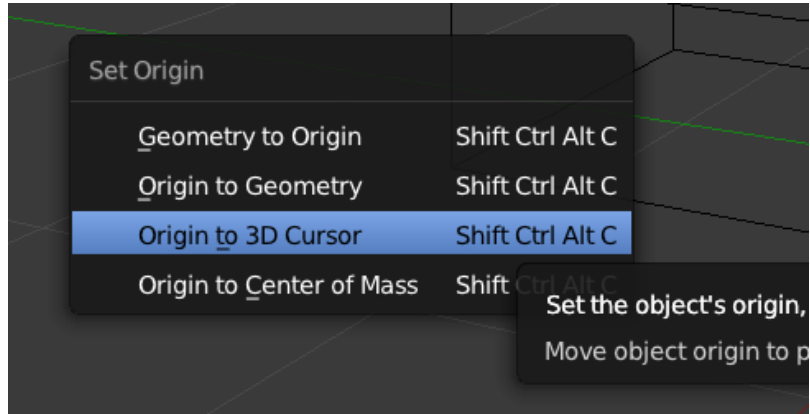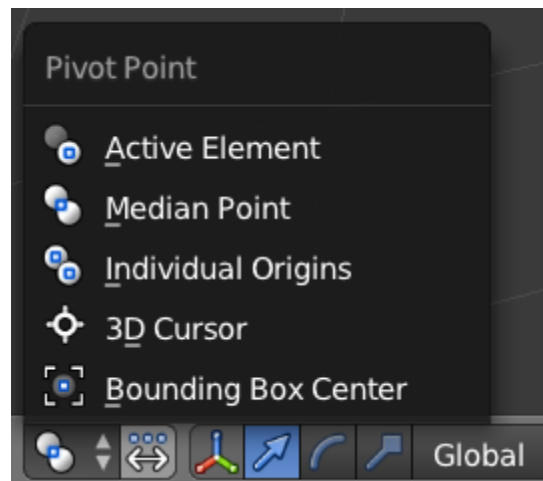
Here you can switch to a different pivot point temporarily. For example, to rotate a polygon around an axis (Active Element) rather than its center (Median Point).

5.3.3. Understand about Shapes

Cube: A standard cube contains eight vertices, twelve edges, and six faces, and is a three-dimensional object. Objects that can be created out of cubes include dice, boxes, or crates.

Rectangle: The standard plane is a single quad face, which is composed of four vertices, four edges, and one face. It is like a piece of paper lying on a table; it is not a three-dimensional object because it is flat and has no thickness. Objects that can be created with planes include floors, tabletops, or mirrors.

Circle: Objects that can be created out of cones include spikes or pointed hats.

193

Vertices: The number of vertical edges between the circles or tip, used to define the cone or pyramid.

Radius 1: Sets the radius of the circular base of the cone.

Radius 2: Sets the radius of the tip of the cone. Which will create a frustum (a pyramid or cone with the top cut off). A value of 0 will produce a standard cone shape.

Depth: Sets the starting height of the cone.

Base Fill Type: Similar to circle (see above).

5.3.3.4 Cone Editing

The tool works by first defining the base of the object by holding LMB and dragging to define size of the base. Next release the LMB and drag to define the height of the object. Finally, press LMB again to confirm the shape of the object.

You can also use the hotkeys below to constrain the object.

Depth: The initial depth used when placing the cursor.

Surface: Start placing on the surface, using the 3D cursor as a fallback.

Cursor Plane: Start placement using a point projected onto the orientation axis at the 3D cursor position.

Cursor View: Start placement using a point projected onto the view plane at the 3D cursor position.

Orientation: The alignment of the cursor when placing objects; defines the orientation of the base.

Surface: Align the object using the surface orientation, using the Transform Orientations as a fallback.

Default: Align the object using the default Transform Orientations.

Snap To: The target to use while Snapping.

Geometry: Snap to all types of geometry (vertices, edges, and faces).

Default: Snap to the snap target defined in the global Snapping controls.

Plane Axis: The axis used for placing the base region.

X: Use the X axis to place the base region.

Y: Use the Y axis to place the base region.

Z: Use the Z axis to place the base region.

Auto Axis: Select the closest axis when placing objects (surface overrides).

Base

Origin: The initial position of the base.

Edge: Places the object edge first and define the size of the base as the distance from the first edge to the adjacent edge.

Center: Places the object center first and define the size of the base as the distance from the base center to the perimeter.

Aspect: The initial setting for the aspect of the object's base.

Free: Draws the length and width of the base using an unconstrained aspect.

Fixed: Draws the length and width of the base using a 1:1 aspect.

Height

Origin: The initial position of the height.

Edge: Places the object edge first and define the size of the height as the distance from the first edge to the adjacent edge.

Center: Places the object center first and define the size of the height as the distance from the base center to the perimeter.

Aspect: The initial setting for the aspect of the object's height.

Free: Draws the length and width of the height using an unconstrained aspect.

Fixed: Draws the length and width of the height using a 1:1 aspect.

Vertices: The number of vertical edges between the circles or tip, used to define the cone or pyramid.

Base Fill Type: Set how the circle will be filled.

Triangle Fan: Fill with triangular faces which share a vertex in the middle.

N-gon: Fill with a single N-gon.

Nothing: Do not fill. Creates only the outer ring of vertices.

5.3.4. Understand about Materials and UV Mapping

Sooner or later it is advisable to use image textures in your model. The UV Editor allows you to assign textures directly to mesh surfaces. The 3D viewport shows the objects to be textured. If you set the 3D viewport to structured viewport shading, the changes made in the UV editor are immediately visible. The reverse is also true. This is because no actual rendering is done. It's all viewport shading. By default, if you apply an image to UVs and then render it, the texture will not be displayed. Therefore, to render an image, you need to do the following:

- Create a material for the object.

- Instruct Blender to render using the UV texture of the face.

- To create a material, you need to click Add New Material in the shading context.

- There are two ways to instruct Blender to use UV textures when rendering. The fast way and the right way.

- An easy way is to use the generated UV coordinates. The generated coordinates are used by default on all texture nodes except image textures that use UV coordinates by default. To use the generated coordinates for the image as well, use the generated output of the Texture Coordinate node.

- The correct way is to manually generate UV coordinates using UV unwrapping. To use UV mapping, use the Texture Coordinate node (UV output) or UV Map node and select the UV map you want to use (the default is "UV Map").

Using the Test Grid

If the image is a single basic pattern and you want to apply it to your model to make it look like fabric, you don't need to stretch it (unless you want the fabric to look like spandex). You may need to test your UV mapping with a test image.
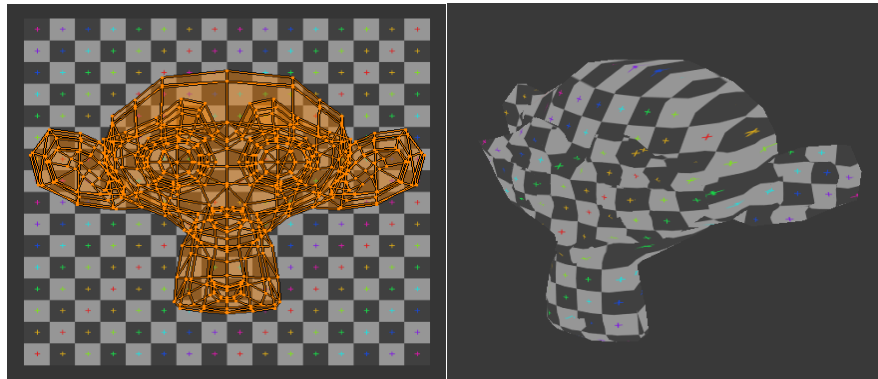
Once rendered, the mesh color will be a test grid and the UV texture will be the specified frame size. Note that Blender has a built-in test pattern. To use this, click the New button in the Data Block menu in the Image Editor header and change the generated type to UV grid.

