

In-Class Exercise 06 – Audacity

Topics: Audacity

Summary:

This exercise is designed to help familiarize you with Audacity, the audio editing program you'll be using for Project 2. By the end of this exercise, you should be comfortable enough with Audacity to begin the project. Some example submission files accompany this document.

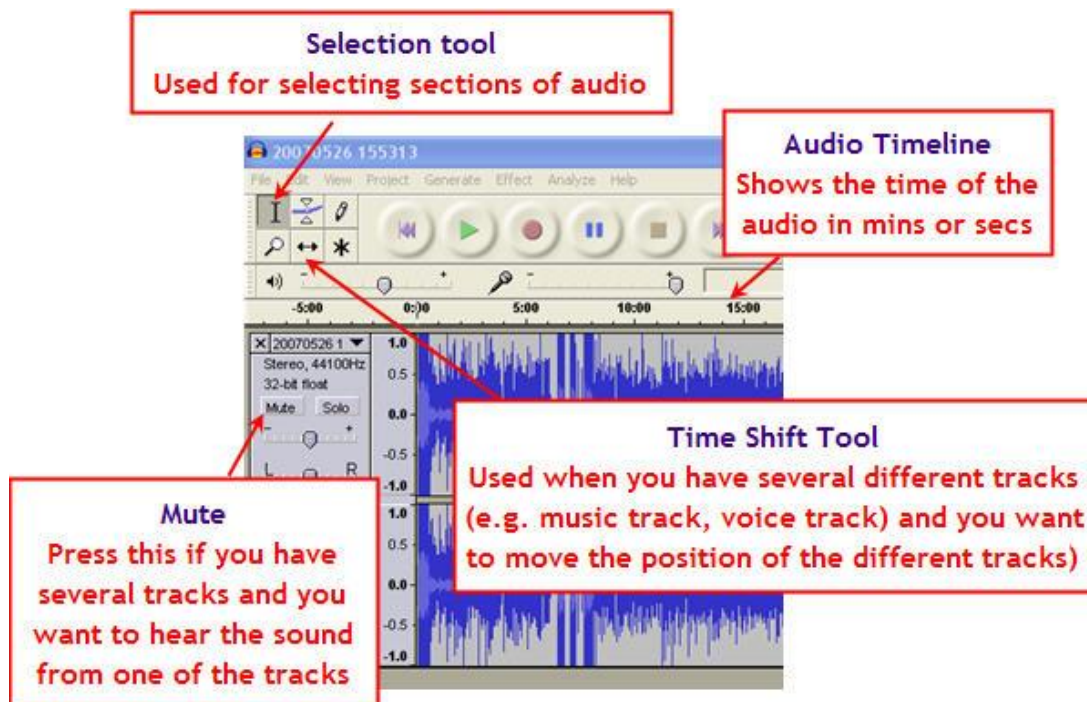
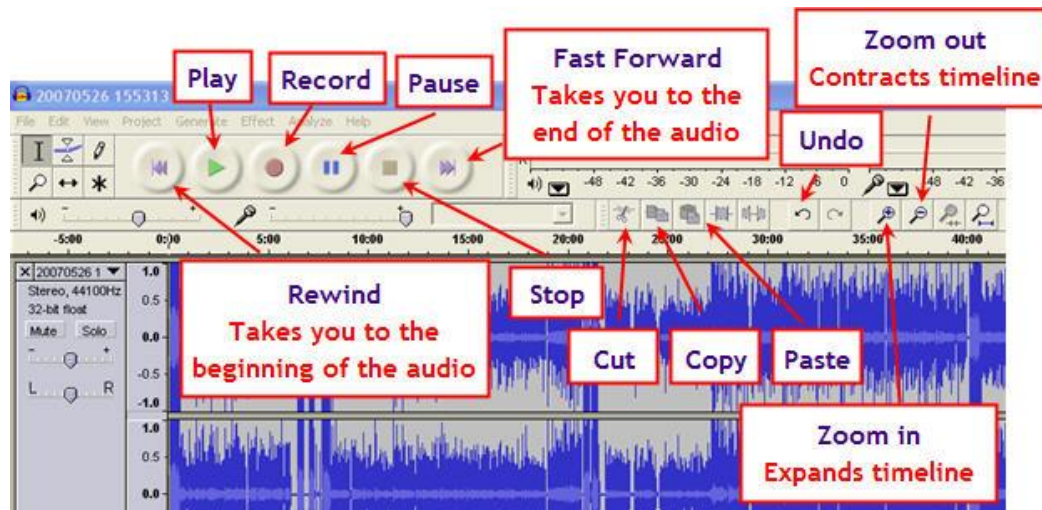
Reminders:

- Please use headphones for this assignment. If you do not have headphones, please see the instructor.
- Please call on the instructor if you need help. You are also welcome and encouraged to confer with your classmates if the instructor is busy helping somebody else.
- You are welcome to take breaks at your discretion while working on this assignment. However, you are not allowed to leave for the day until the class period has ended or you have completed the assignment and turned it in.

