Why learn audio editing skills?

Adding audio to the classroom:

- Scalable to student needs and levels, adaptable, versatile

- Portable and accessible

- Relevant both to student interests and authentic culture

- For enrichment, assessment, review, and more

- Familiarity with basic editing allows you to tailor authentic materials to students' needs

What about you?

Take one minute now to share in the chat about how you're currently using audio.

Applications:

- Add audio narration or notes to slides to explain difficult concepts

- Add audio and audio assignments to Canvas

- Provide pronunciation examples (both "good" and "bad")

- Allow students to perform self-checks of skills

- Increase student buy-in by incorporating trends *(podcasts, Tik Tok-style videos, TED Talks, etc.)*

- Incorporate native speakers via interview projects, etc.

Authentic Materials

Use your new skills to adapt authentic materials to your students' skill levels and needs.
- Use songs, podcasts, and watch vlogs to improve listening skills
- Use poetry, songs, or role plays to improve pronunciation
- Use different recordings to introduce dialects and variety of voices
- Prepare your students for for real-life contexts
- Accelerate vocabulary learning and self-assessment

Student-Oriented Projects

- Podcasts that discuss current events, to introduce campus
- Interviews with local community members
- Classroom/campus news reports
- Organize cultural nights, poetry readings, tongue twister contests
- Capturing true stories in the community/campus/environment

Other Goals

- Assessment
- Review
- Student self-checks

Workshop Objectives

**You will leave this workshop with the knowledge to:**

- Access Audition through Creative Cloud and elsewhere

- Record, import, and play audio files

- Add effects, make edits, and mix multiple audio files

- Export your new audio creations

- Begin integrating new and creative uses for multimedia into your teaching

Why use Audition?

- Zoom is convenient but **<u>not</u>** optimized for audio, lacks editing capabilities.
- Audition is fully-featured and straightforward to use for both simple and complex audio tasks
- Part of the heavily university-supported Adobe Creative Cloud Suite, for PC and Mac
- CC programs have many similar features and interfaces– you may already have a head start!

Download Creative Cloud to your personal computer:
- **Step 1:** To begin the process, visit https://adobe.iu.edu
- **Step 2:** Locate the heading "Download Adobe Creative Cloud" and click the link Download Creative Cloud.
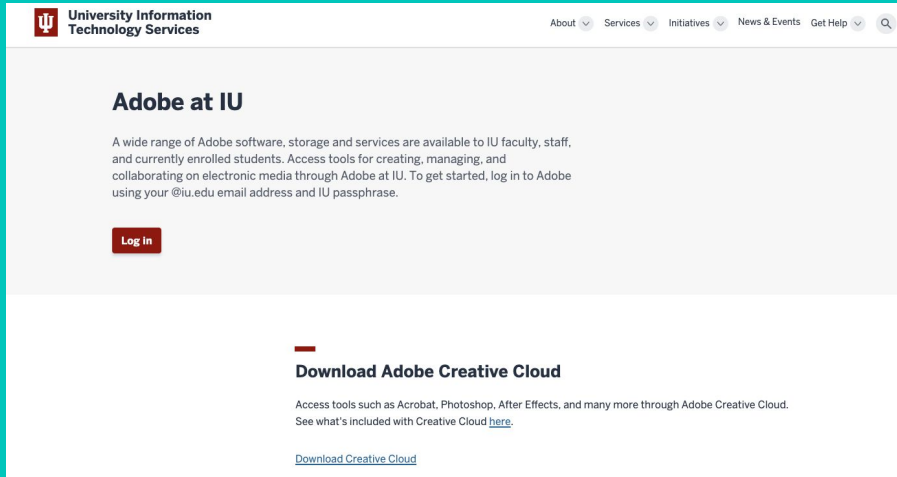
IUanyWare: Access a virtual suite of free-to-use software from *any* computer, *anywhere*. To begin, visit IUanyware.iu.edu
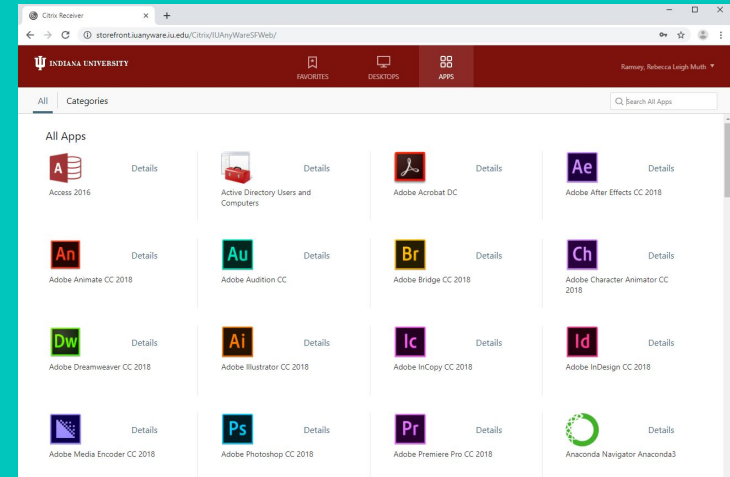
Accessing Adobe Programs

All IU affiliates have free access to the entire Adobe Creative Cloud suite of software both on campus and for installation on your personal workstation *(PC and Mac)*.

If you have difficulty with any of these steps, please visit the IU Knowledge: https://kb.iu.edu/d/bffs

Frequency – the pitch of the sound, measured in Hertz (Hz), higher numbers are higher pitch

Amplitude – the loudness of the sound, usually measured in deciBels (dB)

Waveform – the representation of a sound (usually as a graphic), in Audition refers to a single audio file

Multitrack – in Audition refers to a work session where multiple waveforms can be mixed and edited as part of a single project

Effects – in Audition refers to any processing function applied to the waveform as a whole

File Format – the digital "container" of a file

For editing/preservation: **.wav**
For sharing/online: **.mp3**

Common Terms

Before recording, consider…

Environment

Equipment

Purpose

Practice

Remember: **Pause for a moment to LISTEN!**

What <u>background noise</u> do you hear?

Often we don't notice background noise if we are not actively listening, but this noise can be a big problem on your recording.

Best Practices

Although Audition offers many editing tools, there is no substitute for a good quality recording!

Try to remember these best practices:

- Always be mindful of the <u>environment</u> in which you are recording.
  - If you are struggling to find a quiet location to record, ask CeLT staff!

- Always check and adjust your <u>microphone level</u> before recording.

- Always leave a <u>short pause</u> at the beginning of recording, before beginning to speak.
  - This eliminates the possibility of accidentally missing the beginning of your audio **and** provides a noise sample for Noise Reduction, if necessary.

- Always <u>fade in</u> your file at the beginning and <u>fade out</u> at the end.
  - These fades don't have to be long but will make your file sound smoother and more polished.

- Never be afraid to <u>ask for assistance</u> if you have a question or concern. CeLT is happy to help!

Search

APPS

::: All apps

↻ Updates

CATEGORIES

📷 Photo

✎ Graphic design

🎞 Video

🖌 Illustration

📱 UI and UX

3D and AR

⊛ Social media

Acrobat and PDF

⚗ Beta apps

RESOURCE LINKS •

St Stock

ƒ Manage fonts

All apps   🖥 Desktop   📱 Mobile   ☐ Web

Installed

Ps	**Photoshop**	● Up to date	Open	⋯
Ai	**Illustrator** v 25.2.1	● Up to date	Open	⋯
Ai	**Illustrator** v 24.3	● Up to date	Open	⋯
📕	**Acrobat DC**	● Up to date	Open	⋯
Pr	**Premiere Pro** v 15.0	● Up to date	Open	⋯
Pr	**Premiere Pro** v 14.9	● Up to date	Open	⋯
Ae	**After Effects**	● Up to date	Open	⋯
Au	**Audition** v 14.0	● Up to date	Open	⋯

Opening Audition: the Default Workspace

Waveform   Multitrack   **Tools bar**   Default ≡   Edit Audio to Video   Radio Production   Search Help

Session type toggle

Files   Favorites

Files panel

Name ↑   Status Duration

Editor ≡   Mixer

Effects Rack ≡   Markers   Properties   »

Presets:

Effects Rack

1
2
3
4   **Editor panel**
5
6
7
8
9

Input: +0
Output: +0

Mix: Dry   Wet   0 %

History ≡   Video   **Playback control bar**

History panel

Levels ≡   Selection/View ≡

Volume meter   Start   End   Duration

                                                        Selection 0:00.000   0:00.000   0:00.000

0 Undo   View   0:00.000   0:00.000   0:00.000

dB -57 -54 -51 -48 -45 -42 -39 -36 -33 -30 -27 -24 -21 -18 -15 -12 -9 -6 -3 0

   12.69 GB free

Configuring Audio Devices
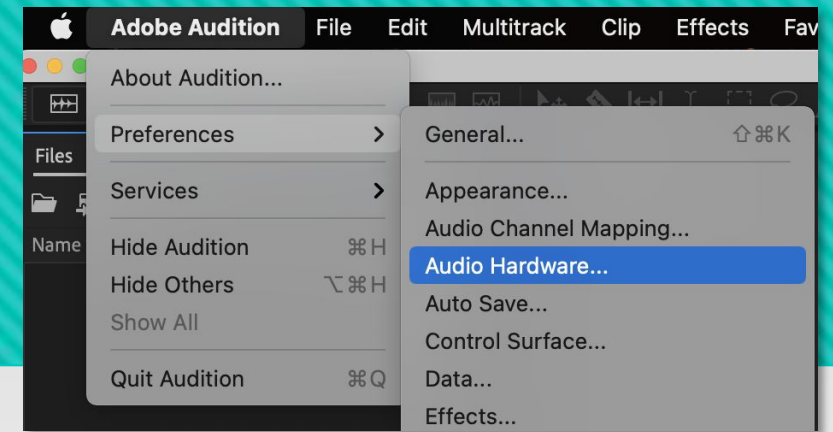
- **Step 1:** Launch Audition (with the "Open" button) from the "Installed" list of apps in the Creative Cloud manager.

- **Step 2:** At the top of the screen, navigate to **Edit > Preferences > Audio Hardware** (*or* Adobe Audition > Preferences > Audio Hardware *on Mac).*

- **Step 3:** With your headset plugged into your computer, click the drop-down arrow next to "Default Input" and verify that your device is appearing. "System Default" should automatically select your headset source when it is plugged in, but it's best to check.

- **Step 4:** Do the same with the "Default Output."