5.3.5. Comprehend Lighting concept

Depending on what you're working on in Blender, you may need proper lighting.

If you're creating a 3D model, painting textures, or creating a 2D animation, you're unlikely to need lighting. However, if you are designing a rendering of a 3D scene, for example, B. Background objects, lighting can change everything.

Blender offers various "lamp" types that radiate light into the scene to make it more visible. These different lights can be added manually from the Build tab. This may sound simple, but there are many tricks you can use to create great works. Let's dive! Add

Lighting: There are several ways to illuminate your scene with

Blender. The most common is to add a "ramp" from the Build tab. From this lamp, you can choose from five types (discussed later).

- Sun
- Dot
- area
- half
- Spot

You can place the light source anywhere in the design area after selecting and inserting the desired Blender lighting type. To do this, left-click on the ramp and place it anywhere in the scene to illuminate the area of interest. You can also fine-tune some settings of the lamp option to get the lighting you need. The most common tweaks are intensity and color.

Types of Lighting

The most commonly used Blender lighting types are Point, Sun, and Spot. Apart from these types, many objects are created as light sources.

- **Points:** The point lamp emits light in all directions. This is useful for scenes with small light sources (such as candles), or when you want to illuminate one side of the scene with light and the other side with another type of light to experiment with different settings and combinations.

- **SUN:** The Sun lamp, as the name implies, behaves like the sun in 3D space. This is very powerful and usually only one of them can illuminate the entire scene. It is recommended to use the sun lamp as the base light of the whitish light and add secondary lights to each part of the scene as needed for better effect.

- **SPOT:** Finally, the spot lamp emits light through the cone in the specified direction. The amplitude of the cone is 0 to 180 degrees. This lamp emits only in the specified direction, so it is best used in small areas or parts of the scene where you want to illuminate an object without affecting nearby objects. Volume lighting, described in the next section, also works very well.

Volumetric Lighting

Have you ever looked up at the sky on a cloudy day and saw the rays of light flowing? This is the best way to describe volumetric lighting.

Unfortunately, if you add this kind of lighting to a normal Blender scene, no matter how strong the light, you won't be able to see the rays unless they hit an object. However, this process creates noise in the 3D space of the scene, producing small particles everywhere.

Particles capture the rays and bounce them back into the scene. By illuminating these particles, the process creates a ray that can be seen throughout the design space and, of course, in the final render.

Object

As mentioned above, the object also acts as a ramp if the object's texture is set to glow. Both lamps and luminous objects provide excellent lighting. Play around with the ramp until you find the perfect combination for your scene.

There are two ways to add volume lighting to Blender 2.8, which works for both Eevee and Cycle. Both start with the following steps:

- Go to the shader editor.
- Select a world.
- Select the default shader and press "X" to remove it.
- Add a new "Principled Volume Shader"
- Connect to the World Out and Volume nodes.
- Be sure to reduce the density of the main volume node if you do not want to use very strong lights to create the effect.

5.3.6. Understand about Physics

For part of Open Source software for free, the mixer is a powerful and versatile 3D computer graphic tool that quickly complements the creative toolset.

One of the most impressive features is the installation of a physical engine that allows dynamic animation and graphics to create. When used correctly, this opens unlimited possibilities for unbelievable visual content.
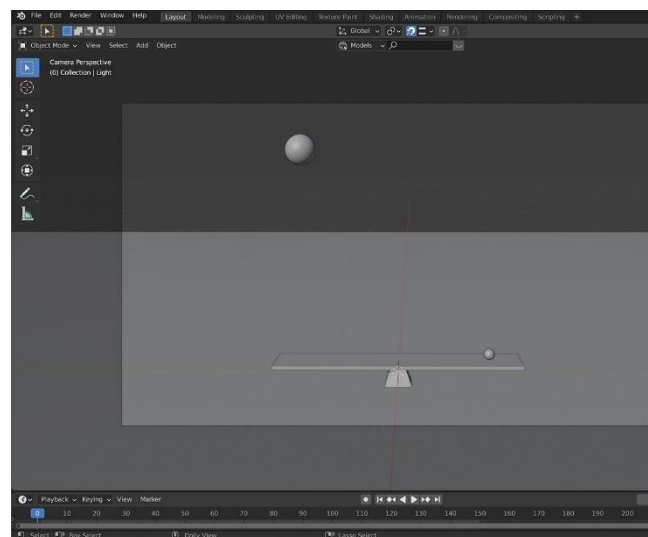
Preparation of Lever

Figure 37: object preparation

In this example, a "bright" object is used to generate a "heavier" object using a "bright" object at one end sitting. When this is complete, this is driving a light object.

You need 5 objects. Two weights that act as pivot points, "board", objects.

Long rectangular shape functions as a "plate", which is a pivot point, and two balls act as weights. You need to add "Floor" to your object. In this scenario, aircraft objects are used.

Preparation of Objects

First, you can prepare to record physics and configure objects. When you are satisfied, you need to place the object. Make sure the timeline at the bottom of the window is at frame zero.

Make sure the object collides in place as it falls. Note that you need to look at them from multiple angles in the 3D view to make sure there are collisions.

Once you're content, you want to begin including physics parameters for your objects. These may be accessed from the Physics Properties tab within side the Properties window. The putting we`re going to feature is called Rigid Body. This way that Blender will practice physics for your selection, treating it as a stable object.

Rigid Body physics is available in each Active and Passive form—selecting which one to apply is crucial to your normal simulation.

To add this setting to an object, simply click Rigid Body under the Enable Physics drop-down box in the Physical Properties window.

Under Type, you can choose whether to make the rigid body setting for this object active or passive. Simulation pivots and floors must be passive as objects that need to provide collisions but do not move.

Weights and "plates" need to be moved and become active.
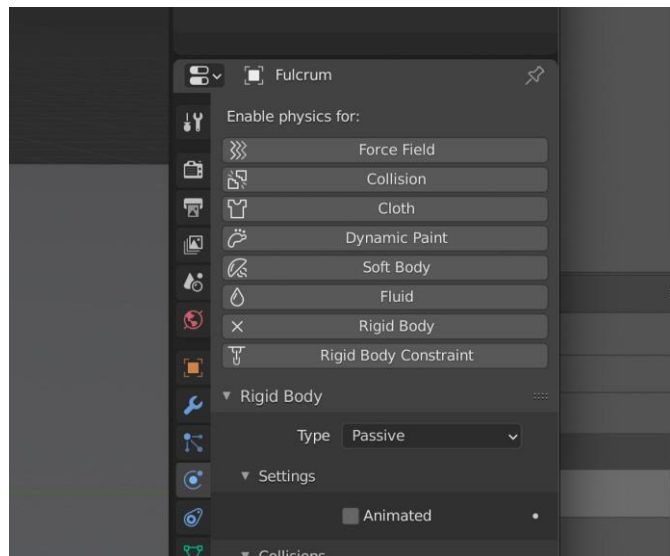
After entering these settings, adjust the start and end frames and click the play button on the timeline to start the simulation. You may notice the initial slowdown when

Blender calculates the simulation, but this should be smoother in subsequent runs.

The first simulation may not produce the desired results. You may need to adjust some settings for better results.

In addition to adjusting the size and shape of objects in the 3D view to change the simulation, some settings can be adjusted in the rigid body settings.

One of the most important is the mass of the object.