Please read each step carefully before completing it. Be sure to follow the rules of proper spelling, grammar, capitalization, punctuation, and sentence structure in your write-up.

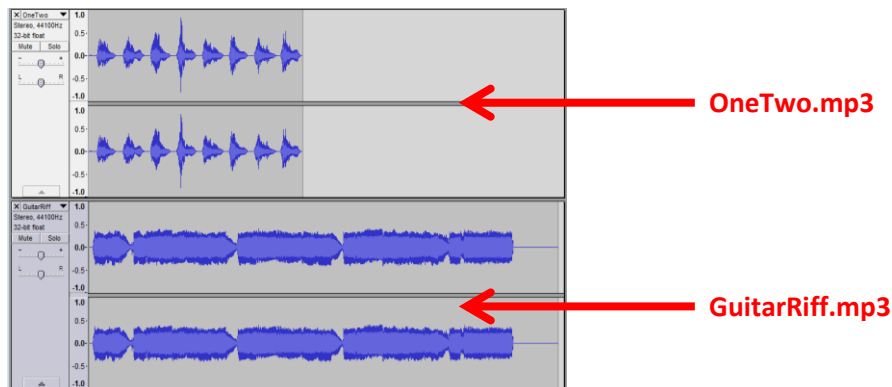
Instructions:

1. Open up Audacity. You should see something like the following (arrangement may vary):

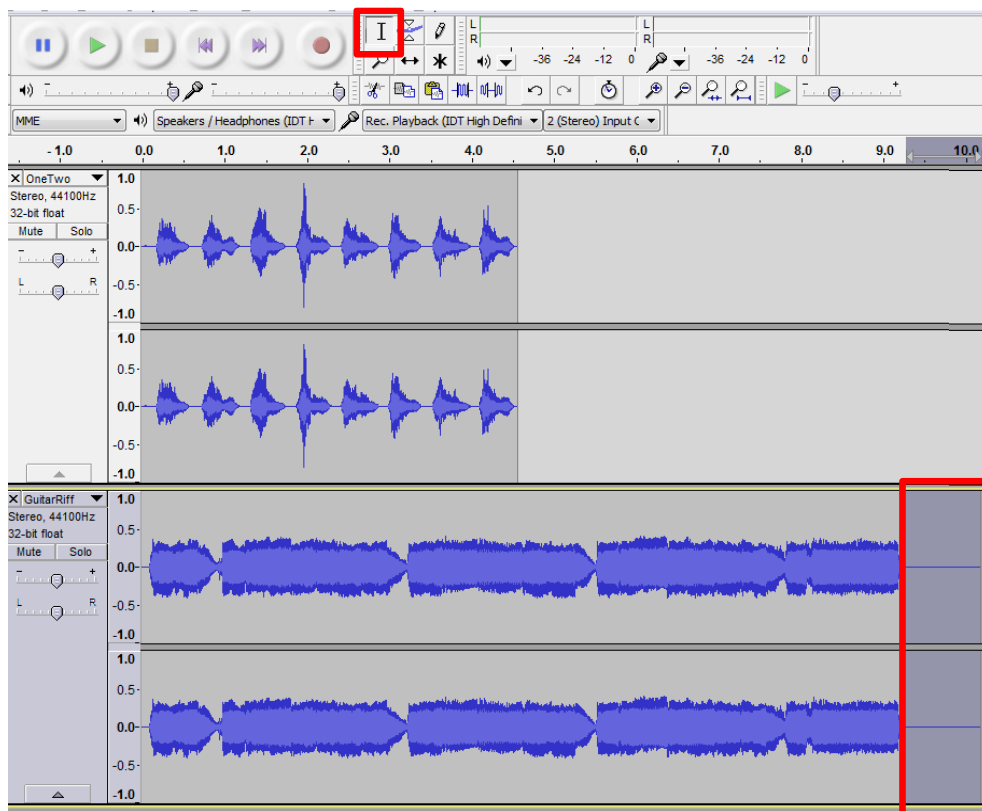


2. Audacity automatically opens in a new project. Save this project out as LastnameFirstname_ICE06 to your desktop. **Be sure to save early and often!**
3. Download the two .mp3 files (**OneTwo.mp3** and **GuitarRiff.mp3**) attached to this assignment from D2L if you have not done so already (**Right-Click -> Save link as...**).