- **Step 5:** Click "Okay" at the bottom of the Preferences panel. These settings are retained the next time you open the program.
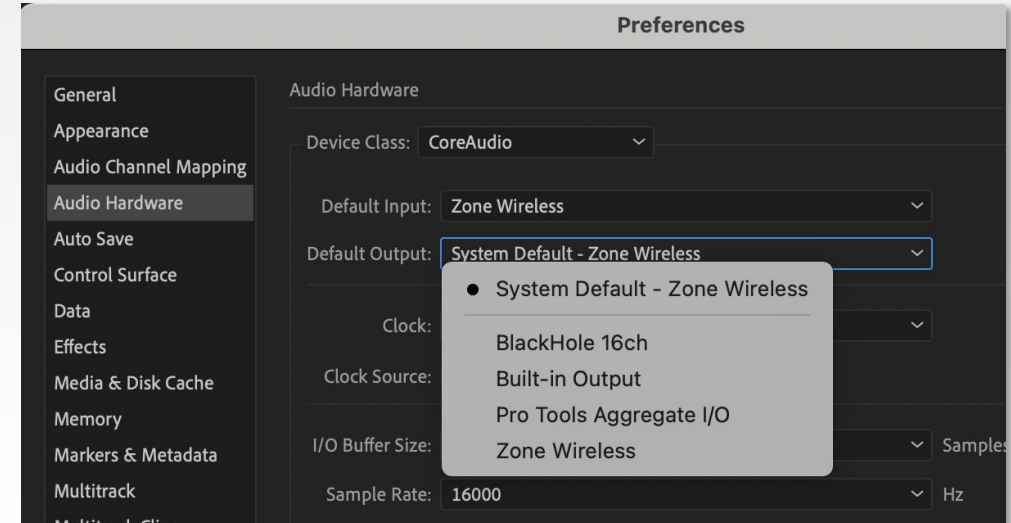
Tool Bar and Editor Panel

To learn more about the Audition interface and basic navigation, view UITS IT Training's video: https://iu.mediaspace.kaltura.com/media/t/1_azi4qlfo

Editor: intro * Mixer

Zoom view

hms   1.0   Timeline   3.0   4.0   5.0   6.0   7.0   8.0   9.0

Current-time indicator

+0 dB

Heads-up display

Waveform display

Playback control bar

0:06.046

Time indicator

Move Tool

Slip Tool

Razor Tool

Time Selection Tool

Some of the tools are only available in particular editing modes and will be grayed out when unavailable.

Selection/View

	Start	End	Duration
Selection	0:06.046	0:06.046	0:00.000
View	0:00.000	0:09.302	0:09.302

dB -57 -54 -51 -48 -45 -42 -39 -36 -33 -30 -27 -24 -21 -18 -15 -12 -9 -6 -3 0

44100 Hz • 32-bit (float) • Mono   1.56 MB   0:09.302   11.88 GB free

Getting Ready to Record

To begin a new recording, you have several options:
- File > New > Audio File
- *In the Files panel:* New File > New Audio File
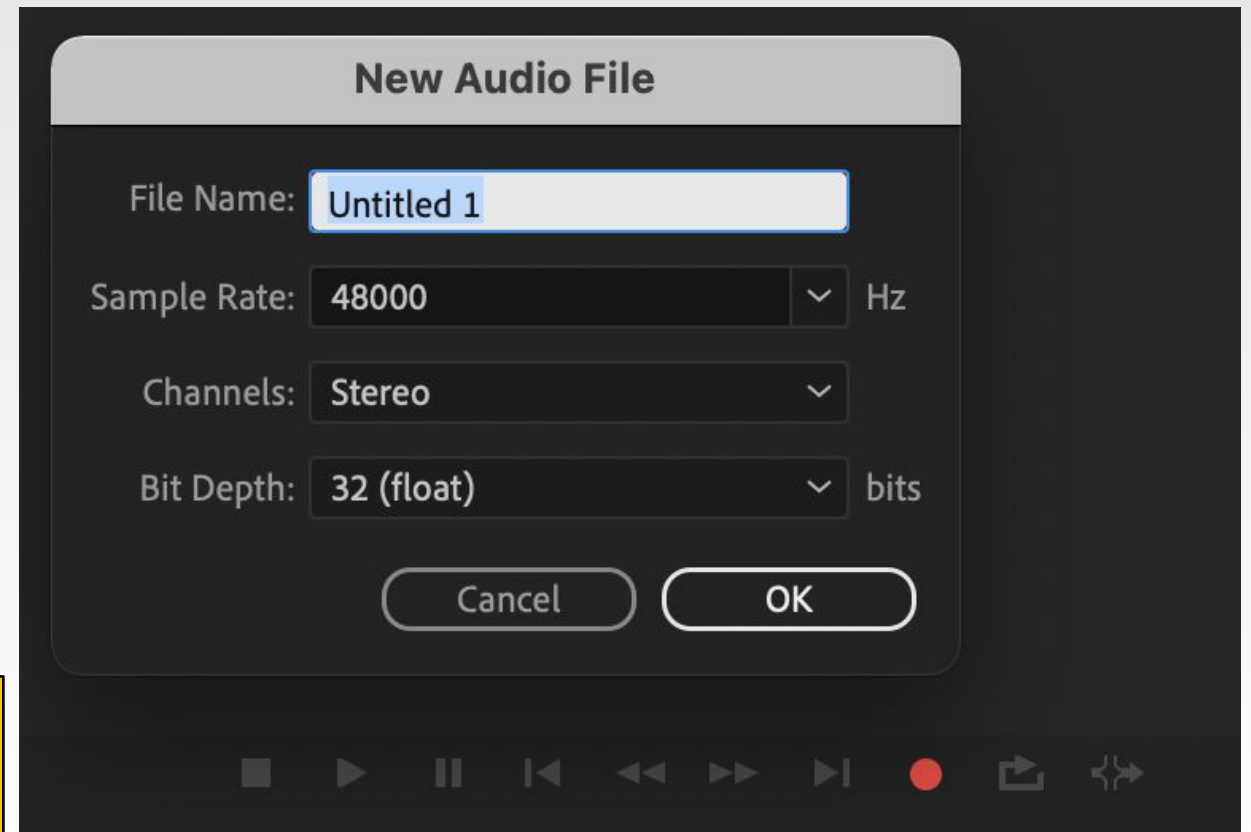- *Pressing the red Record button in the playback controls*

You will now see the file name listed in the "Files" panel.
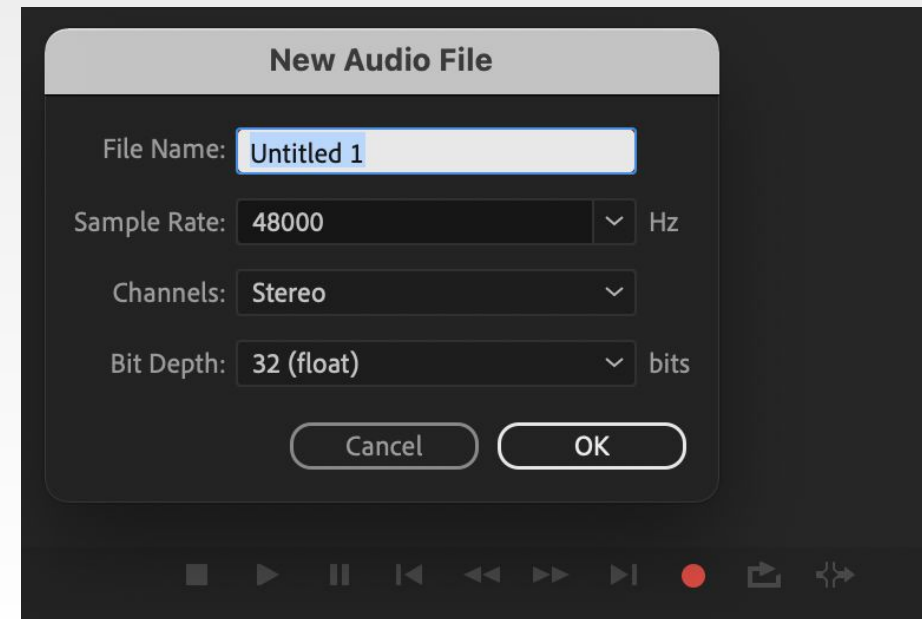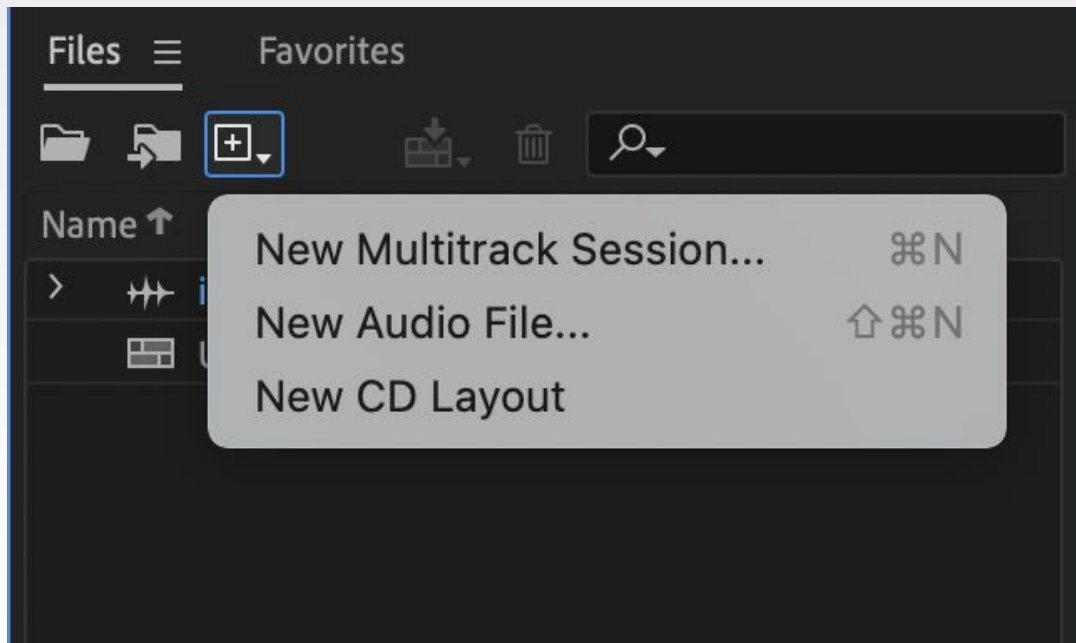
Recommended Recording Settings

- **File Name:** *Giving your file a clear name will be helpful when working with multiple files in a multitrack session.*

- **Sample Rate:** 44100 Hz for most projects

- **Channels:** Mono for a single microphone input

- **Bit Depth:** 16 bits for most projects

Note: Audition does not have any input volume settings and relies on the audio device's own volume control. To adjust the microphone volume, visit your computer's audio settings.

New Audio File

File Name: Untitled 1

Sample Rate: 48000 Hz

Channels: Stereo

Bit Depth: 32 (float) bits

Cancel   OK

What is clipping?

Clipping happens when the signal is too loud and exceeds the maximum possible volume.