5.3.7. Learn about Animation insertion

The Animation section lets you manage settings related to Animation. This includes how editors look and also some different tools properties
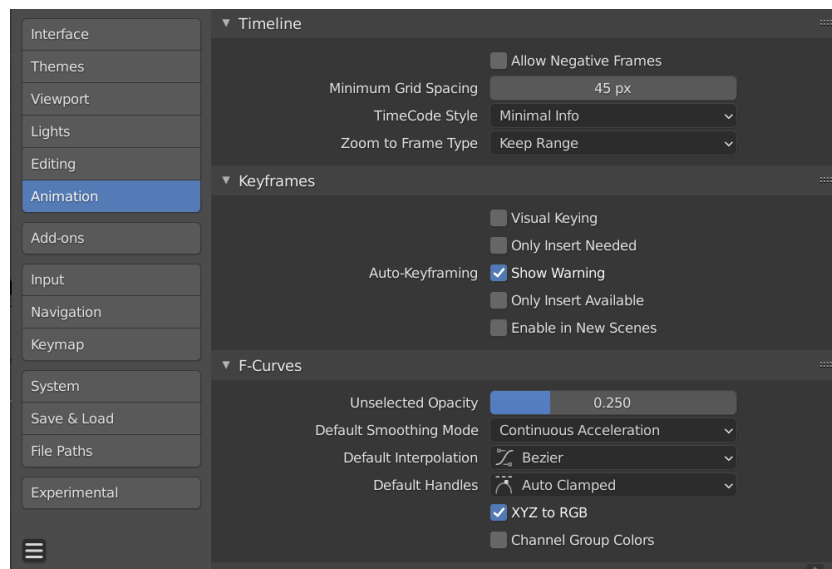
- **Timeline:** These settings control the contents of the timeline.

- **Allow negative frames:** Playback and animation may occur in the negative image area.

- **Minimum grid spacing:** The minimum number of pixels between grid lines.

- **Timecode style:** The timecode format is displayed when the timing is not displayed in the frame. In this format, the timecode is truncated to the left and right as needed, and "+" is used as the frame number delimiter in seconds. Zoom to

- **Frame type:** Defines the time range (around the cursor) that is displayed when the view frame Numpad0 is executed.

- **Hold range:** The currently displayed time range is retained.

- **Seconds**: The number of seconds specified in the Zoom Seconds field appears around the cursor.

- **Key frame:** The number of animation key frames defined in the Zoom Key frames field is displayed around the cursor. .

5.3.8. Learn about Key Frames

These settings control the key frames that make up the animation.

- **Visual keying:** If the object uses constraints, the property values of the object do not actually change. Visual keying adds a key frame to an object property based on a visual transformation of the value constraint.

- **Only insert needed:** This will only insert key frames if the property values are different.

- **Auto-keyframing:** If you move an object in the upper right corner of the 3D viewport when automatic keyframes are on, you will see a warning.

- **Only inserts Available:** This will only add keyframes to existing F-Curve channels.

- **Enable in new scenes:** By default, it enables automatic keyframes for new scenes.

These settings control Keyframes which are the building blocks for animations.

5.3.9. Understand 3D view, timeline, graph Editor, Job Sheet

3D Navigation

This custom menu is part of the virtual numeric keypad emulator and user perspective navigation tools.

- **Activation:**
  1. Open Blender and go to the Settings> Add-ons tab.
  2. Click 3D View and click 3D Navigation to activate the script.

- **Interface:** Located in the 3D viewport ‣ sidebar ‣ view. This add-on is divided into two panels.

Timeline

The timeline editor, indicated by the clock icon is used for key frame manipulation and play head scrubbing. The timeline provides the user with a high-level view of the animation of the scene by displaying the current frame, keyframes of the active object, start and end frames of the animation sequence, and custom markers. The timeline contains transport controls for playing, pausing, and skipping animation sequences. It also includes tools for editing Keyframes, keying sets, and markers.
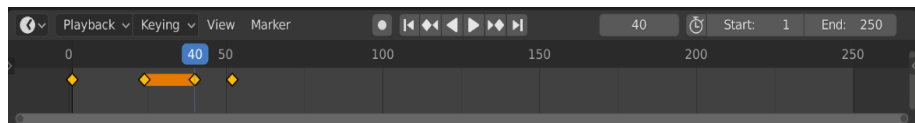
Graph Editor

The Graph Editor allows users to adjust the animation curve of animable properties over time. F curves.
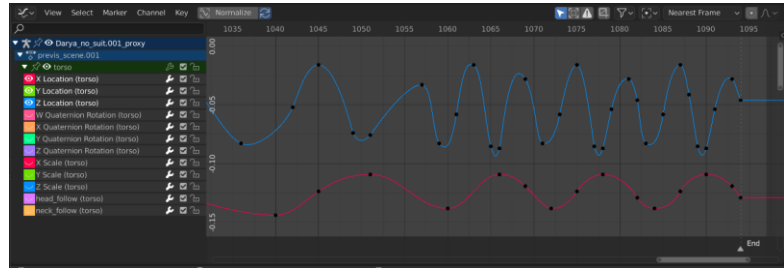
- **Main areas**

  In Curve View, you can view and edit F curves. Fcurve has some important parts:

- **Curve**

  The curve defines the value of the property (Y-axis) (X-axis) over time.

- **key frame**

  Keyframes are user-defined values for a particular frame and are represented by small black squares that turn orange when selected.

- **handle**

Each key frame has a handle that helps you set the value of the curve between the keyframes. These handles are represented by extruded lines with circular ends and can be selected and modified to change the shape of the curve.
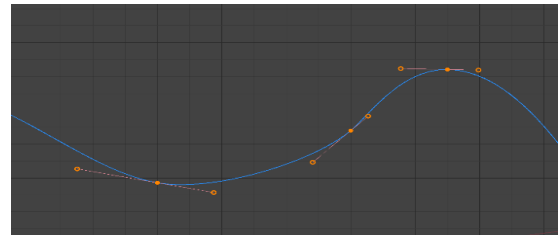
Dope Sheet

The Dope Sheet view is used to visualize motion tracking data and is implemented as a separate view in the Movie Clip Editor, similar to the Graph view.

Shows the channels of the selected track, each channel visualizes the tracked segment of the track as a dark bar and the keyframe position of the track as a small diamond.

The background is highlighted according to the number of tracks in the frame. This means that if the frame (or set of frames) has less than 8 tracks, the background will turn red. The background of 8-16 tracks is yellow.

This is visual feedback only and does not mean that the camera movement will not be reconstructed if it is less than 8 tracks. This means that you need to pay attention to these frames and see if all sorts of good features are tracked there. Keep in mind that if the frame does not have the proper feature points and the frame has less than 16 traces, that does not mean that the solution is inaccurate. Rather, adding traces to bad feature points reduces the accuracy of the solution.

- **Show only selected items (mouse pointer icon)**

Limits the dope sheet channel to information about the selected track only.

- **Hidden (ghost icon)**

Contains information from the hidden track.

- **Sorting method**

Track the sort order.

- **name**

Sorts the selected tracks alphabetically by name.

- **longest**

Sort tracks by the length of the longest tracked segment.

- **Total**

Sort tracks by total frame.

- **mean error**

After resolving camera or object movement, sort the tracks with an average reprojection error.

- **Startup frame**

Sort channels by first frame number.

- **end frame**

Sort channels by last frame number.

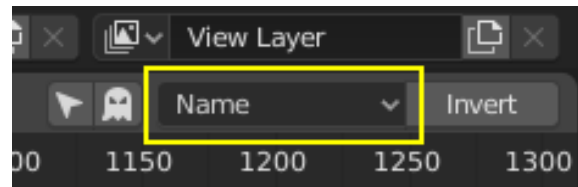- **Inversion**

Change the sort order from ascending to descending.

- **Usage**

The Dope Sheet View is for visualization and does not have any tools to actually edit data.

- Group discussion and presentation on 3D modeling concept

- Presentation on blender properties

- Make an animation of bouncing ball by utilizing required tools of blender

- Design a virtual tour of institute building

Do you know?

➢ Did you know it has a GPU-accelerated unbiased render engine, called Cycles? As long as you have a CUDA-compliant graphics card, you'll get real time rendering in the main display.

➢ Blender also has a fluid simulation component (using the Lattice Boltzmann method if you must know), which you can use to make anything from splashing liquids to warm chocolate or oozing toothpaste. Fluids are part of Blender's Physics system, and generates a cached surface mesh as it simulates.