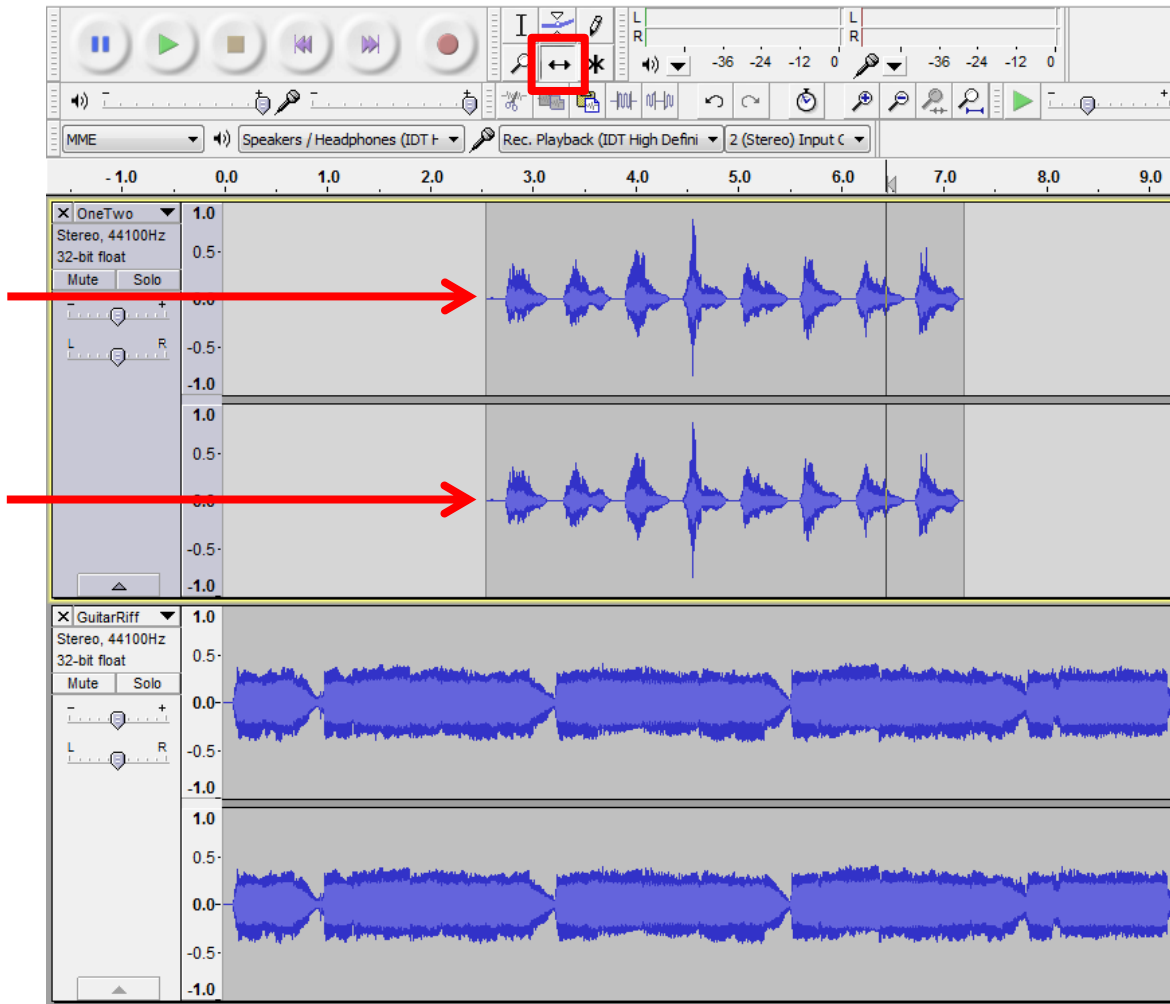
4. Import **OneTwo.mp3** and **GuitarRiff.mp3** (File -> Import -> Audio, or drag and drop each file into Audacity). Each .mp3 will appear on its own layer:



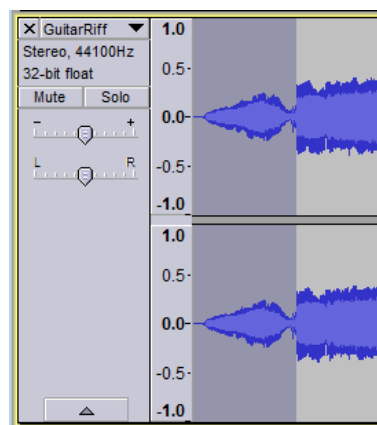
5. With the **Selection Tool** selected (it should be selected by default), select ALL of the silence at the end of the lower audio track (the GuitarRiff track) and press the Delete key to delete it.



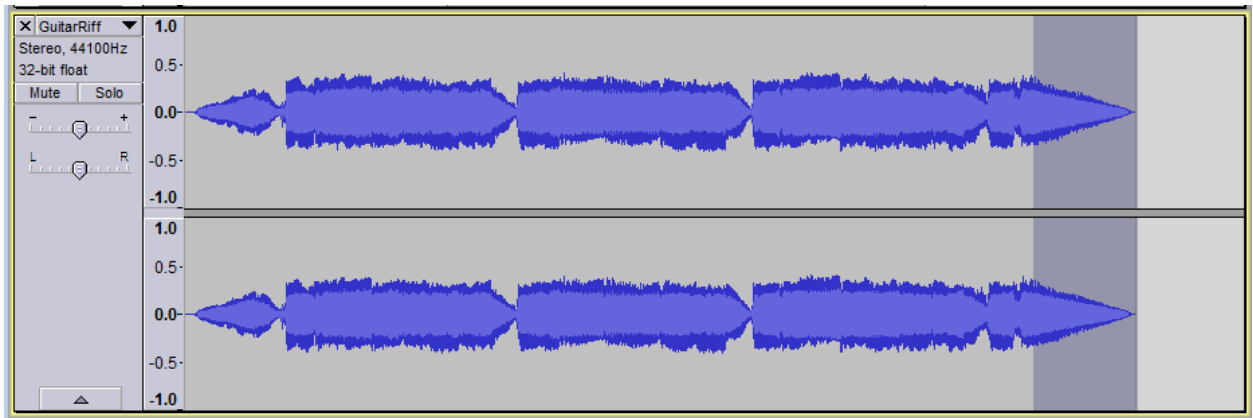
6. Select the **Time Shift Tool**, then click and drag the upper track (OneTwo track) so that it appears over the middle of the lower track.



7. Select the **Selection Tool** again. Highlight approximately the first second of the lower track and choose **Effect -> Fade In** from the menu bar to fade it in.



8. Highlight approximately the last second of the lower track and choose **Effect -> Fade Out**.



9. Put your cursor at the beginning of both tracks.
- Click **Mute** on the lower track, then click **Play** to listen to just the upper track.
 - Click **Mute** again to unmute it.