Always check your recording volume before beginning to record, in order to avoid this audible distortion!
In Audition, try to make your average volume fall between -18dB and -6dB on the volume meter.
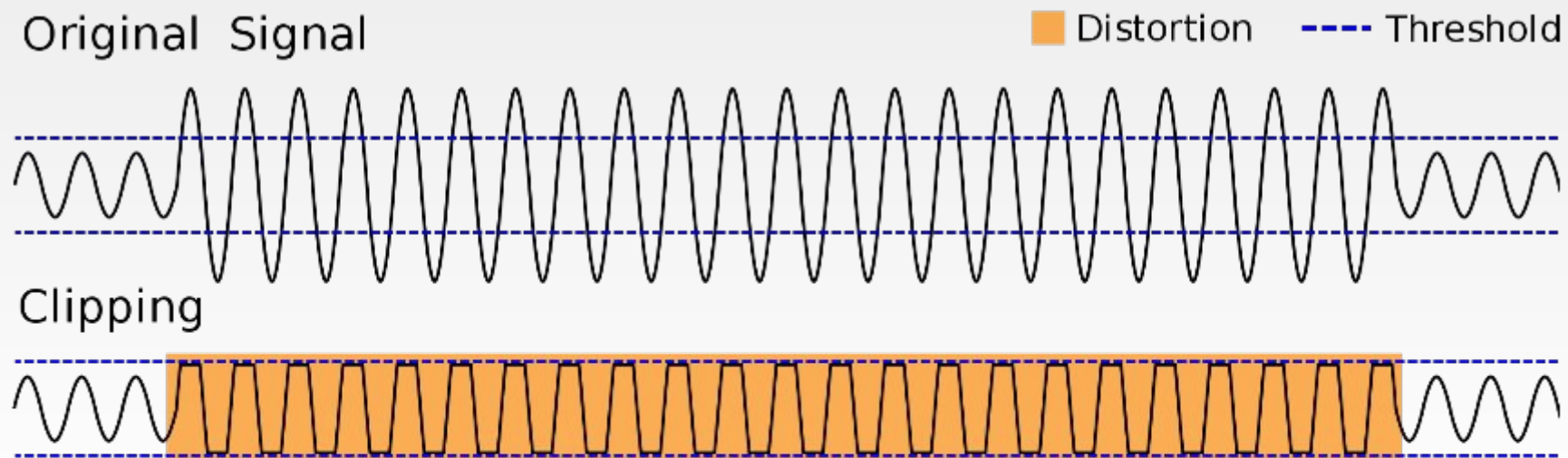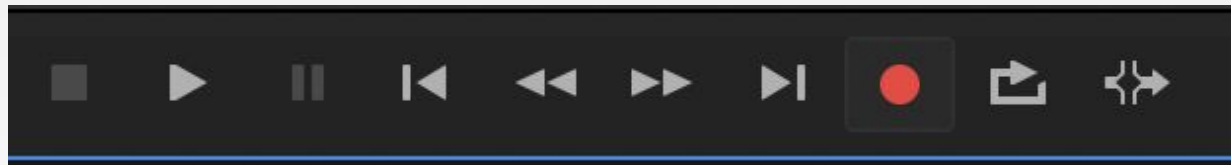
Recording in Waveform Mode

For most speech-oriented purposes, it's easiest to record in "Waveform" mode.

To begin recording: Press the red "Record" button in the playback controls.

To stop recording: Press the square "Stop" button in the playback controls *or* press "Record" again.

Note: The playback bar also offers a number of other functions during recording, including pausing record, recording over portions of the existing track (replacing content), etc.

Saving Your Project and Your Recording

Remember: _Saving_ will save your Audition project workspace. _Exporting_ will save your new creation as an audio file. A "peak" file will also be generated when you export, but you generally won't need to retain it after finishing your project.

Hands On!

Now, try recording in Audition.

Throughout this workshop we will make a brief "podcast." First, we will record the introduction.

- Put on your headset and create a **New Audio File**.
- Press the **"Record"** button, then speak a sentence or two to introduce yourself to your "audience."
  - *"Hello, this is Rebecca Ramsey from the Center for Language Technology."*
- Press the **"Stop"** button to end the recording.

- Export your audio file to your desktop as a WAV file named **"intro.wav"**.

Please let me know if you have any questions or need additional help.

Managing Multiple Files
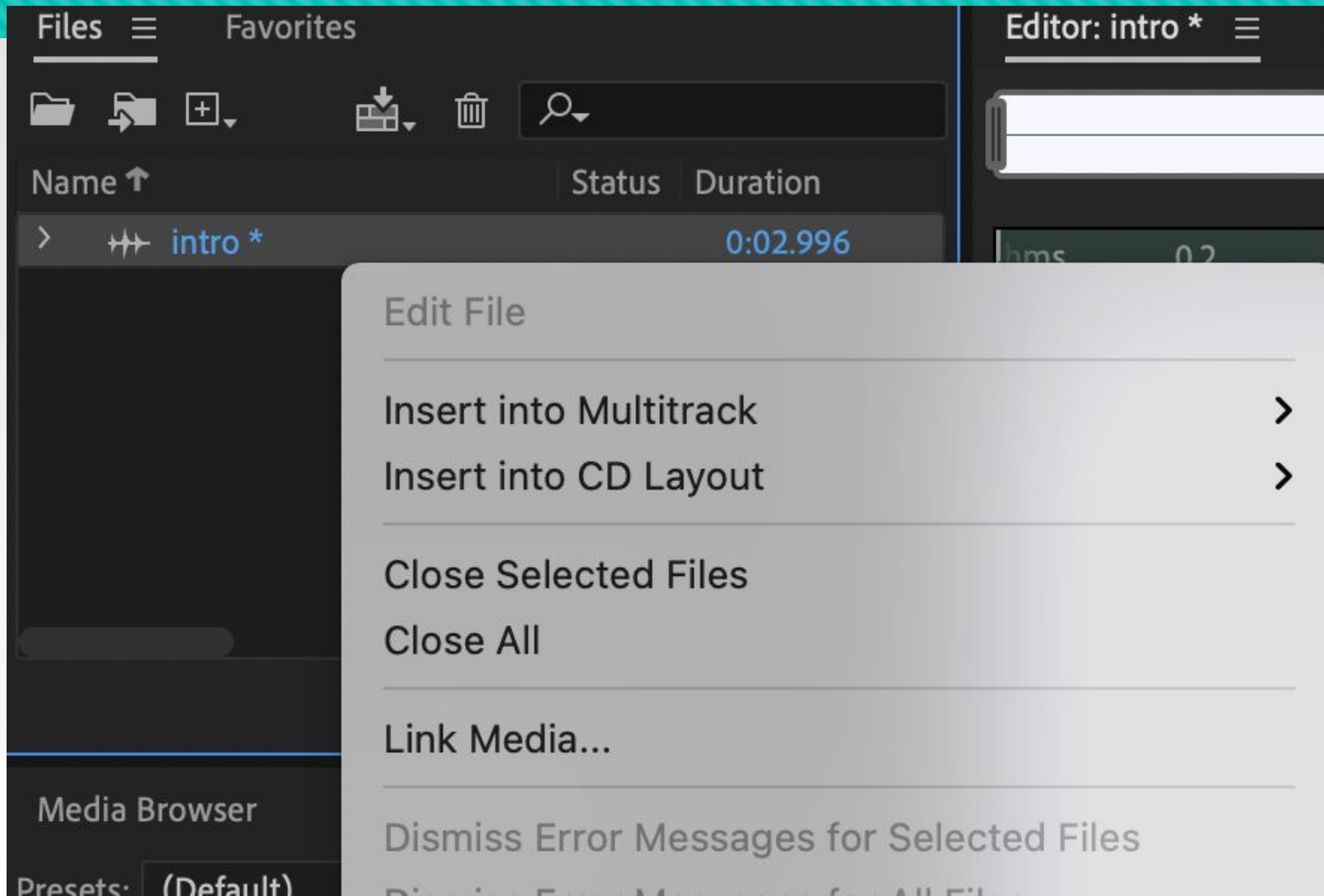
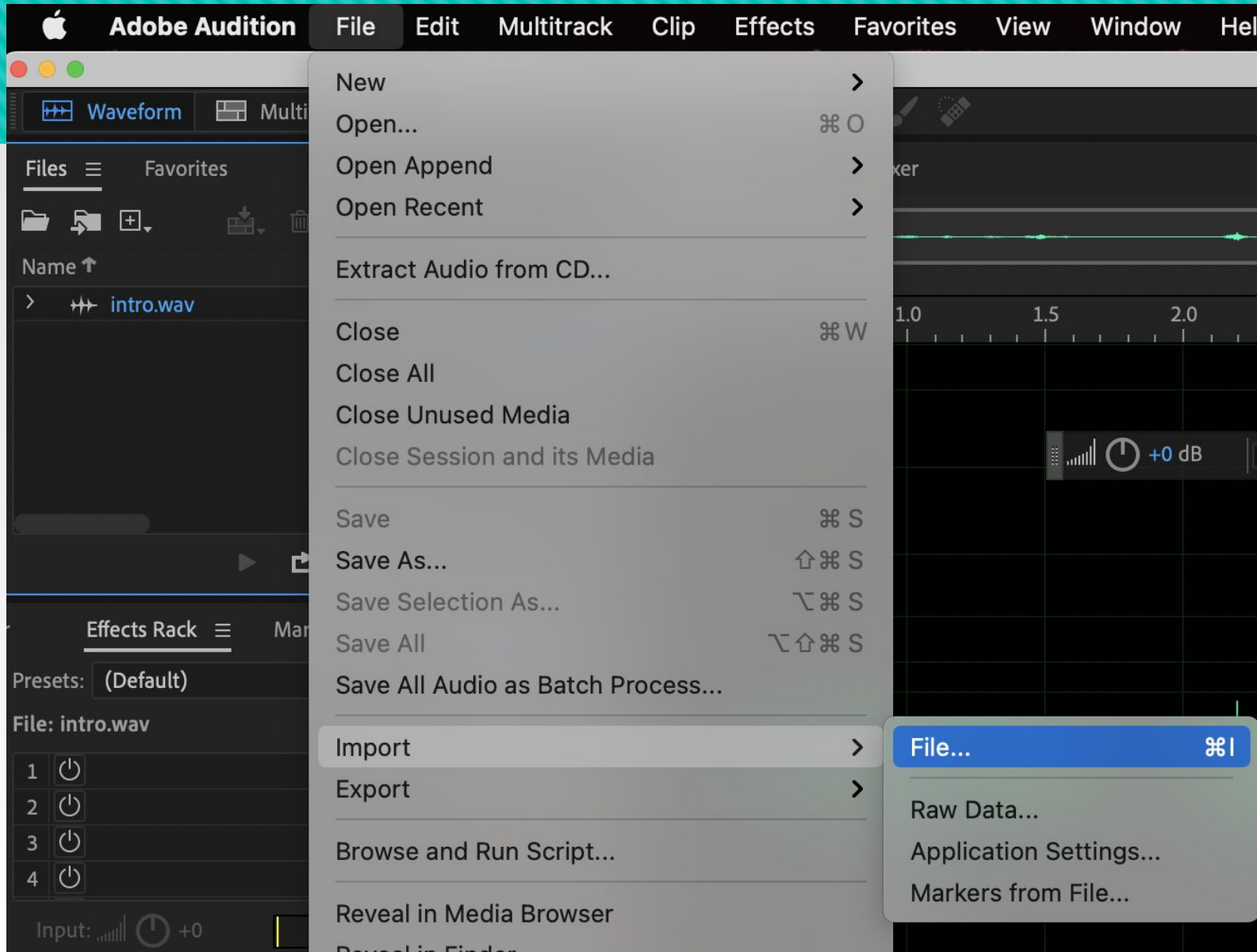Once created, all of the files will be listed by name in the Files panel.

