CS 1033

Multimedia and Communications

Lab 10: Sound Editing with Audacity and Incorporating Sound, Animation and Video into a Webpage with KompoZer

NOTE: you will need headphones for this lab to plug into the computer. In the labs, try doing the following if the front headphone jacks are not working:
Start>Control Panel>Sound Effects Manager>Front Panel>Headphone for the jack where you plug in your headphones.

BEFORE YOU START – Configuring your headphones

Since you will be working with audio this week, you will be bringing in a pair of headphones to plug into the front of your computer in the lab. Unfortunately, the lab computers don't automatically "know" that your headphones were plugged in, so you will have to set the audio output to your headphones first!

1. After you login to your computer, look to the bottom right of your screen for the System Tray.
   In it, you will see a blue icon with yellow lines (if you leave your mouse overtop of it, it will say "Sound Effect"). **Double click it to open the speaker settings (see image below)**.

2. The "Realtek Control Panel" will appear. Click on the tab marked "**Speaker Configuration**" at the top of the window (if it is not open already), which will switch to the window below:

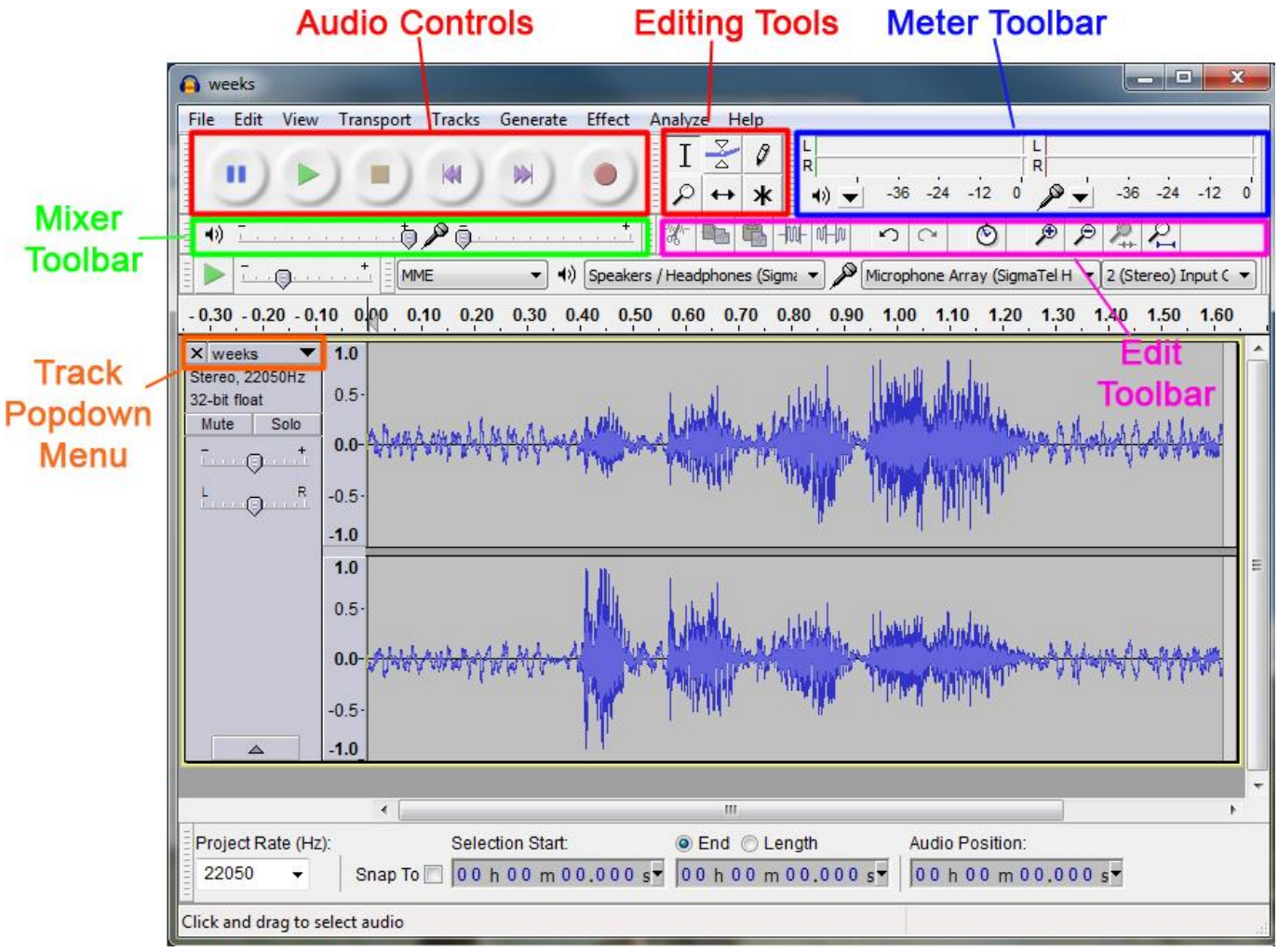
3. Near the in the bottom right corner, there is an area marked "Front Panel".
   a. The red circle on your screen matches the red audio jack on the front of your computer, and is where a microphone would be plugged in.