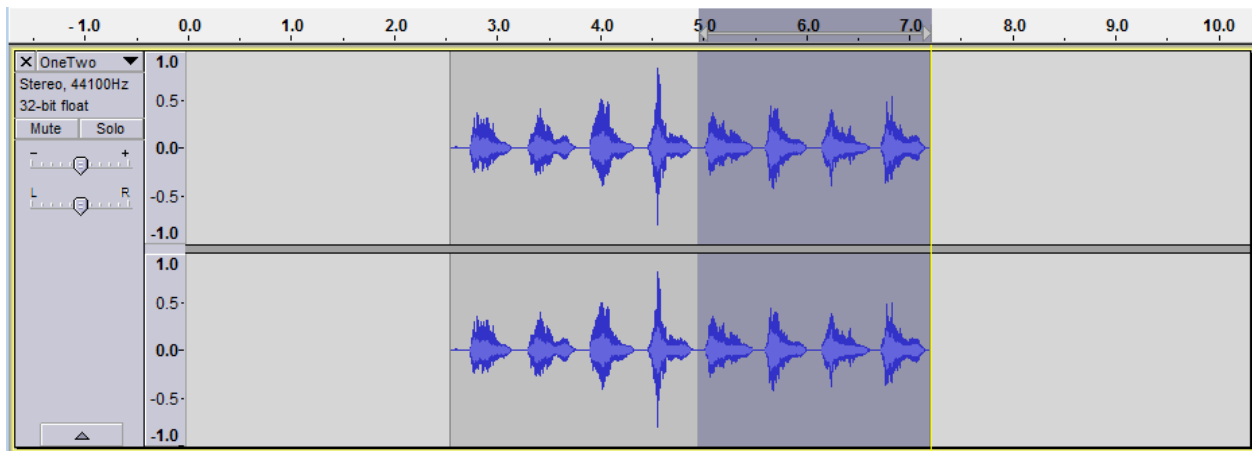


10. Repeat the previous step with the **Mute** button on the upper track.
11. The lower track is a little loud, so let's reduce it. Click on the **Volume Slider** for the lower track until the slider reads "Gain: -6 dB".

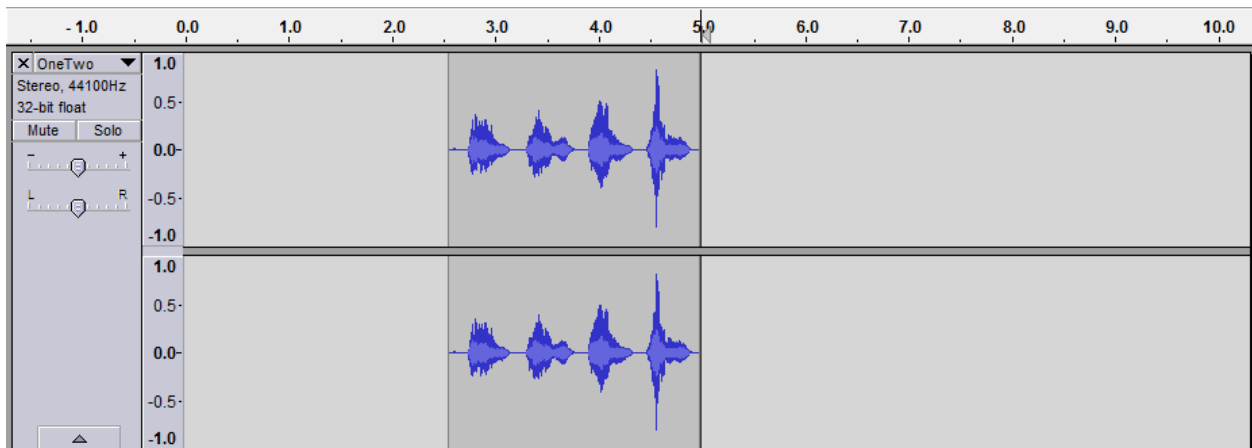


12. Highlight the second half of the upper audio track and delete it.

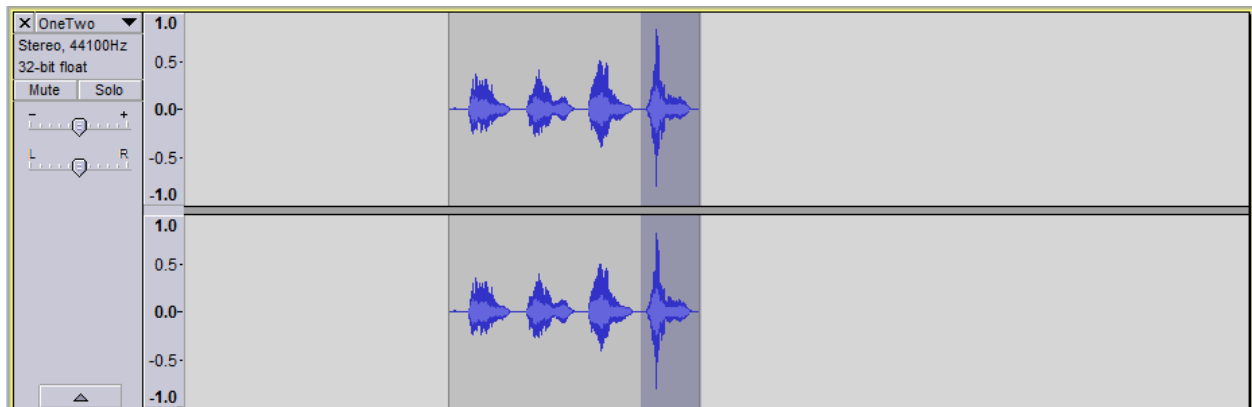
Before:



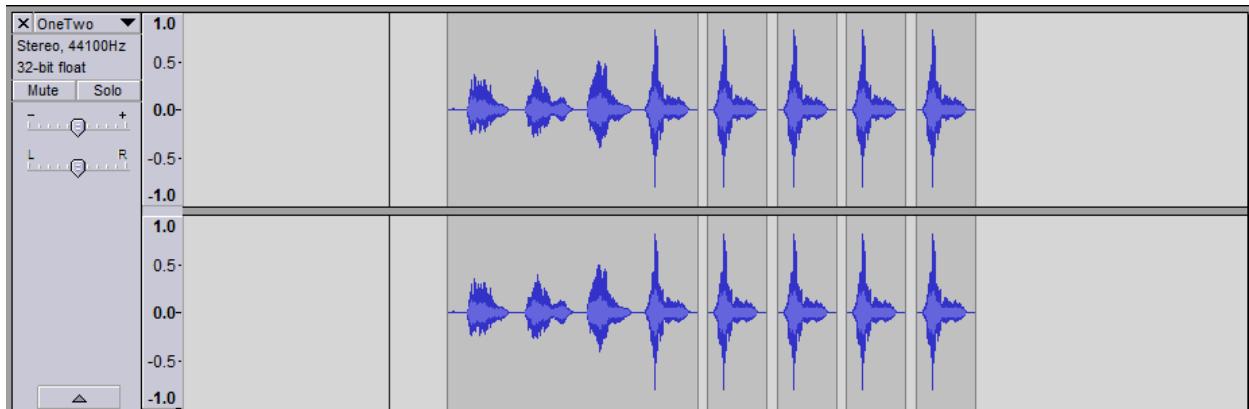
After:



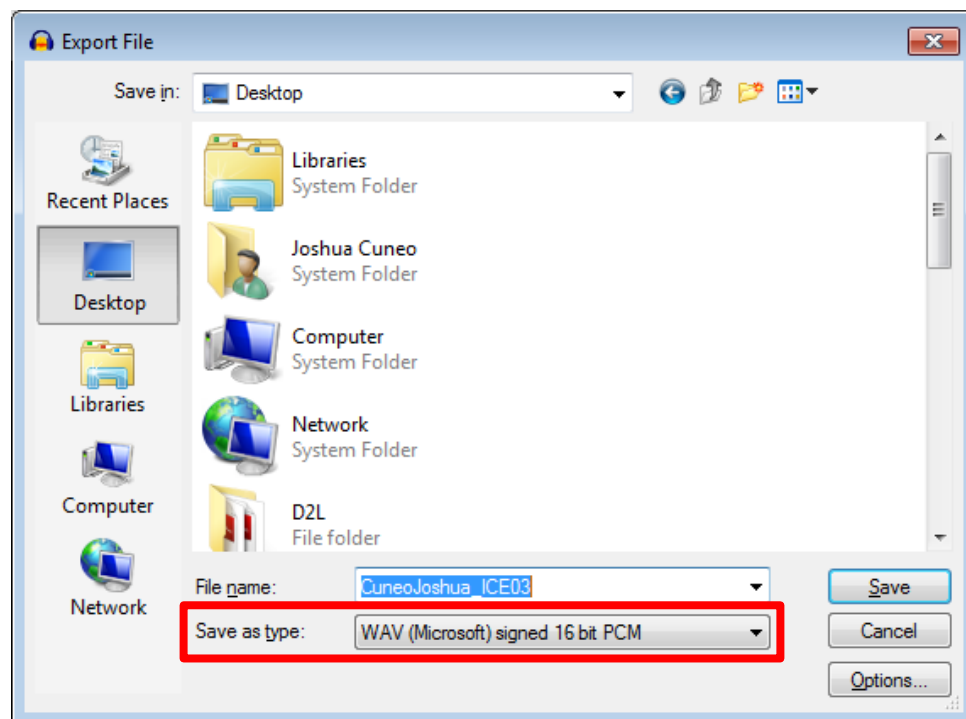
13. Highlight the last set of waveforms in the upper track and copy (**Ctrl + C** or **Command + C**).



14. Put the cursor just after the end of the upper track and paste (**Ctrl + V** or **Command + V**) four times. You will have to reposition your cursor after each paste.