➢ As well as enabling you to create and output CG, Blender is also a non-linear video editor. And even though it looks a little different to your Typical Premiere or Final Cut Pro set-up, all the tools are there and you can rearrange the layout to imitate one of the big-name NLEs.

➢ Blender offers the usual video editing tools, allowing you to add clips or images to a timeline, make cuts and edits, add transitions, keyframe fades and so on. The graph editor lets you manipulate timings or audio levels, and when you're done you can export to a number of formats.

➢ You can make subtle colour grades, apply flares and glows, add depth-of-field, or motion blur, and more. It's not going worry the makers of Nuke or After Effects any time soon, but it's useful if all you need is to combine your CG elements and add a little finesse.

➢ It pumps this data to Blender's camera and then your CG can be seamlessly composited into the footage. It might not have the same high-end features as the big players but it does support object and planar tracking, and for most users it's absolutely ideal.

EXERCISE

Select the correct option.

1. How do you scale selected 3D objects?

    a. Press S key and move the mouse   c. Press R key and move the mouse

    b. Use the mouse wheel   d. Press F key and move the mouse

2. Can you create animations with Blender?

    a. No   c. With external Plug-in

    b. Yes   d. With an Intel Processor

3. How do you reset the UV map of a mesh?

    a. Select all faces, press the M key and select "Reset" from the menu

b. Select all faces, press the V key and select "Reset" from the menu

c. Select all faces, press the U key and select "Reset" from the menu

d. None Of the above

4. How do you delete selected 3D objects?

a. Press the mouse wheel

b. Press the D key

c. Press the Shift + X keys

d. Press the X key or the Delete key

5. What is the UV/Image editor used for?

a. Map of UV of polygon, paint textures, backdrop for node editing and preview renderer

b. Edit Nodes

c. Textures painting only

d. UV mapping of polygon geometry only

6. How do you apply an image texture to a mesh for rendering? How do you scale selected 3D objects?

a. Select the mesh, press the T and select "Apply" from the menu

b. Select the mesh, press U and select "Load an image"

c. Go to the Texture panel, press on the image button and click apply

d. Select the mesh, go to the texture panel, select the type image, and open an image

7. How do you align the active camera to the view?

a. The camera cannot be aligned to the view

b. Right click on the camera and select "Align to the view" from the menu

c. Press the CTRL, ALT and Numpad 0 keys

d. The camera cannot be aligned to the view

8. What is mesh editing?

a. Refers to the act of moving the object in the 3D view

b. Refers to the act of manipulating the data of a mesh, or polygon-based object

c. Refers to the act of manipulating the texture of a mesh, or polygon-based object

d. Refers to the act of painting the texture directly to a 3D object

9. Can you render single layers in Blender?

a. Yes

b. No

c. Only if the objects in the scene are textured

    d. Only if the number of the objects in the scene isn't more than 30

10. The Node Editor is used to:

    a. Edit the constraints of the selected object

    b. Edit the connection between two meshes

    c. Edit an armature

    d. Edit material, composite and texture nodes

Answer Key

1	a	2	B	3	c	4	a	5	a
6	d	7	C	8	c	9	a	10	d

Answer the following Questions briefly.

1. Define 3D Modeling.
2. What is Active Camera Setup?
3. Define properties of blender.
4. Define Node, Mesh and Vertices.
5. What is Pivot Point Adjustment?
6. Define Lightning and its type.
7. Explain Graph Editor.
8. Define key frames.
9. How can you define physics in your words?
10. Define cone-editing

Answer the following Questions in detail.

1. Describe Scope of 3D Modeling and also its uses.
2. Explain in detail about the properties of blender and interface.
3. How can you setup the camera? Make Rectangle and add animations to it. Use different camera angles. Describe the whole procedure.
4. Write detailed note on Animation Insertion.
5. Explain 3D view, timeline, graph Editor.

CHAPTER 06: SOFT SKILLS
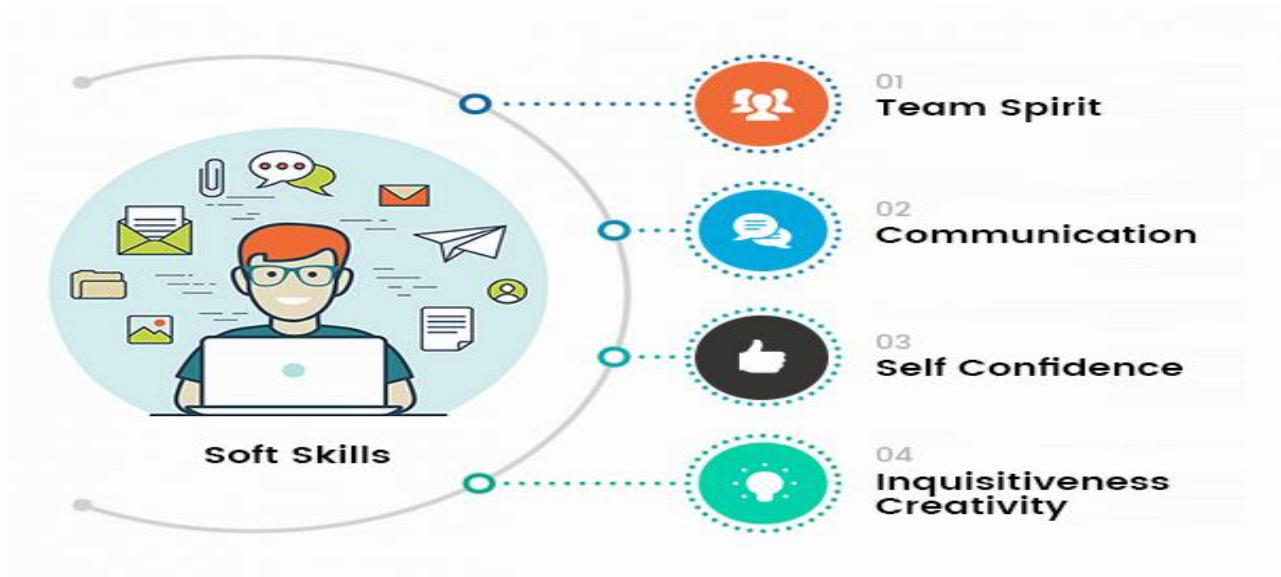
After studying this chapter students will be able to:

- know the basic soft skills.
- understand the importance of soft skills in daily life.
- apply soft skills for academic and professional success.
- learn the personal and professional aspects of life.
- understand the importance of self-image.
- develop self-confidence.
- know model of communication.
- realize importance of active listening and responding.
- understand effective communication.
- identify obstacles in communication.
- know the importance of teamwork in a professional environment.
- understand the concept of teamwork and leadership.
- know the concept of better time management.
- observe time management in daily life.
- understand professional and personal time management.
- learn the concepts of attitude and behavior.
- understand the impact of positive and negative attitude in professional life.

7.1 Introduction to Soft Skills

7.1.1 Basic Soft Skills

Soft skills are those personality traits, social graces, personal habits, friendliness, and optimism that mark people to different degrees. Soft skills complement hard skills, which are the technical requirements of any job.

7.1.2 Importance of Soft Skills

Soft skills enable students with a strong conceptual and practical framework to develop and manage teams. They play an important role in the development of the students' overall personality by enhancing their career prospects. Training in soft skills provides strong
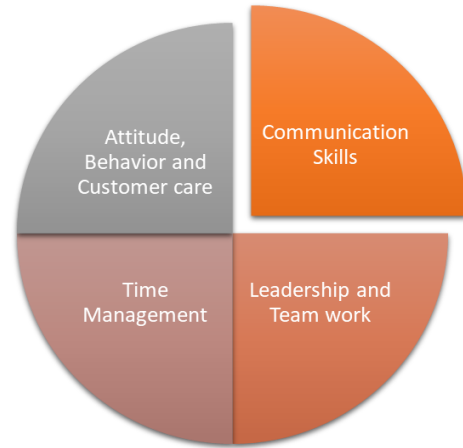
Fig. 7.1 Basic Soft Skills

practical orientation to the students and help them in building and improving their communication skills, effective use of English, business correspondence, presentations, team building, leadership, time management, group discussions, interviews and interpersonal skills. It also helps students in career planning and effective resume writing. The ability to deal with one's feelings in any given situation helps to achieve academic intelligence / cognitive capacities (IQ) with a humane understanding of issues.