To open a file in Waveform mode:
Double-click on the file name in the Files panel to open the Waveform view of it.

To close a file permanently:
Right-click on the file name in the Files panel and select either <u>Close Selected Files</u> *or* <u>Close All</u>

Importing Audio

To import audio:
Go to File > Import> File
and select desired file
or
Drag and drop audio file into
the "Files" panel

**Once imported, you can
double-click on the name in
the "Files" panel to open it.**

Hands On!

Now, let's make a few more segments for our podcast.

- For this demonstration we will start with a blank session, so right-click in the Files panel and select **"Close All."**

- Now create a new audio file titled **"middle"** and record a few sentences about what your students learned this week. We will not be exporting this file yet.

- Finally, create another new audio file titled **"ending"** and record one more time to create your ending. *"Next week we'll be discussing _____, so stay tuned!"* Do not export this file either.

You can toggle between your available audio files by double-clicking on their name in the Files panel.

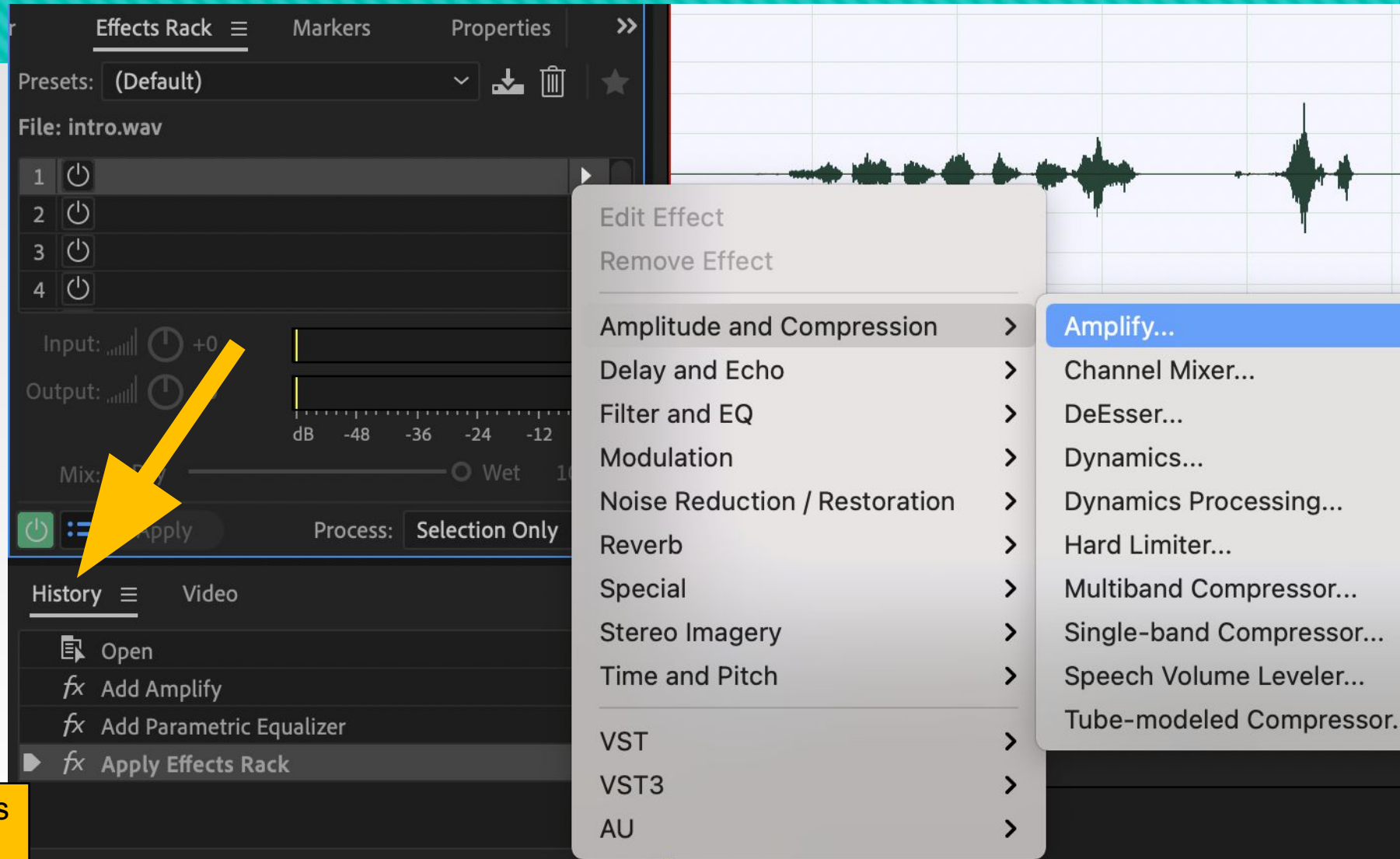Please let me know if you have any questions or need additional help.

Basic Editing

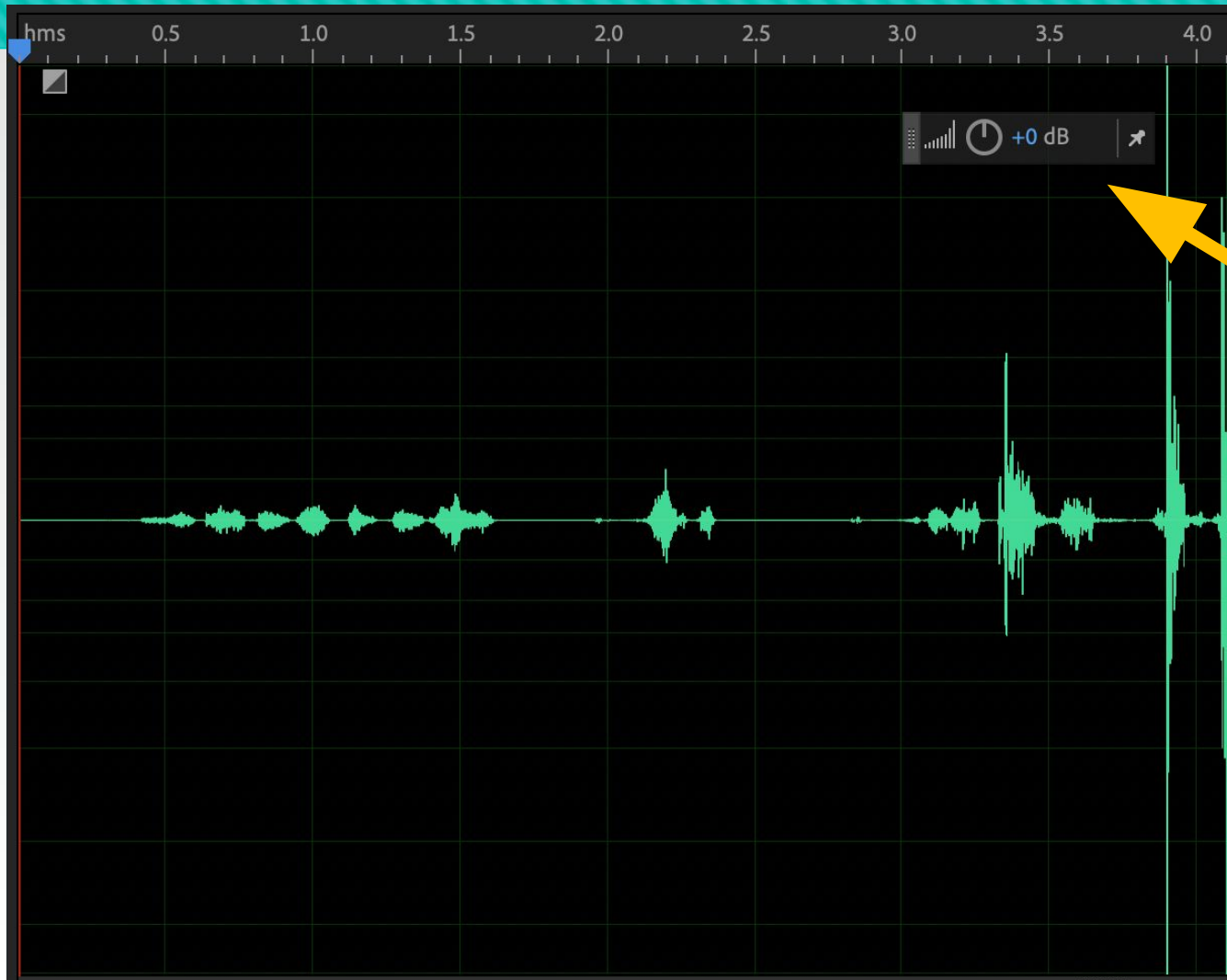**Let's take a look at some features of the editing interface and effects rack.**

Basic processing tasks can be done in Waveform mode, while trimming and other editing is easier in Multitrack mode.

The **History panel** makes it easy to undo and redo changes!