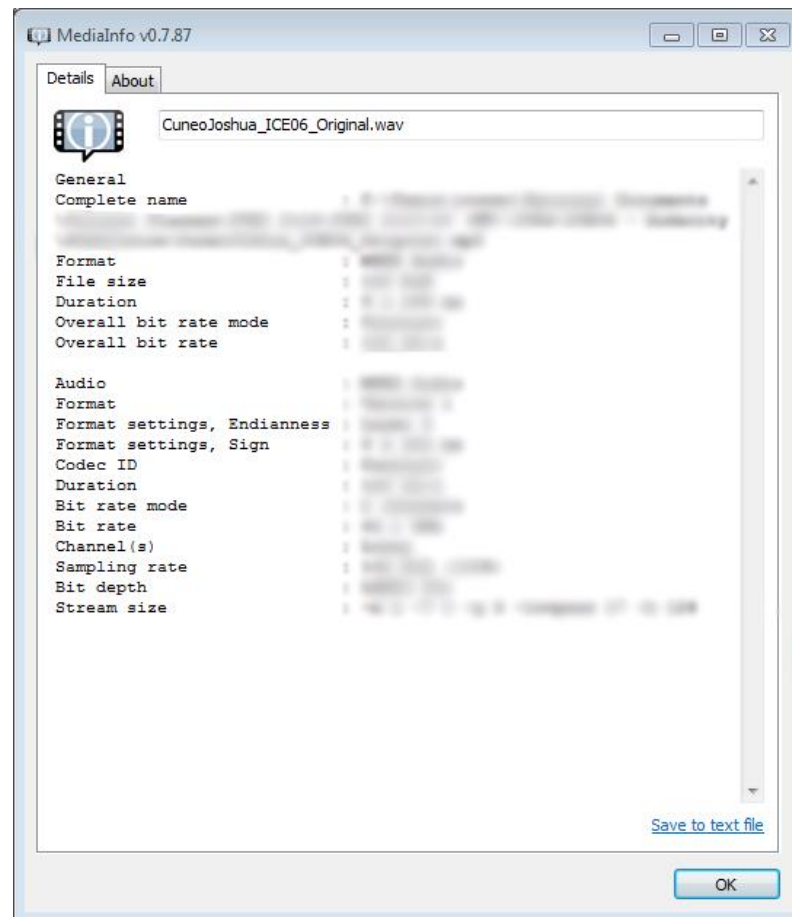


15. Now put your cursor at the beginning of both tracks and hit **Play** to play the entire audio. Your resulting file should sound similar to CuneoJoshua_ICE06_Original.mp3.
16. Export your file as a .wav file called **LastnameFirstname_ICE06_Original** (**File -> Export**, then choose “WAV (Microsoft) signed 16-bit PCM” under “Save as type”). Say “Okay” to any warnings.



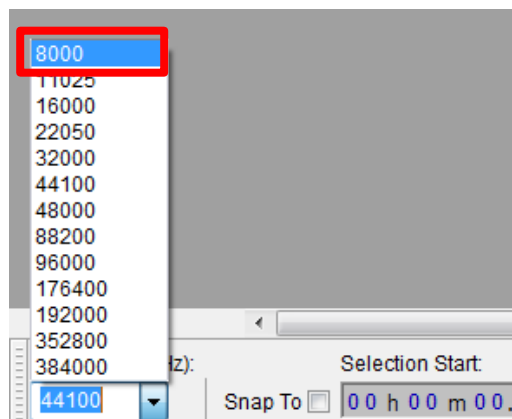
17. Listen to your .wav file to make sure it sounds correct.

18. Download and open the **ICE06_Template** file in Word and save it as **LastnameFirstname_ICE06**.
19. Go to your .wav file in your Windows or Mac folder, right-click on it, and select MediaInfo. You should see an image like the one below:



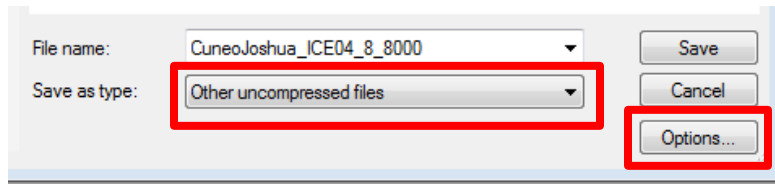
20. Take a screenshot of this window and paste it into your Word document.
21. In your Word file, please answer the following questions (be sure to include units!) using MediaInfo:
- What is the duration of your file?
 - What is the sampling rate of your file?
 - What is the bit depth of your file?
 - How many channels does your file have?