Soft Skills are required to improve one's attitudes, values, beliefs, motivation, desires, willingness to embrace new ideas, goal orientation, persuasion, futuristic thinking, comparison, diplomacy, and various skills sets and etiquette to be able to deal with different situations diligently and responsibly.

Fig. 7.2 Important Soft Skills

7.1.3 Soft Skills for Academic & Professional Success

Soft skills (also referred to as "non-cognitive" skills) are increasingly important indicators of success both at school and in adult life. Careers that focused on social skills grew more rapidly rather than high math low social skill occupations.

New technologies result in an increase in the importance of skills and tasks for which there is still no suitable non-human substitute. Certainly, machines are better than humans at performing routine tasks that follow explicit rules, but people are much better at tasks that require flexibility, creativity, and judgment qualities that don't require an explicit understanding of rules. A machine can answer a phone and direct a call, but it takes the soft skills of a human to "read" the tone of the conversation, interpret the caller's motivations, and respond in a uniquely personal manner. This ability to observe and interpret behavior is also consequential in team behavior. Effective teamwork requires a complex and context-dependent understanding of one's team members and their likely responses to a wide range of scenarios.

Companies look for candidates who are smart and can present themselves well. Soft Skills training has become a must for the students who want to go for job or higher studies. Soft skill is not a visible skill like the domain subject content in a student but it helps in improving the personality of the person. It gives finishing touch to the personality. It includes communication skills, interpersonal skills, group dynamics, teamwork, body language, etiquettes, selling skills, presentation skills, confidence building etc. Soft skills along with grammar, pronunciation and vocabulary exercises boost the confidence of students.
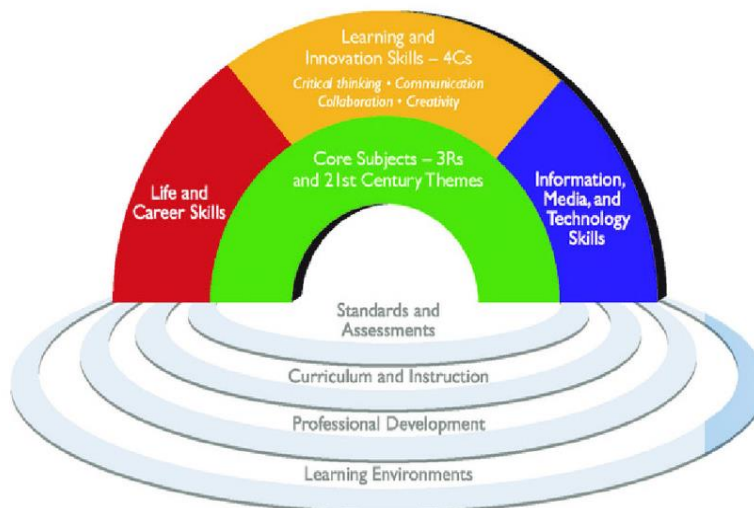

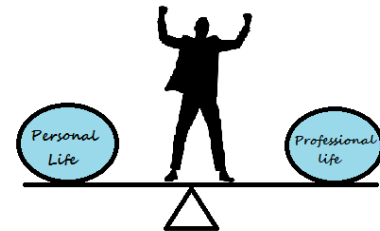Fig. 7.3 Framework for 21st Century Learning

7.2 Personal and Professional Grooming

7.2.1 Learn Personal and Professional Aspects of life

Describe the balance as "what each of us strikes between our enrichment and our loss" is "essential to our physical, emotional and spiritual well-being". For many researchers and therapist it is a challenge to balance their professional activities with their priorities in life, including marriage, family, personal and spiritual growth, and physical health.

Lack of balance between personal and occupational health can lead to fatigue, a syndrome that includes emotional exhaustion, personal isolation of relationships, patients and work, diminished sense of accomplishment (negative self-assessment), and may be associated with poor performance. and poor health.

To prevent this stage of complete exhaustion it is essential to reflect on and clarify personal values and choices. Spending time with family and friends, religious or spiritual activity, self-care, including nutrition, exercise, and a supportive spouse or partner serve as key factors in balancing work and life. In addition, it is important to control the workload, find a meaning in work, and settle limits as well as learn to use administrative support systems adequately. As John Gardner puts it: "Meaning is not something you stumble across, like the answer to a riddle or the prize in a treasure hunt. Meaning is something you build into your life. You build it out of your own past, out of your affections and loyalties . . . out of your own talent and understanding, out of the things you believe in, out of the things and people you love, out of the values for which you are willing to sacrifice something." To maintain the work-life balance it turns out to be crucial to define values and to ask fundamental questions about the reasons why you chose your profession, the areas where you think you are irreplaceable, and what would you like your life to be like in 10 years?

7.2.2 Understand the importance of self-image

Making your own image is a learning product. Influences in childhood, such as parents and caregivers, have a profound effect on our outlook. They are mirrors that bring us back to our image. Our experiences with others as teachers, friends, and family add to the image on the screen. Relationships strengthen what we think and feel about ourselves.

The image we see in the mirror may be an abstract idea that we are on the inside. Based on this idea, we develop a positive or negative image. The strengths and weaknesses we find affect how we act today. We continue to absorb information and evaluate ourselves in a number of areas, such as physical appearance (How do I look?), Performance (How do I do?), And relationships (How important?).

With our good looks, we see and own our assets and power while realizing the reality of our debts and limitations. By focusing on ourselves, we focus on our faults and shortcomings, distorting our shortcomings and imperfections.

Create a positive self-image

Personal image is not permanently edited. Part of our image is dynamic and transformative. We can learn to develop a healthier and more accurate view of ourselves, thus challenging the distortion of the mirror. The change in your image happens throughout life. Healthy self-esteem begins with learning to accept and love ourselves. It also means being accepted and loved by others.

Specific steps to develop a positive self-image

- Take a self-image inventory.
- Make a list of your positive qualities.
- Ask significant others to describe your positive qualities.
- Define personal goals and objectives that are reasonable and measurable.
- Confront thinking distortions.
- Identify and explore the impact of childhood labels.
- Refrain from comparing yourself to others.
- Develop your strengths.
- Learn to love yourself.
- Give positive affirmations.
- Remember that you are unique.
- Remember how far you have come.
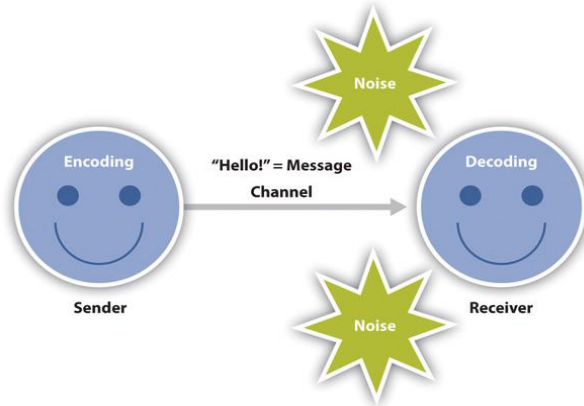
7.3 Communication Skills
7.3.1 Model of Communication

Models of communication simplify the communication process by providing a visual representation of the various aspects of a communication encounter. The following are the three models of communication:

- Linear or Transmission model of Communication.
- Interaction model of Communication.
- Transaction model of Communication.