Effects Rack ≡   Markers   Properties   »

Presets: (Default) ∨   ⬇ 🗑 ⭐

File: intro.wav

1 ⏻
2 ⏻
3 ⏻
4 ⏻

Input: +0
Output:

dB -48 -36 -24 -12

Mix: ○ Wet   1(

⏻ ≡   Apply   Process: Selection Only

History ≡   Video

📄 Open
ƒx Add Amplify
ƒx Add Parametric Equalizer
▶ ƒx Apply Effects Rack

Edit Effect
Remove Effect

Amplitude and Compression   >   Amplify...
Delay and Echo   >   Channel Mixer...
Filter and EQ   >   DeEsser...
Modulation   >   Dynamics...
Noise Reduction / Restoration >   Dynamics Processing...
Reverb   >   Hard Limiter...
Special   >   Multiband Compressor...
Stereo Imagery   >   Single-band Compressor...
Time and Pitch   >   Speech Volume Leveler...
                                   Tube-modeled Compressor.
VST   >
VST3   >
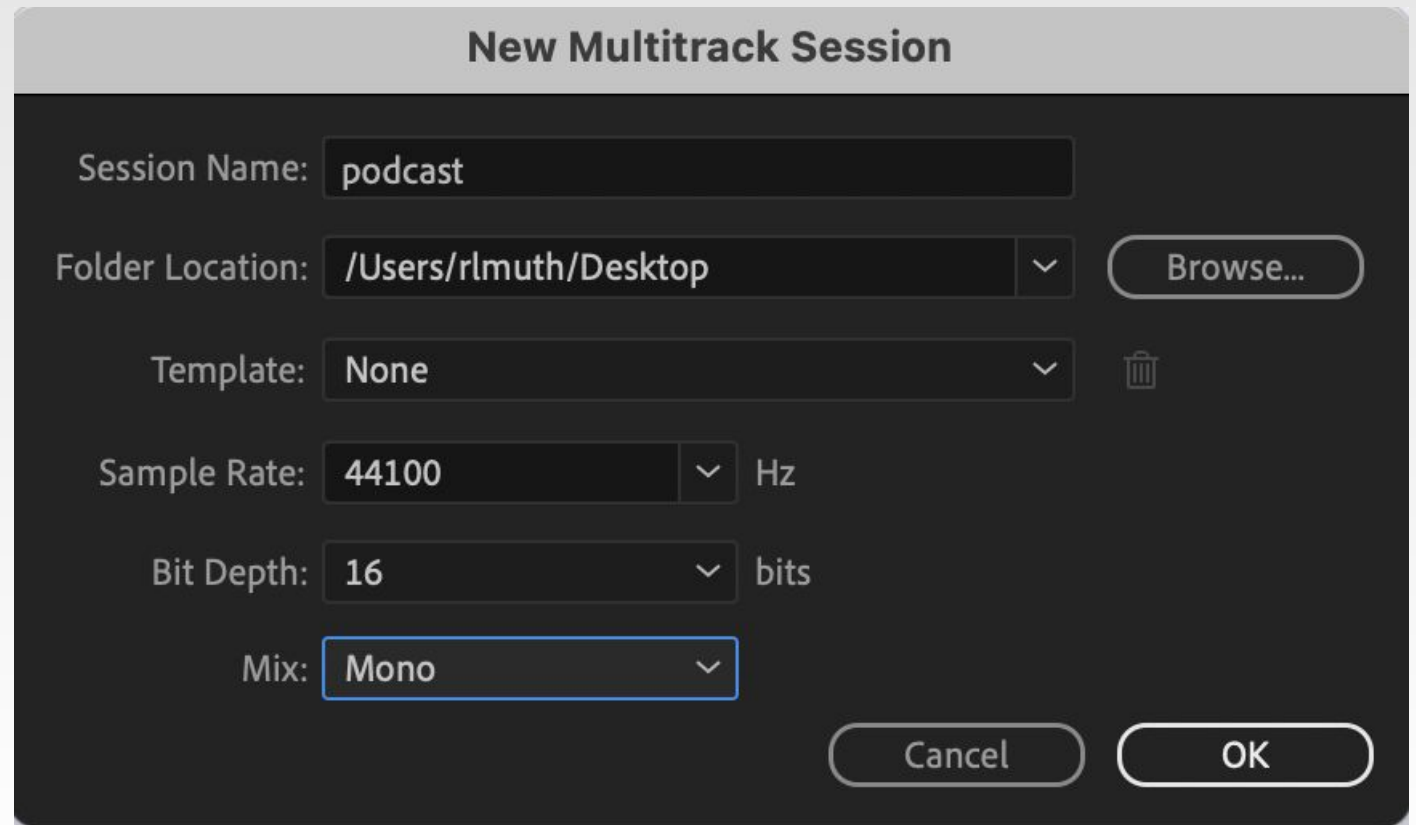AU   >
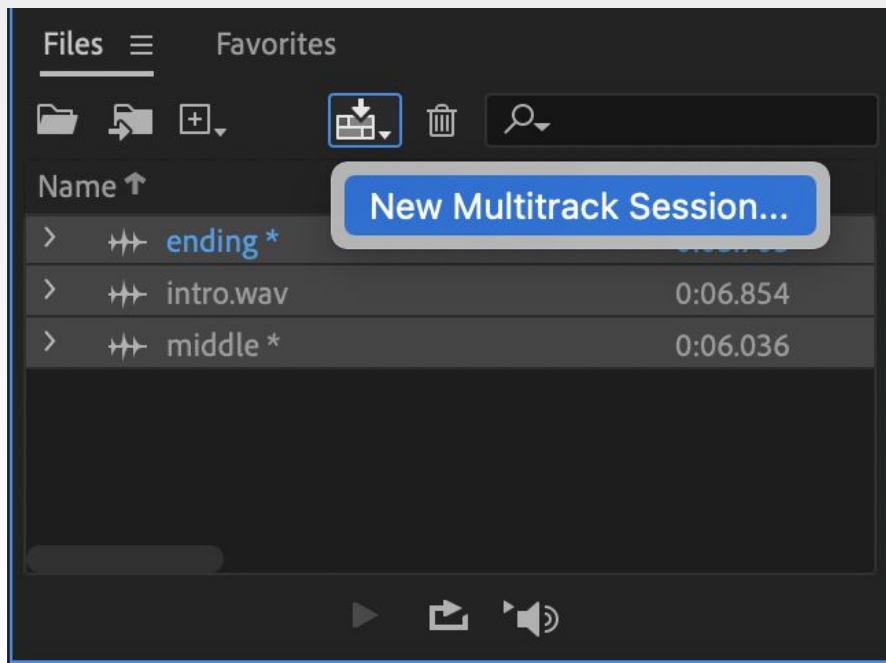
Changing the Volume

The **Heads-Up Display** allows you to quickly change the volume for the entire clip.

Combining Multiple Files

To mix multiple audio clips into one, you must use Multitrack mode.