22. Using the web or Lynda.com, learn about one feature in Audacity that is **not** already covered in this assignment, in class, or in my example submission. This feature **must** change your audio in some way. Your feature may include
- a. An effect under the Effect menu not already covered in this assignment
 - b. How to do a voice recording
 - c. How to generate specific noises to add to your audio project
 - d. How to import the audio track from a video file
23. Apply your new feature to your audio file such that it changes at least part of your file in an OBVIOUS way. Export your file as another .wav called **LastnameFirstname_ICE06_Enhanced**.
24. Fill out the questions regarding the feature you learned. (Remember the rules of good writing!) Be sure to include the following:
- a. What is the feature?
 - b. How do you use the feature? In other words, where in Audacity do you find this feature?
 - c. What effect does this feature have when you apply it to your audio project?
 - d. A complete URL to the page where you learned about this feature.
25. Now let's change the sampling rate and bit depth of your audio file. (**NOTE:** You will be applying these changes to your enhanced file. That's okay.)
- a. **Sampling Rate:** In the lower-left corner of Audacity, change the value of Project Rate (Hz) to 8000.

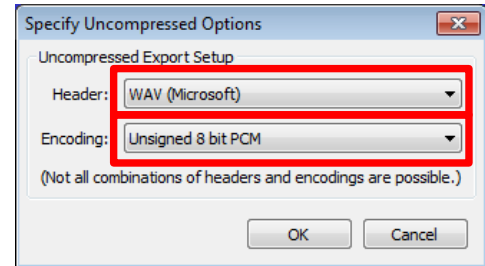


- b. **Bit Depth:** Go to **File -> Export Audio...** and do the following:

- i. Choose “Other Uncompressed Files” under Save As Type, then click “Options...”.



- ii. Choose “WAV (Microsoft)” for the Header and “Unsigned 8 bit PCM” for the Encoding. This changes the bit depth from 16 bit to 8 bit. Click **OK**.



- iii. Give your file the name **LastnameFirstname_ICE06_8_8000**, then click **Save**. Listen to your file. It should sound similar to CuneoJoshua_ICE06_8_8000.wav. Note the reduction in audio quality.

26. Repeating Steps 19 and 20, right-click on your **LastnameFirstname_ICE06_8_8000** file in Windows or Mac, select MediaInfo, and take a screenshot.

27. In your Word file, please answer the same questions about your **LastnameFirstname_ICE06_8_8000** file that you answered for your other file in Step 21.

28. In Audacity, zoom out until you can see your entire project. Take a screenshot of your Audacity window and paste it into your Word document.

29. You should now have the following files:

- a. LastnameFirstname_ICE06_Original.wav (Step 16)
- b. LastnameFirstname_ICE06.docx (Step 18)
- c. LastnameFirstname_ICE06_Enhanced.wav (Step 23)
- d. LastnameFirstname_ICE06_8_8000.wav (Step 25)

30. Upload all four files to D2L. **Do not upload your Audacity project files, only the final .wav files.** If your uploaded file has a *.aup extension, it's the wrong file!

Criteria:

Step	Points	Reason
4	5	OneTwo and GuitarRiff tracks present
5	6	No silence at end of track
6	6	OneTwo track over middle of GuitarRiff track
7	5	First second of track fades in
8	5	Last second of track fades out
11	6	Volume lowered on GuitarRiff
12	6	Second half of OneTwo track deleted
14	6	Last "two" of OneTwo track repeated four times
16	5	File exported as .wav with correct sampling rate and bit depth
18	5	Effect chosen is one not discussed in class
19	5	Enhanced.wav with new feature applied
20	4	Screenshot of MediaInfo for LastnameFirstname_ICE06_Original
21	4	Answers to MediaInfo questions about LastnameFirstname_ICE06_Original
24a	3	Word doc: What is this feature?
24b	3	How do you use this feature?
24c	3	What effect does this feature have when applied?
24d	3	A complete URL to the page describing this feature.
25	8	Separate 8_8000 .wav file created with correct sampling rate and bit depth
26	4	Screenshot of MediaInfo for LastnameFirstname_ICE06_8_8000
27	4	Answers to MediaInfo questions about LastnameFirstname_ICE06_8_8000
28	4	Screenshot of Audacity