b. The green circle on your screen matches the green audio jack on the front of your computer, and is where you plug your headphones in. **Plug in your headphones here.**

4. Finally, in the dropdown beside the green circle on your screen, **change the setting from "Not connected" to "Headphones"**. Click the "X" at the top of the screen to save your settings and exit. Your headphones are now properly configured!

Reference Sheet – Audacity Layout

Audacity is a **free**, powerful, and easy to use audio editor and recorder for Windows, Mac OS X, Gnu Linux, and other operating systems. The screenshot below highlights its layout - use it as a reference during this lab.



Although Audacity is a very powerful audio editor that works with an unlimited number of tracks of virtually any size, it cannot do everything. It cannot:

- record more than two channels at once on many systems,
- edit MIDI files, although it can open them.

Lab 10 - Tutorial 1

Objectives:

Upon completion of tutorial 1, you should be able to:

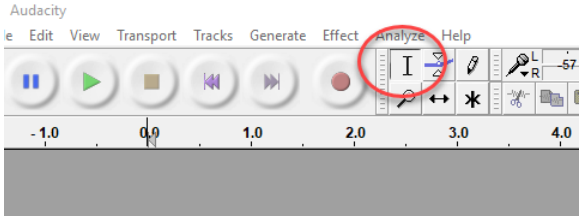
- Import a sound file into Audacity and listen to the sound using the play button.
- Identify and explain the purpose of various buttons in the Audacity interface.
- Select a portion of a sound clip and remove that portion from the clip
- Amplify a selection of the audio clip
- Fade out a selected portion of the audio clip
- Convert an audio clip to a .WAV format or a .MP3 format

COPYING AND EXTRACTING THE FILES NEEDED FOR LAB 10

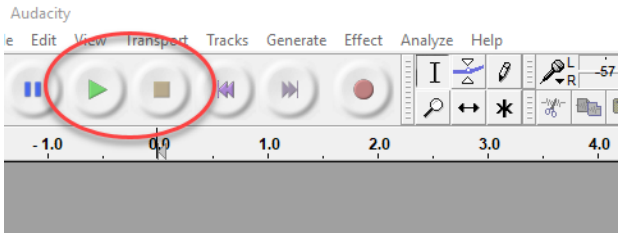
1. Download the file ***lab10.zip*** from http://www.csd.uwo.ca/~lreid/cs1033labs/lab10 (click on the ***lab10.zip*** file and save it) to F:\\c1033 (the cs1033 folder on your memory stick)
2. Right click on the lab10.zip file and select ***Extract All...***
3. It should try to extract the files to a folder inside your cs1033 folder called lab10 (e.g. F:\cs1033\lab10). Click on the ***Extract*** Button
4. There now should be a lab10 folder in your cs1033 folder that contains all the files and folders you will need for this lab.

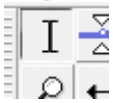
IMPORTING AND EDITING A SOUND CLIP

5. Start the program by either clicking on the Audacity shortcut icon on the desktop OR click on the magnifying glass in the bottom left corner and search for the word "Audacity"
6. Notice that the *Selection Tool* is selected by default (it appears to be pressed down). This tool is often called an "I Beam" because it looks like a capital I.