- *In the Files panel, with the clips selected:* New Multitrack Session

New Multitrack Session

Session Name: podcast

Folder Location: /Users/rlmuth/Desktop

Template: None

Sample Rate: 44100 Hz

Bit Depth: 16 bits

Mix: Mono

Cancel   OK

Editor vs. Mixer Views

In Multitrack mode you can assemble/reorder clips, perform edits, and change the entire track volumes relative to each other.
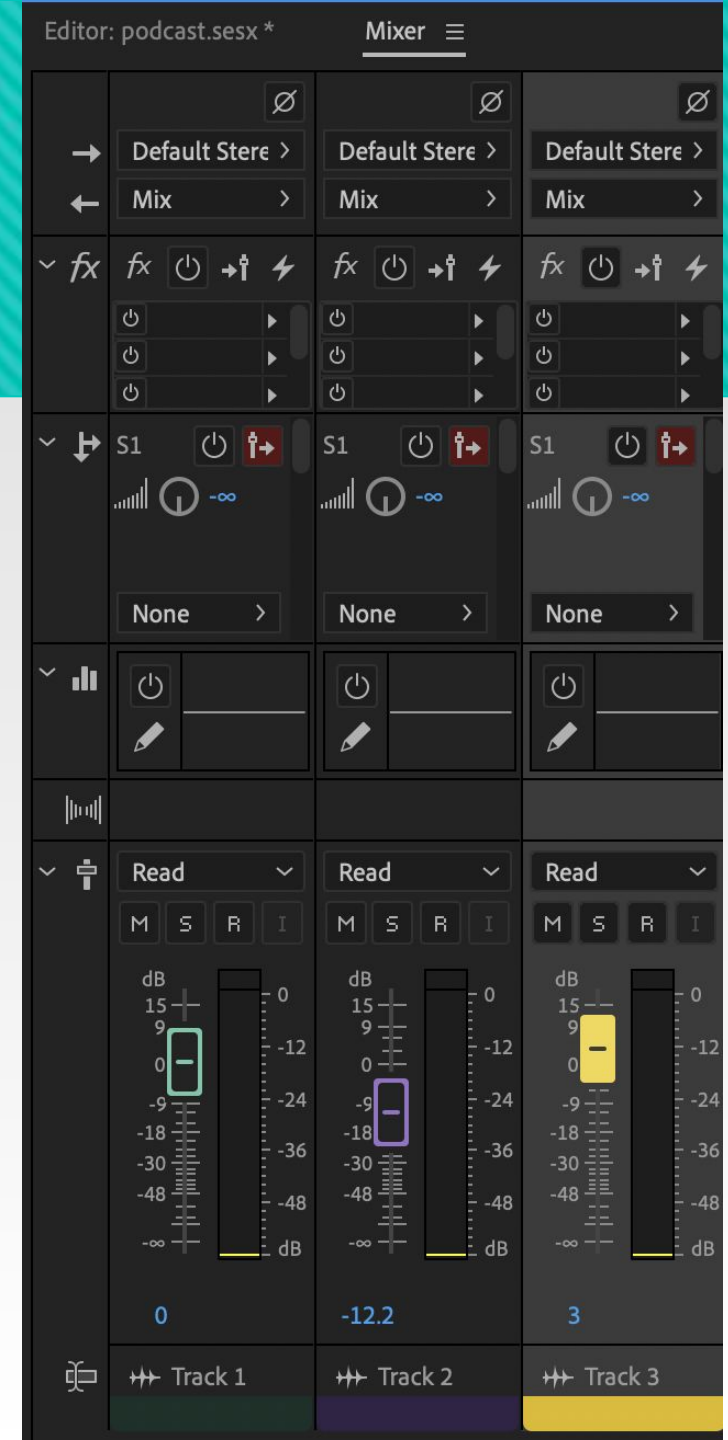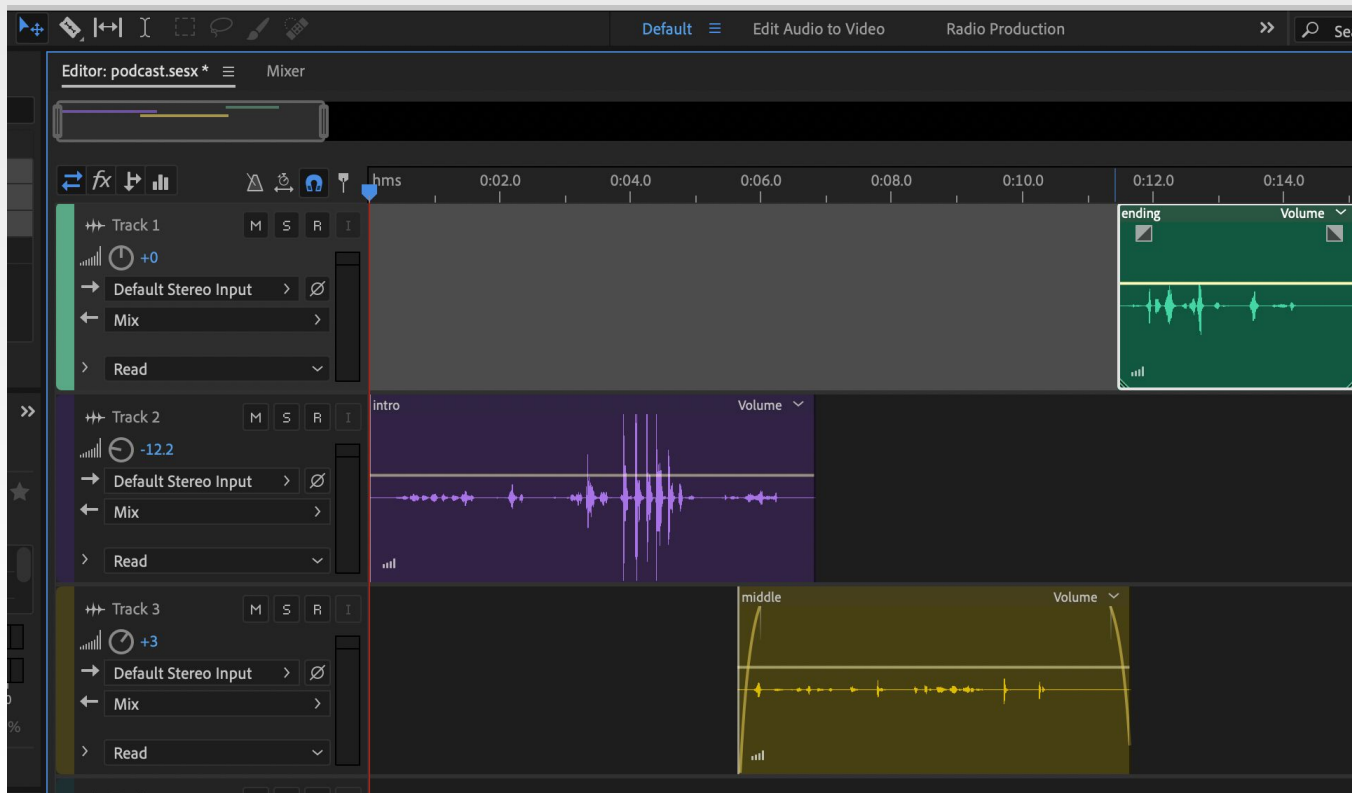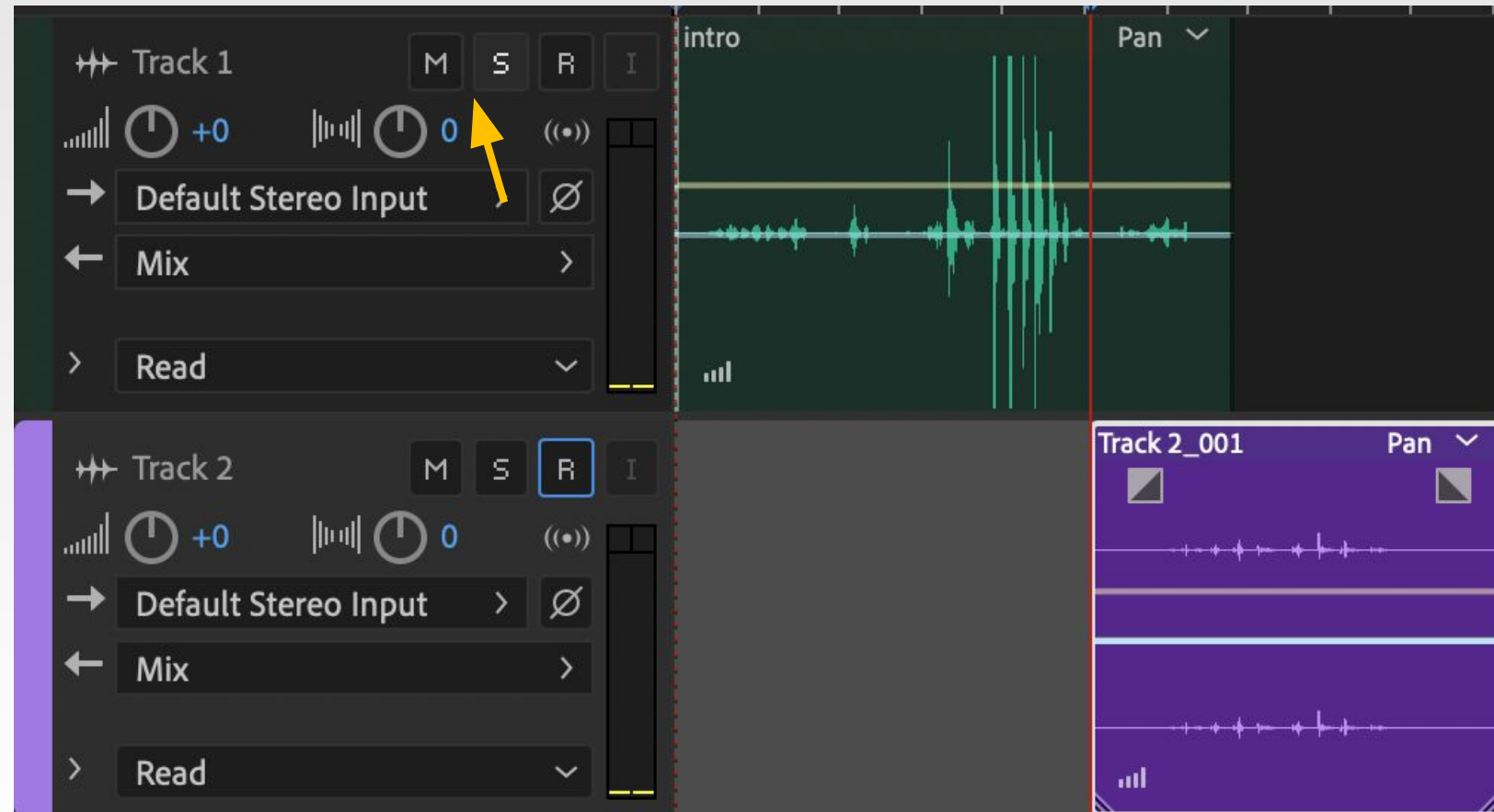
Listening to Your Audio

All of the audio tracks in your multitrack session will play simultaneously.

If you don't want to hear some of them, you will need to mute or solo tracks by clicking the **mute** or **solo** button by the track name.

Mute: Mute will "turn off" playback of only the track muted.

Solo: Solo will play only the track soloed. The rest will not play.

Creating Fades and Joining Clips

A **fade** is a gradual increase or decrease in the loudness of an audio track, generally used to "smooth" the beginning and end of a recording.

Fading In or Out: To fade your clip, hover your mouse over the top corner edge of the clip until the bi-colored gray square appears. Click it and drag the fade to your desired duration. It will be automatically applied once you release the click.

To join two clips together:
Line the tracks up appropriately by selecting the "Move" in the Tool Bar and then drag the clips horizontally until they are aligned.

You should always **crossfade** your audio when joining tracks together. This means <u>fading out</u> the first track while <u>fading in</u> the second.

Note: The clips, even if aligned, are still discrete audio files on your computer until you **export** the multitrack session as a new file.
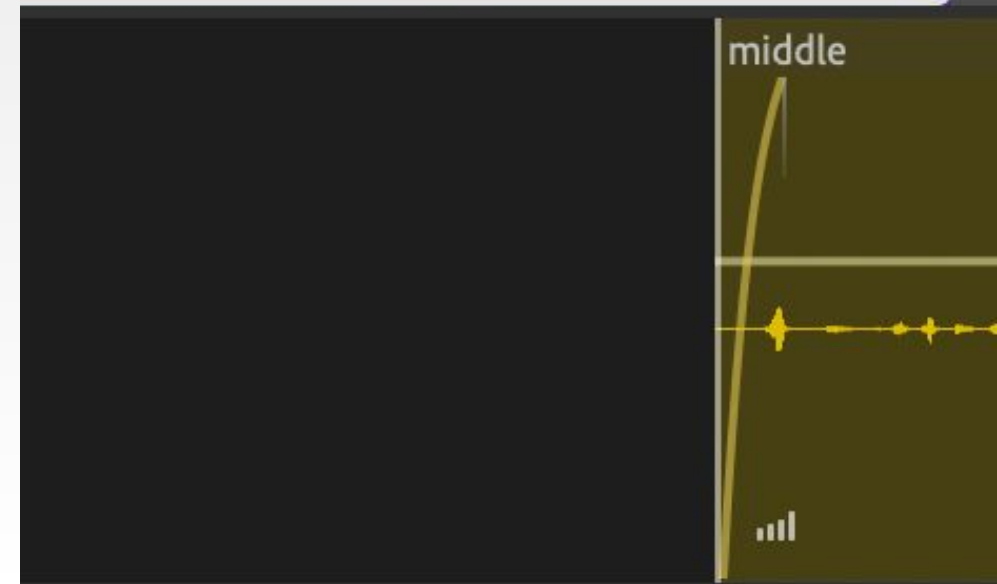
Common Audio Fixes and Effects

Most commonly used editing tools:
* Volume/Amplification
* Trimming
* Joining multiple files
* Noise reduction
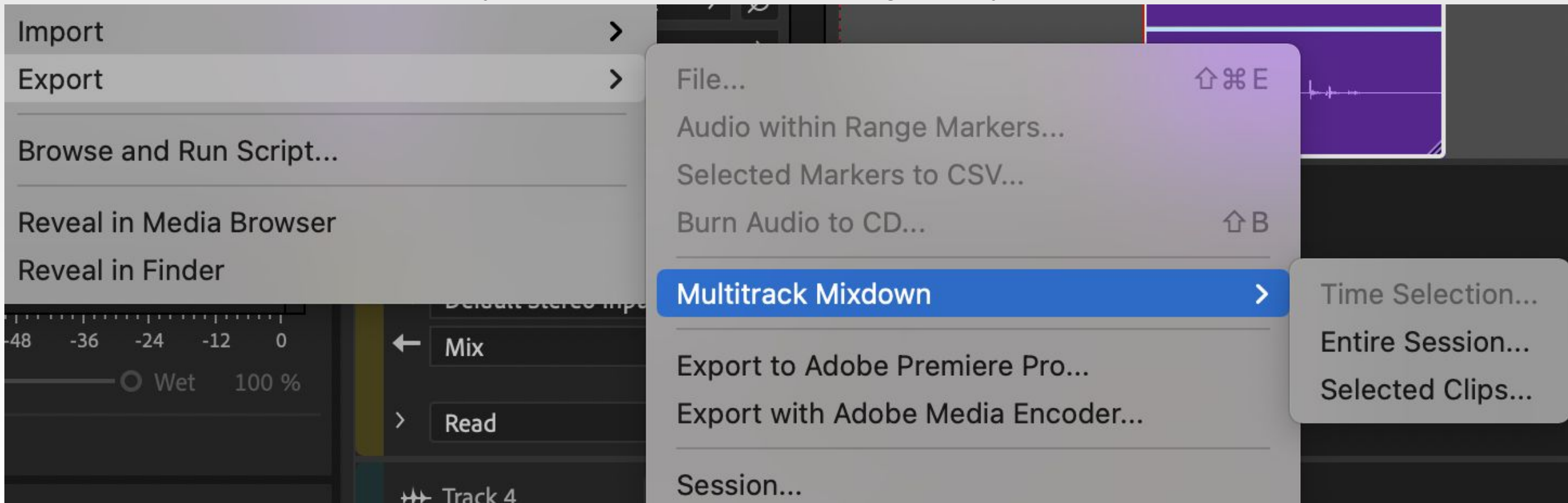
To remove background noise:
Audition offers excellent noise reduction processing. Although we won't practice with it today, I will include instructions for this processing in the materials sent to workshop participants for later reference.