Linear or Transmission model of Communication

The linear or transmission model of communication describes communication as a linear, one-way process in which a sender intentionally transmits a message to a receiver. This model focuses on the sender and message within a communication encounter. Although the receiver is included in the model, this role is viewed as more of a target or end point rather than part of an ongoing process.

7.4 Linear or Transmission model of Communication

Interaction model of Communication

The interactive or interaction model of communication describes communication as a process in which participants alternate positions as sender and receiver and generate meaning by sending messages and receiving feedback within physical and psychological contexts. Rather than illustrating communication as a linear, one-way process, the interactive model incorporates feedback, which makes communication a more interactive, two-way process.

The interactive model takes physical and psychological context into account. Physical context includes the environmental factors in a communication encounter. Psychological context includes the mental and emotional factors in a communication encounter. Feedback and context help to make the interaction model a more useful illustration of the communication process, but the transaction model views communication as a powerful tool that shapes our realities beyond individual communication encounters.
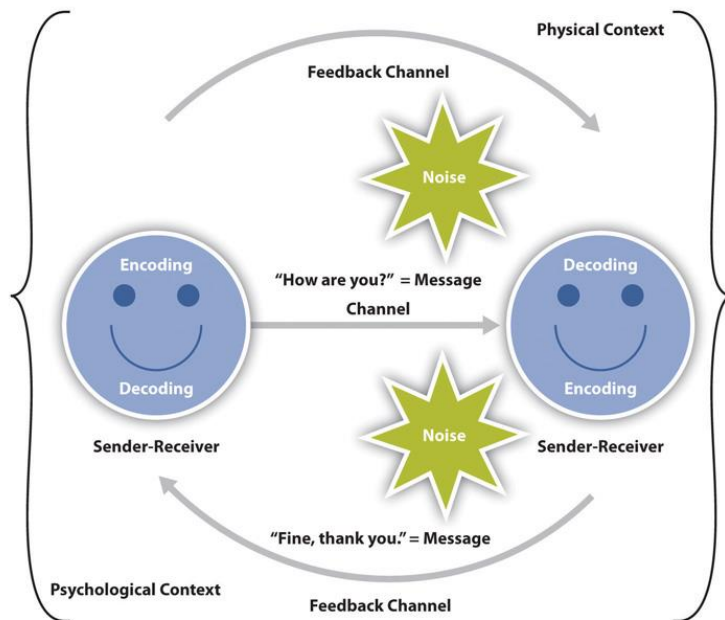

Fig. 7.5 Interactive model of Communication

Transaction model of Communication

The transaction model of communication describes communication as a process in which communicators generate social realities within social, relational, and cultural contexts. In this model, we don't just communicate to exchange messages; we communicate to create relationships, form intercultural alliances, shape our self-concepts, and engage with others to create communities.

The roles of sender and receiver in the transaction model of communication differ significantly from the other models. Instead of labeling participants as senders and receivers, the people in a communication encounter are referred to as communicators. Unlike the interactive model, which suggests that participants alternate positions as sender and receiver, the transaction model suggests that we are simultaneously senders and receivers.

The transaction model also includes a more complex understanding of context. the transaction model considers how social, relational, and cultural contexts frame and influence our communication encounters.
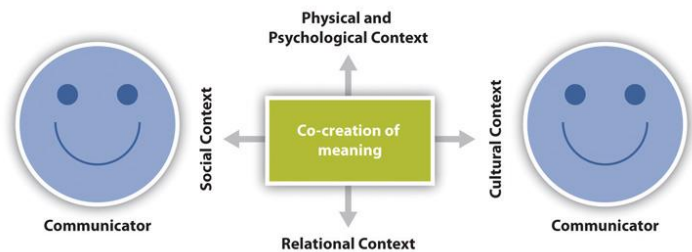
Fig. 7.6 Transaction model of Communication

7.3.2 Importance of Active Listening and Responding

Effective communication consists of both speaking and listening. Active listening is when you are fully aware and concentrate on what is being said rather than passively hearing what the speaker is trying to convey. The goal of active listening is to acquire information, listen to understand people and situations before responding to it. It is the conscious decision to listen carefully and understand what people are trying to convey without being judgmental. The listening ability can vary from person to person. But the good part is that it is a communication skill and can be acquired with time and patience. The following are several benefits of being an active listener:

1. It helps you build connections
2. It helps you build trust
3. It helps you identify and solve problems
4. It helps you increase your knowledge and understanding of various topics
5. It helps you avoid missing critical information

7.3.3 Effective Communication

Effective communication is a process of exchanging ideas, thoughts, knowledge and information to serve a purpose.

Characteristics of Effective Communication

- **Clear Message:** The message which the sender wants to convey must be simple, easy to understand and systematically framed to retain its meaningfulness.

- **Correct Message:** The information communicated must not be vague or false in any sense; it must be free from errors and grammatical mistakes.

- **Complete Message:** Communication is the base for decision making. If the information is incomplete, it may lead to wrong decisions.

- **Precise Message:** The message sent must be short and concise to facilitate straightforward interpretation and take the desired steps.

- **Reliability:** The sender must be sure from his end that whatever he is conveying is right by his knowledge even if the receiver has trust on the sender.

- **Consideration of the Recipient:** The medium of communication and other physical settings must be planned, keeping in mind the attitude, language, knowledge, education level and position of the receiver.

- **Sender's Courtesy:** The message so drafted must reflect the sender's courtesy, humbleness and respect towards the receiver.
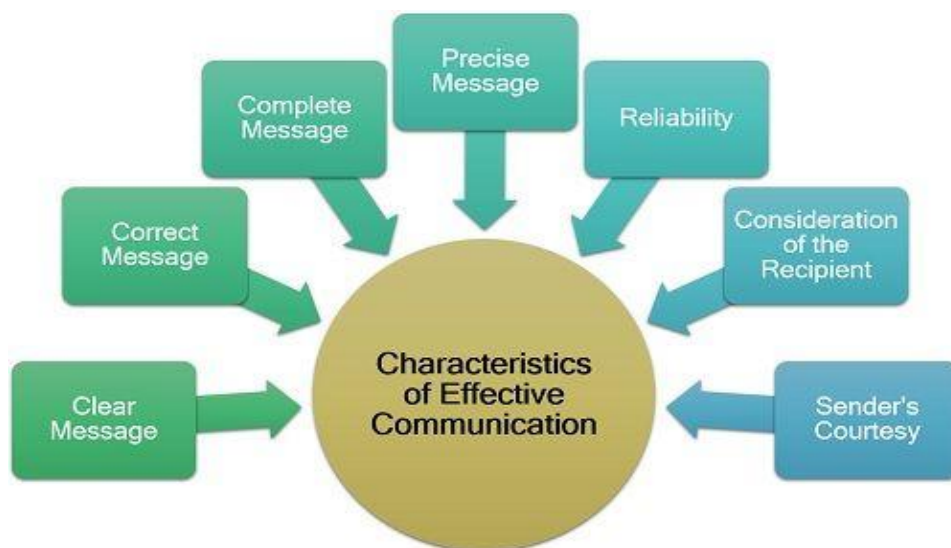

Fig. 7.7 Characteristics of Effective Communication

Effective Communication Skills

- **Observance:** A person must possess sharp observing skills to gain more and more knowledge and information.

- **Clarity and Brevity:** The message must be drafted in simple words, and it should be clear and precise to create the desired impact over the receiver.

- **Listening and Understanding:** The most crucial skill in a person is he must be a good, alert and patient listener. He must be able to understand and interpret the message well.

- **Emotional Intelligence:** A person must be emotionally aware and the ability to influence others from within.

- **Self-Efficacy:** One must have faith in himself and his capabilities to achieve the objectives of communication.

- **Self-Confidence:** Being one of the essential communication skills, confidence enhances the worthiness of the message being delivered.