Exporting Your Multitrack Project

To export your entire multitrack project as a new single file, navigate to:
File > Export > Multitrack Mixdown > Entire Session
Since this file is likely to be shared, MP3 format is generally the best choice of format.
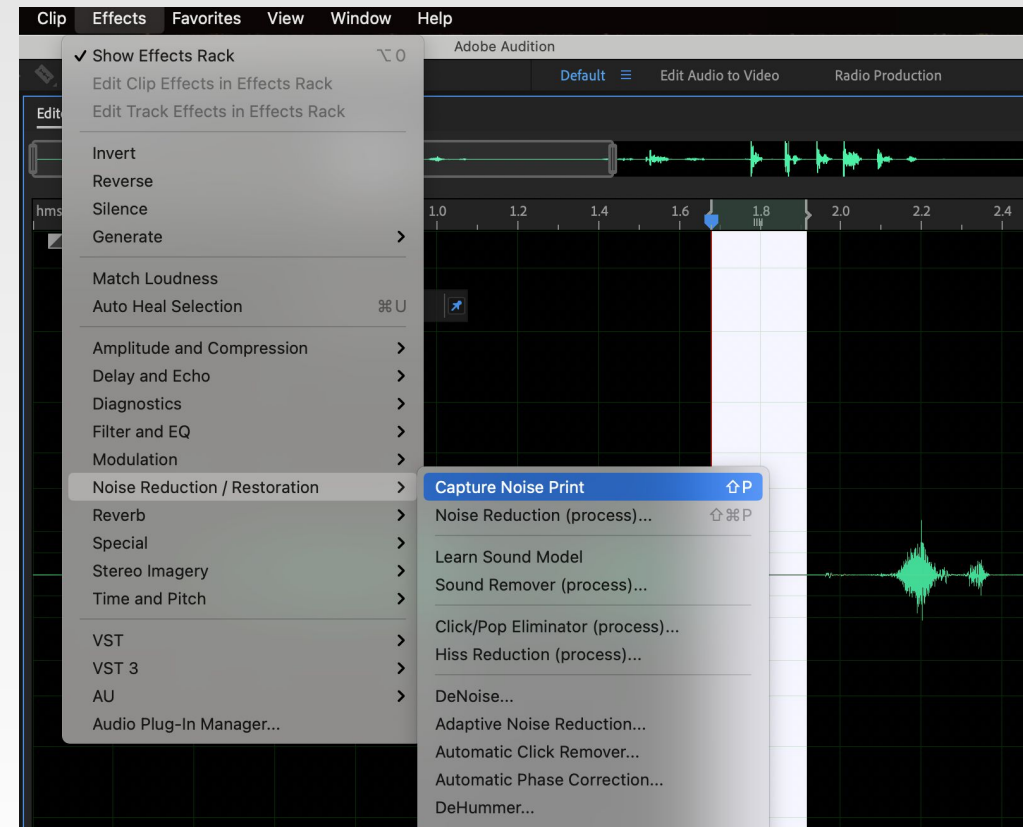
Removing Noise

It's always best to record audio is a quiet room with no background noise, but sometimes this isn't feasible. **Constant background noise** (such as hums, buzzes) can often be *reduced* but be aware that it's impossible to eliminate *all* of the undesired noise.

To reduce noise (in Waveform editing mode):
You must have at least a small section of recording that contains **only** the noise. To begin, in Waveform mode, highlight this portion of noise. From the drop-down menu at the top of the screen, select Effects>Noise Reduction/Restoration>Capture Noise Print. This shows the software what noise you wish to remove in the next step.

Note: Some noise, like **traffic** or **background conversations**, cannot be helped by noise reduction editing.

Removing Noise

Next, **select the entire clip** and navigate to <u>Effects>Noise Reduction/Restoration>Noise Reduction (process)</u> to open the Noise Reduction window. You will see a graph of your signal and noise, and a number of adjustable parameters. The most important adjustments are explained below, but you can hover your mouse over any blue numbers in Audition to view a description of the parameter.

Noise Reduction: Controls the overall "strength" of the noise reduction.

Reduce by: Controls how much the volume of the "noise" frequencies is reduced. Larger numbers = more reduction, but may be more damaging to the remaining audio.

It's important to remember that there is no "best setting" for any noise reduction parameters, and you should rely on trial and error. Make a few changes, preview it, and then tweak it some more until you are happy!
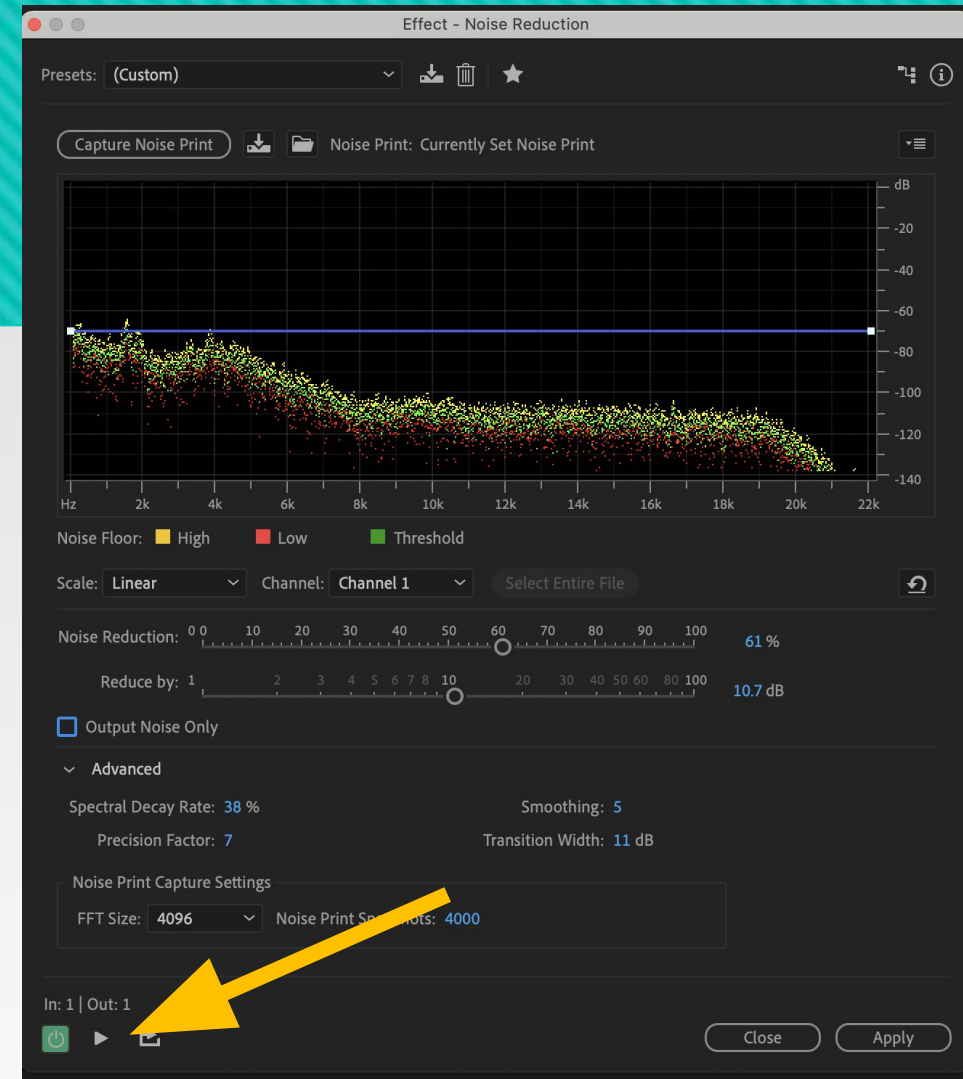
Tip: There is a Play button at the bottom of the window, allowing you to preview the results. Clicking the "Output Noise Only" selection allows you to listen to what noise is being **removed**.

Hands On!

Now, let's assemble our podcast.

- <u>Import</u> the first piece of your podcast (intro.wav). Your other segments should still be available in the Files panel.

- Select all three audio clips in the Files panel and make a <u>New Multitrack Session.</u>

- Line up the clips in order in the multitrack window, using the <u>Move Tool</u> to align the clips horizontally.

- For each track, <u>trim any excess silence</u>, if there is any.

- Finally, perform a <u>crossfade</u> at each junction point.
    - Remember: To make a crossfade, <u>fade out </u>the end of the first clip and <u>fade in</u> the beginning of the second clip.

- Now it's time to export your finished project!

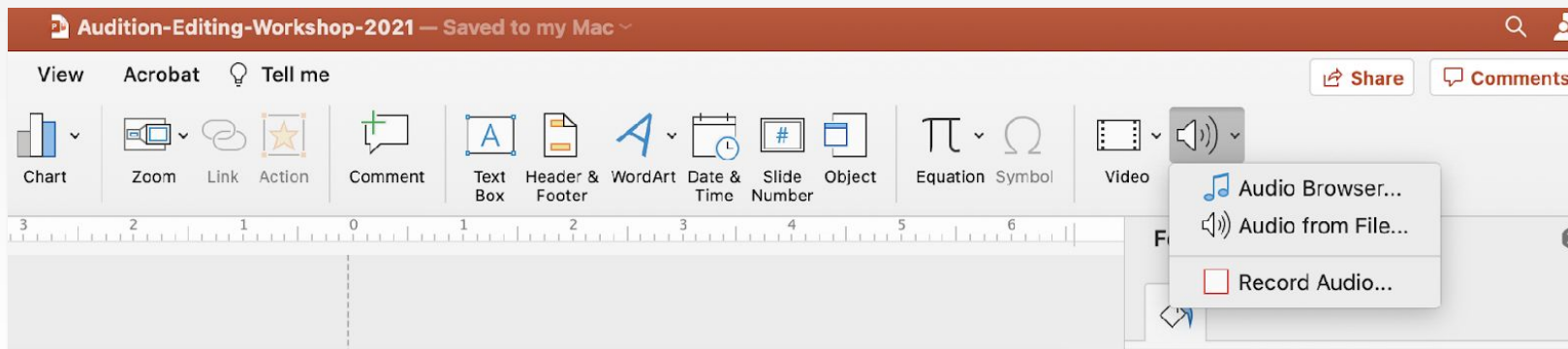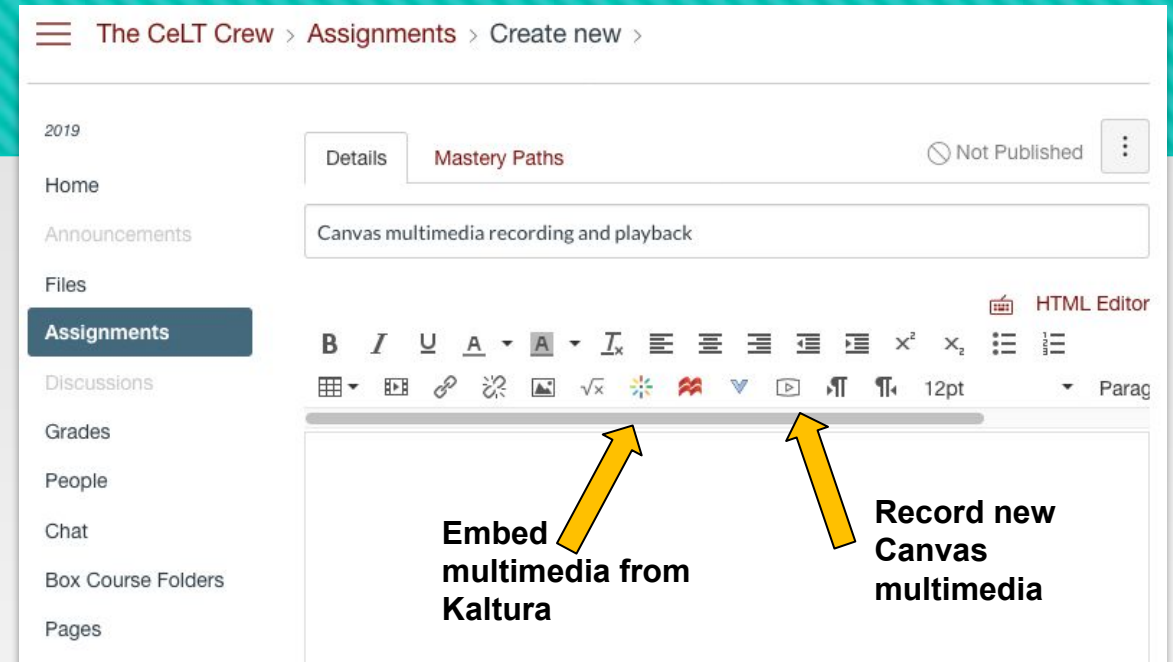Please let me know if you have any questions or need additional help.

Applying Today's Knowledge

Canvas and PowerPoint
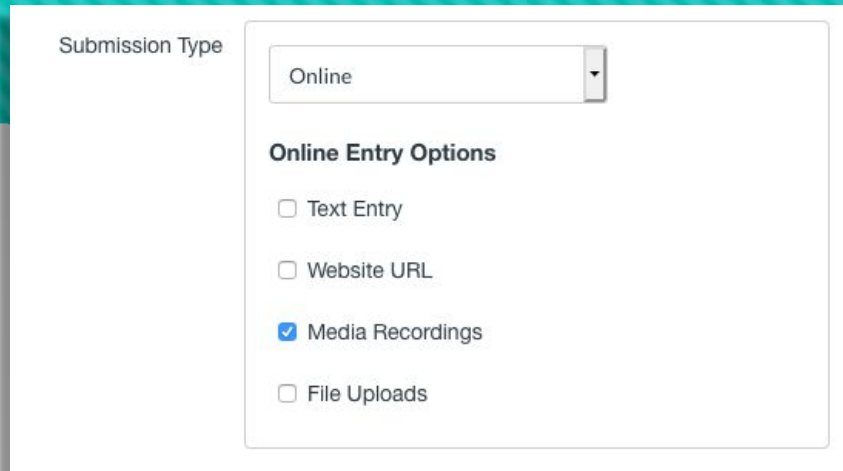
In Canvas:
- Add audio/video to a module:
- Add media to an assignment prompt
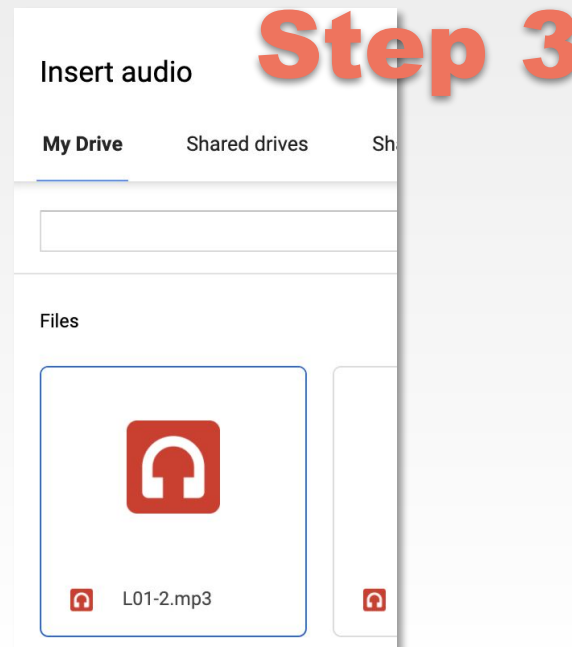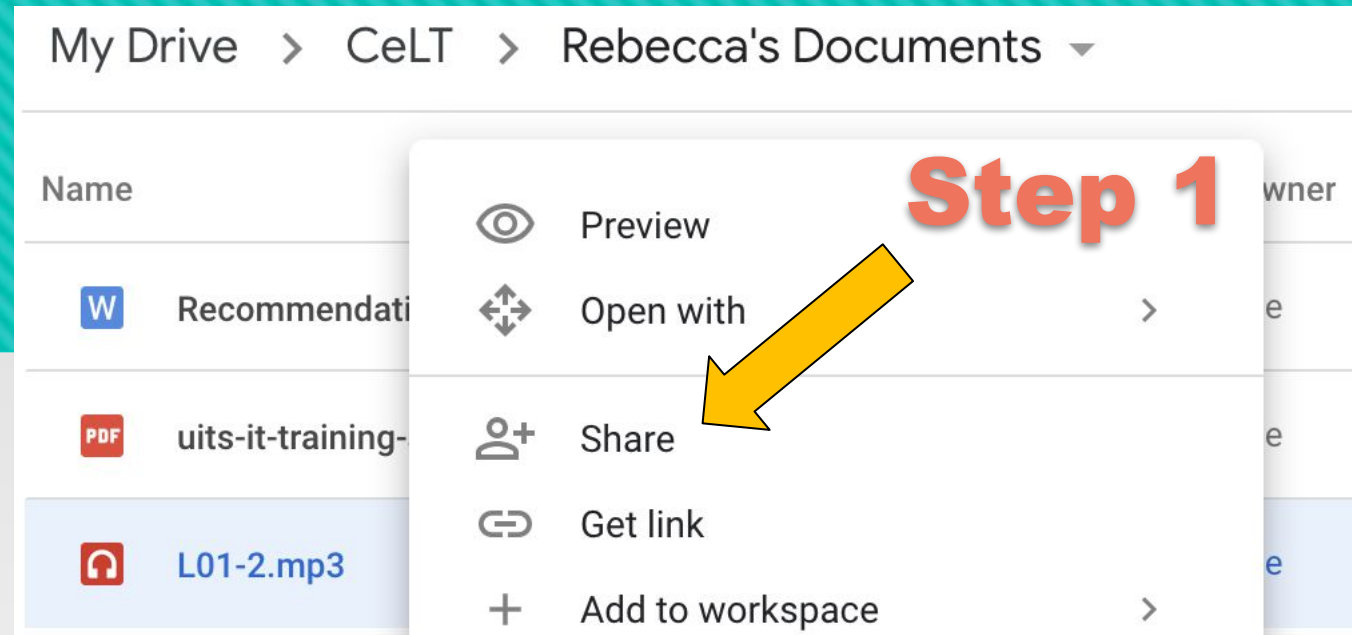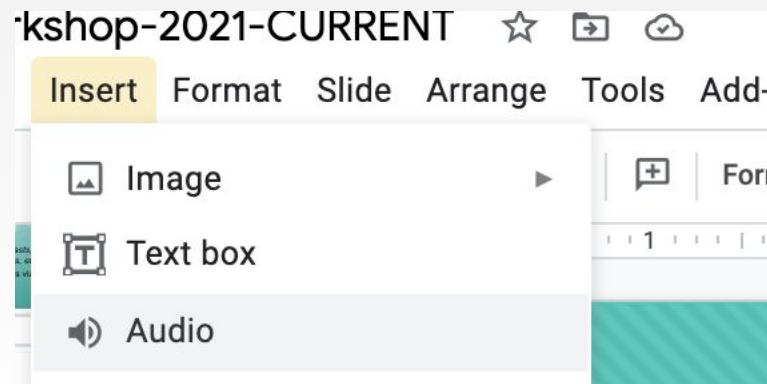- Have students submit media as a response

Embed multimedia from Kaltura

Record new Canvas multimedia

In PowerPoint:
- Insert audio to play either when clicked or automatically

In Google Slides

Step 1

My Drive > CeLT > Rebecca's Documents

Name ... wner

W Recommendati... e
👁 Preview
✥ Open with >
PDF uits-it-training-
👤+ Share
🎧 L01-2.mp3
🔗 Get link
➕ Add to workspace >

To add narration or voice notes:
- **Step 1:** You must first upload your audio to your Box **and** *make that file shared with your presentation's audience*
- **Step 2:** Navigate to **Insert > Audio**
- **Step 3:** Choose your (already uploaded) file

Step 2

...kshop-2021-CURRENT ☆ 🗐 ☁

Insert Format Slide Arrange Tools Add-

- 🖼 Image ▶ | ⊞ Fo...
- 🔲 Text box | |
- 🔊 Audio | 1

Step 3

Insert audio

My Drive Shared drives Sh...

Files

🎧

🎧 L01-2.mp3 🎧

Voice typing:
- You may also use voice-to-text to type! *This tool has many supported languages.*
- Navigate to **Tools > Voice typing**

CeLT Multimedia Services

- **Equipment loans**
  Checkout Room BH661
  - USB headsets, external microphones, DARs, specialized phone/tablet tripods and mounts, camcorders, and more
- **Full-service professional audio and video production**
  CeLT Studio Room BH114
  - High-quality professional audio/video recording (including green-screen) and editing
- **Hosting multimedia on the CeLT Language Assets Repository website**
  Web Services Specialist Mintian Guo
  - Customized web hosting for your class and enrichment materials, for IU students and/or public access
- **Customized training and collaboration to help you achieve your teaching goals**
  CeLT Director Xiaojing Kou

To request services, visit: http://celt.indiana.edu

If you have any questions about today's workshop or related topics, please contact Rebecca Ramsey at:

Email: **rlmuth@Indiana.edu**

Phone: **812-855-0005**

Website:
https://celt.indiana.edu/contact

Thank you!