- Respectfulness: Delivering a message with courtesy and respecting the values, believes, opinions and ideas of the receiver is the essence of effective communication.

- **Non-Verbal Communication:** To connect with the receiver in a better way, the sender must involve the non-verbal means communication too. These include gestures, facial expressions, eye contact, postures, etc.

- **Selection of the Right Medium:** Choice of the correct medium for communication is also a skill. It is necessary to select an appropriate medium according to the situation, priority of the message, the receiver's point of view, etc.

- **Providing Feedback:** Effective communication is always a two-way process. A person must take as well as give feedback to bring forward the other person's perspective too.

Fig. 7.8 Effective Communication Skills

7.3.4 Obstacles in Communication

There are certain obstacles which sometimes hinder the process of communication, making it less useful for the sender as well as the receiver. These barriers are categorized under three groups.

Fig. 7.9 Barriers to Effective Communication

Barriers Involving Words

Words play an essential role in the process of communication. Any disturbance or distraction in the way a message is presented may lead to miscommunication. Following are the different types of communication barriers related to words:

✓ **Language**: It is a medium of communication. If the sender is making excessive use of technical terms, it will become difficult for the receiver to understand the message clearly.

✓ **Ambiguity and Overuse of Abstractions**: Even if the message is presented in a non-realistic or vague context involving a lot of notions, the receiver won't be able to connect with the idea properly.

✓ **Disorganized Message**: When the words are not organized systematically to form a powerful message, it loses its efficiency and meaning.

✓ **Information Overload**: The effectiveness of communication reduces when a person keeps on speaking for an extended period. Thus, leading to the receiver's exhaustion, who won't be able to keep track of everything that is conveyed.

Barriers Involving People's Background

People belong to different backgrounds, i.e., culture, education level, gender, etc. These attributes majorly affect the efficiency of the communication process. It involves the following challenges:

✓ **Attitudinal Differences**: At times, people are resistant to understand or change their mind when they have set their views about a particular topic. Their attitude obstructs to meet the purpose of the communication.

✓ **Demographic Differences**: The difference in age, generation, gender, status, tradition, etc., creates a lack of understanding among people and thus, hinders the process of communication.

✓ **Lack of Common Experience or Perspective**: The experiences of a person develop their perspective of observing things in a specific way. This perspective varies from person to person. Therefore, it becomes difficult for a receiver to relate with the sender's experience or views.

✓ **Jumping to Conclusions**: Some people lack the patience of listening to others and often jump to conclusions between the communication.

Physical Barriers:

These barriers can be experienced directly but are challenging to overcome. These include:

✓ **Physical Distance**: When people communicate over long distances, they miss out the non-verbal aspect of communication, since the gestures and expressions of the receiver cannot be interpreted.

✓ **Noise**: The environment or the communication system sometimes involve unwanted noise which interrupts the process of communication making it inefficient.

7.4 Leadership and Teamwork

7.4.1 Importance of Teamwork in a Professional Environment

Teamwork means that people try to cooperate, using their individual skills and providing constructive feedback, despite any personal conflict between individuals. Teamwork is selfless. It focuses on the end goal. Thus, the foundation for teamwork is a common goal.

1. **Teamwork is efficient work**

   • Split difficult tasks into simpler ones, then work together to complete them faster

   • Develop specialized skills, so that the best person for each task can do it better and faster

   • It leads to better productivity, reduced costs, greater profitability, and many other benefits.

2. **Teams self-monitor**

In teamwork, many people have responsibility for the same goal. Most significantly, teammates observe and depend on the quality of each other's work. When one team member's performance

dips, the others have the knowledge and motivation to help them improve. Without management intervention, effective teams can often regulate their own performance.

3. Teams innovate faster

When a team tackles a problem, the project benefits from multiple perspectives, skillsets, and experiences all at once. A team approach can therefore lead to faster, deeper innovation.

4. Teammates learn from each other

Working together make you learn each other's strengths and correct each other's mistakes. And everyone's performance will improve.

5. Teamwork can create healthy competition

Provided the right challenge and rewards are in place to promote competition, team performance can keep improving.

7.4.2 Concept of Teamwork and Leadership

Teamwork always leads to greater productivity. Leadership and teamwork have a direct impact on the ability for an organization to carry out its mission. You need leadership to make sure everyone on your team is going in the same direction and working towards the same goal. Good leadership provides a clear vision for the team.

Both leadership and teamwork are driven by critical soft skills that need to be exercise in a balanced manner. This balance between leadership and teamwork is imperative to ensure that both are executed not only in tandem as two sides of the same coin but with symbiosis as they draw inspiration for success from each other. Poor leadership cannot pull a motivated team to success; similarly, strong leadership cannot hope to achieve success with an incompetent and unmotivated team.

Organizational leadership is a composite of skills and behaviors enabling a person to exercise an interpersonal influence on a group of people. The leader's vision and purpose are thus achieved by directing and motivating the team to accomplish the desired set of goals envisioned by the leader. Indeed, leadership itself is a focused exercise in influencing and empowering people individually and in teams. The ultimate accomplishment of a leader is to persuade followers to do seemingly impossible feats. Indeed, the best leaders motivate their followers to accomplish tasks and goals well beyond their own expectations.

Teams are an essential component of successful organizations today and building and motivating teams are necessary pursuits to attain that success. Teams require continuous nurturing and

interaction to maintain high performance throughout their temporary lives. Leadership must now concentrate on motivating and supporting teams using tools that were not previously considered but have become crucial in a globalizing environment. In order for a team to be attuned to success, a combination of attributes is required that include clear objectives; shared leadership; clear roles and responsibilities; interdependent members; mutual encouragement; and trust between the leader and the team.

7.5   Time Management

7.5.1 Concept of Better Time Management

"Time management" is the process of organizing and planning how to divide your time between specific activities. Good time management enables you to work smarter not harder so that you get more done in less time. Failing to manage your time damages your effectiveness and causes stress. Time Management refers to making the best use of time.

Fig. 7.10 Time Management

7.5.2 Time Management in Daily Life

The ability to manage your time effectively is important. Good time management leads to improved efficiency and productivity, less stress, and more success in life.

The following are the ways to manage time effectively:

Set goals correctly

Set goals that are achievable and measurable. Use the SMART method when setting goals.

1.   Prioritize wisely

Prioritize tasks based on importance and urgency. For example, look at your daily tasks and determine which are:

- Important and urgent: Do these tasks right away.

Fig. 7.11 Time Management Tips

- Important but not urgent: Decide when to do these tasks.
- Urgent but not important: Delegate these tasks if possible.

2. Set a time limit to complete a task

Setting time constraints for completing tasks helps you to be more focused and efficient. Making the small extra effort to decide on how much time you need to allot for each task can also help you recognize potential problems before they arise. That way you can make plans for dealing with them.

3. Take a break between tasks

When doing a lot of tasks without a break, it is harder to stay focused and motivated. Allow some downtime between tasks to clear your head and refresh yourself.

4. Organize yourself

Utilize your calendar for more long-term time management. Write down the deadlines for projects, or for tasks that are part of completing the overall project. Think about which days might be best to dedicate to specific tasks.

5. Remove non-essential tasks/activities

It is important to remove excess activities or tasks. Determine what is significant and what deserves your time.

6. Plan ahead

Make sure you start every day with a clear idea of what you need to do. Consider making it a habit to, at the end of each workday, go ahead and write out your "to-do" list for the next workday.

7.5.4 Personal and Professional Time Management:

Time Management plays a very important role not only in organizations or the lives of entrepreneurs but also in our personal lives. The importance of time management comes down to how much it impacts your personal and professional life. Time management is organizing your day so that you find the best use for every moment. Excellent time management allows you to create a healthy balance in your workflow and family life. The consequences of failed time management include missing deadlines and living with excessive stress.

The Follow are the excellent ways of managing time:

- Effective <u>Planning</u>
- Setting goals and objectives
- Get organized
- Setting deadlines
- Delegate Tasks

- Prioritizing activities as per their importance
- Spending the right time on the right activity

7.6 Attitude, Behavior and Customer Care

7.6.1 Concept of Attitude and Behavior

Attitude is a feeling, belief, or opinion of approval or disapproval towards something. **Behavior** is an action or reaction that occurs in response to an event or internal stimuli (i.e., thought). Attitude's structure can be described in terms of three components.

- **Affective component**: It involves a person's feelings / emotions about the attitude object. For example: "I am scared of spiders".
- **Behavioral component**: It refers to behavioral responses. For example: "I will avoid spiders and scream if I see one".
- **Cognitive component**: It involves a person's belief / knowledge about an attitude object. For example: "I believe spiders are dangerous".

This model is known as the ABC model of attitudes. One of the underlying assumptions about the link between attitudes and behavior is related to consistency. This means that we often or usually expect the behavior of a person to be consistent with the attitudes that they hold. This is called the principle of consistency. The principle of consistency reflects the idea that people are rational and attempt to behave rationally and that a person's behavior should be consistent with their attitude(s).

Attitude Strength

The strength with which an attitude is held is often a good predictor of behavior. The stronger the attitude the more likely it should affect behavior. Attitude strength involves:

Importance / personal relevance refers to how significant the attitude relates to self-interest.

The **knowledge** aspect of attitude strength covers how much a person knows about the attitude object. People are generally more knowledgeable about topics that interest them and are likely to hold strong attitudes (positive or negative).

7.6.2 Impact of Positive and Negative Attitude in Professional Life:

Having a "positive attitude" means a person believes everything happens for the best in the end. A person with a "negatives attitude" tends to believe their best days are in the past. A person with a negative attitude pays attention to other people's shortcomings.

How Positivity Impacts a Workplace

When there are positive attitudes in a workplace, there's a feeling that anything can be accomplished. Colleagues support each other and work in tandem, and a host of other positive outcomes materialize, such as:

- Increased productivity
- Greater probability of collaboration and teamwork
- Improved morale
- Ability to overcome adversity
- Willingness to think creatively and try new things
- Willingness to share information and ideas
- Lower turnover
- Increased sense of camaraderie
- Improved customer service

Positivity can be contagious, where everyone feels like they're on the same team, the effort is collective, and everyone's ideas are valued and welcomed.

How Negativity Impacts a Workplace

A negative attitude doesn't just put others in a bad mood it also has a tangible, measurable impact on how an office function. The following are some of the effects of an unchecked negative attitude:

- Unwillingness to work collaboratively
- Unwillingness to try new things
- Reduced energy levels
- Depressive feelings
- Reduced quality of work product
- Poor customer engagement\
  Difficulty overcoming obstacles

Activities

- Group discussion and model presentation on soft skills
- Perform role play to enhance self-awareness, self-confidence and self-image
- Demonstrate a pictorial presentation on personal and professional grooming.
- Perform role play and group exercises through listening audio or video documentaries.

- Carry out practice amongst students to reflect verbal and non-verbal communication.

- Give students some task to observe teamwork and leadership properties among them

- Arrange a small competition task following time management

- Schedule the tasks.

- Through different scenarios practically apply the principles of customer care and positive attitude.

- Exercise and deal with problematic and angry persons by conducting role plays

Do You Know?

- Soft skills relate to how you work. Soft skills include interpersonal skills, communication skills, listening skills, time management and empathy, among others.

- Soft skills are an essential part of improving one's ability to work with others and can have a positive influence on furthering your career.

- Soft skills relate to academic success are study skills, listening skills, organization skills, and writing skills. Soft skills relate to professional success are attitude, communication, work ethic, teamwork, leadership qualities, time management, decision making and conflict resolution.

- The three most well-known models for communication are Linear, Interactional, and Transactional.

- Active listening and responding avoids misunderstandings, as people have to confirm that they do really understand what another person has said. It tends to open people up, to get them to say more. It helps people avoid conflicts, because people become more attuned to concerns and don't feel as though they're being dismissed.

- Effective Communication is defined as the ability to convey information to another effectively and efficiently.

- These barriers can be categorized into four main types of constraints to effective communication: Physical, psychological, organizational, as well as semantic barriers.

- Collaboration within a group can help solve difficult problems. Brainstorming is a good opportunity for the team to exchange ideas and come up with creative ways of doing things.

- Teamwork is the ability to work cooperatively with others to achieve group objectives. The

essence of leadership is accomplishing worthy goals through the combined efforts of others, and teamwork capabilities are crucial.

- Better time management enables you to work smarter not harder so that you get more done in less time, even when time is tight and pressures are high

- Managing your time wisely improves work-life balance and increases happiness. Good time management also reduces stress and allows you to achieve your goals faster and easier.

EXERCISE

Select the correct option.

1. Which of the following are the 3 models of communication?

    a. Linear   b. Interaction   c. Transaction   d. All of these

2. The linear or transmission model of communication describes communication as a _____ process

    a. One-way b. Two-way   c. 3-way d. Both a and b

3. _____ is the ability to work cooperatively with others to achieve group objectives.

    a. Teamwork   b. Talent   c. Hardwork   d. Working individually

4. ____ relate to academic success are study skills, listening skills, organization skills, and writing skills.

    a. Technical skills   b. Communication skills   c. Soft skills   d. Attitude

5. _____ involves a person's belief / knowledge about an attitude object. For example: "I believe spiders are dangerous".

    a. Cognitive component b. Behavioral component   c. Affective component   d. None of these

Answer the following Questions briefly.

1. Define the importance of soft skills in daily life.

2. What are professional aspects of life?

3. Define the term Professional success.

4. Define Effective communication.

5. Explain the concept of teamwork.

6. How can you explain time management?

7. How can you lead the team? explain in your own words.

8. What should attitude one can adopt in professional life?

9. Write the rules for Customer care.

10. Define Listening. Why it is necessary?

Answer the following Questions in detail.

1. Write a brief note on Introduction to soft skills.

2. Explain the personal and professional aspects of life.

3. Make an environment of work-place for you and apply all the role of professional development process to show how should be environment take place.

4. Differentiate between teamwork and leadership. Which would you prefer and why?

5. Which type of attitude bring a positive change in society related to our environment.

6. Explain the difference between the positive and negative attitude.

ABOUT THE AUTHOR

Dr. Faisal Riaz

Mr. Faisal Riaz received his Ph.D. from Iqra University, Pakistan in 2018 in the field of Cyber Physical Systems (CPS) and currently serving as an Associate Professor in the Dept. of computer sciences, Mirpur University of Science and Technology. His research interests are Vehicular Cyber-Physical Systems, Cognitive Radio, Affective Computing, and Agent-Based Modelling. He has more than 34 research publications in various national/international research journals and conferences. He is the author of three books as well. Furthermore, he is heading Control. Automotive and Robotics Lab, National Centre of Robotics, Department of Computer Sciences, Mirpur University of Science and Technology (MUST), AJ&K Pakistan. Under the banner of CAR-lab, he has innovated the world's first-ever cognitive and emotional Autonomous Vehicle. He got the hall of the fame award in 2018 in the recognition of his smart innovations. He is the reviewer of many well-reputed journals. He has served as a technical program committee member in many international IEEE conferences.

قومی ترانہ

پاک سَر زمین شاد باد!   کشورِ حسین شاد باد!

تو نِشانِ عزمِ عالی شان   ارضِ پاکستان

مرکزِ یقین شاد باد!

پاک سر زمین کا نِظام   قُوّتِ اُخوّتِ عوام

قوم، ملک، سلطنت   پائندہ تابندہ باد!

شاد باد منزلِ مُراد!

پرچمِ ستارہ و ہلال   رہبرِ ترقی و کمال

ترجُمانِ ماضی، شانِ حال   جانِ استقبال

سایۂ خُدائے ذُوالجلال!