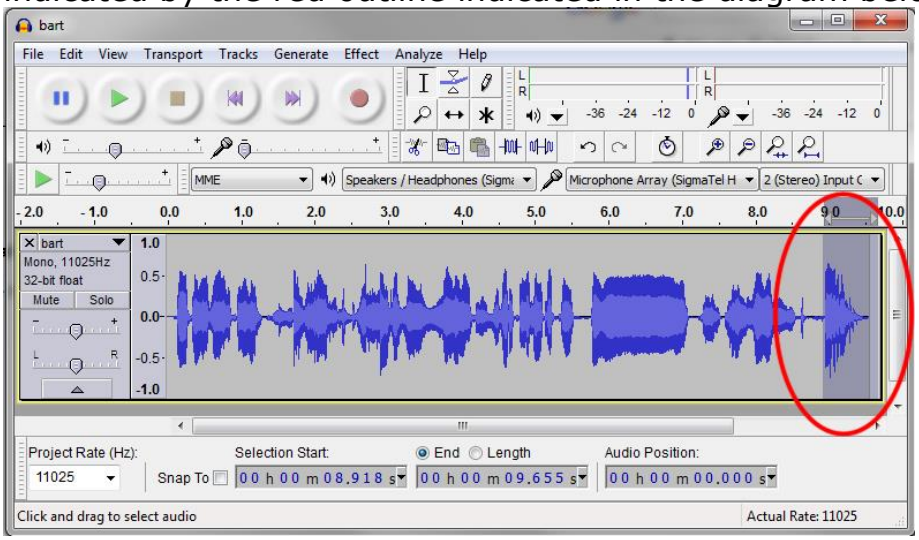


7. Notice a series of round buttons which have controls similar to a CD Player. We will be using the *Play* and *Stop* buttons frequently. Other controls will be mentioned as needed.



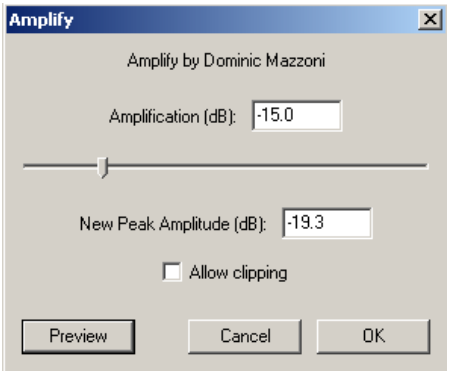
8. From the Menu Bar, select ***File > Import > Audio***. Browse to the *lab10* folder you copied to your memory stick and open the file ***bart.wav***. If a screen pops up, select ***Make a copy of the files before editing (safer)*** and press ***OK***.
9. Save the file as an Audacity Project: from the Menu Bar, select ***File > Save Project As***, and save the file in your lab10 folder as ***bart.aup***
10. Press the ***Play*** button  to play the sound file.
11. To play the sound file starting at different spots on the sound wave, select the ***I-Beam***  and click on any spot in the wave, then press the ***Play*** button again. Notice how it begins to play starting from that point on. To return to the beginning, move the I-Beam to the beginning of the track.
12. Replay the sound file again and try out the Audio buttons: ***Stop, Pause, Skip to Start,*** and ***Skip to End***. Notice the Skip to Start and Skip to End buttons only work when you hit the Stop button, not when you hit the Pause button

13. We are going to remove the door closing sound near the end of the sound clip. Find the "door closing" sound. Play the sound a few times until you figure out where the door sound is in the wave pattern. The door sound is indicated by the red outline indicated in the diagram below:

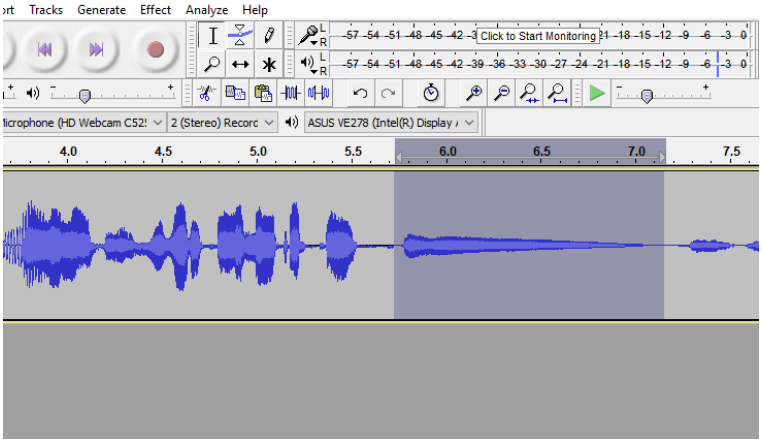


14. Click on the I Beam tool. Then put (Click) the cursor (the I Beam) at the beginning of the sound, hold down the left mouse button and select/highlight to the end of the wave representing the door closing sound. (Should look like image above).
15. From the Menu Bar, select ***Edit > Delete*** to delete this section.

16. Now we will amplify (make louder) Bart's excuse for missing the test, where he says "Ohhhh, my ovaries!"
    a. First, we need to select that portion of the sound clip using the I Beam/Selection Tool. Find that ("Ohhh, my ovaries") area of the sound waves and highlight it.
    b. From the menu bar, select ***Effect>Amplify***. Use the default amplify setting (4.3 dB) and press ***OK***. Play the clip again to make sure it is louder.
    c. Select/Highlight the same area again (or leave it highlighted if it is still highlighted) and select **Effect>Amplify** and change the value to **-15.0** and press **OK**. Play the clip and notice that this makes the clip quieter.
    d. The bigger (more than 0) the amplification number the louder the clip, the smaller (less than 0), the clip will get more quiet.



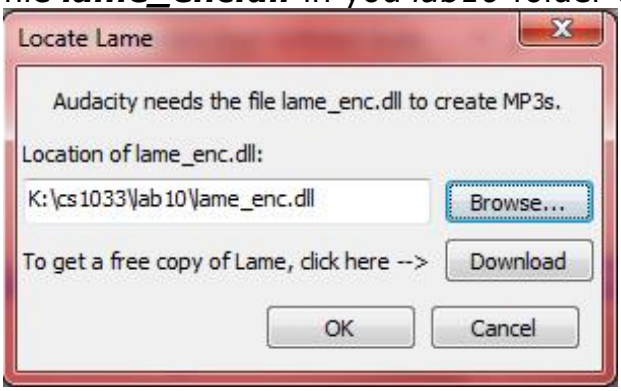
17. Now you are going to fade out the las half of the "Ohhhhhh" exclamation as follows:
    a. Using the I Beam tool, select just the "Ohhhhh" sound (not the "my ovaries" part).
    b. From the menu, select ***Effect>Fade Out*** and hit **OK**



    c. Try playing the full sound clip and make sure the word "ohhhh" faded away but "my ovaries" was still audible.

CONVERTING AN EDITED SOUND CLIP TO UNIVERSAL SOUND FORMATS (.WAV AND .MP3)

18. Now we are going to convert the newly edited sound clip to a WAV format (a well known format for audio files):
    a. Save your project again just to be on the safe side (as bart.aup)
    b. From the menu select ***File>Export Audio.***
    c. Make sure the ***Save as type:*** is set to ***WAV*** and save it as ***bartnew.wav*** to your *lab10* folder and hit the ***Save*** button. You do not need to fill in the window asking for things like Artist Name, just press the ***OK*** button.
19. Now we are going to convert the newly edited sound clip to a MP3 format (another well-known format for audio files). Normally MP3 files have much better compression (make for smaller file sizes) than WAV files.
    a. From the menu select ***File>Export Audio***
    b. Make sure the ***Save as type:*** is set to ***MP3 Files*** and save it as *bartnew2.mp3*
    c. Hit the ***Save*** button
    d. Hit the ***OK*** button
    e. Audacity does not come with MP3 support by default, and you will see a message asking to Locate Lame. Click Browse and you should find the file ***lame_enc.dll*** in you *lab10* folder on your memory stick.



    f. Note: If you plan to install Audacity at home, you must download the lame_enc.dll file. You can download it by clicking the Download button on this screen.
20. Close Audacity, browse to your lab10 folder, notice the size difference in between the .wav file and the .mp3 file
21. Test to see if your WAV and MP3 files play in Windows Media Player. If Media Player asks to install an additional codec, click Install.

Lab 10 - Tutorial 2

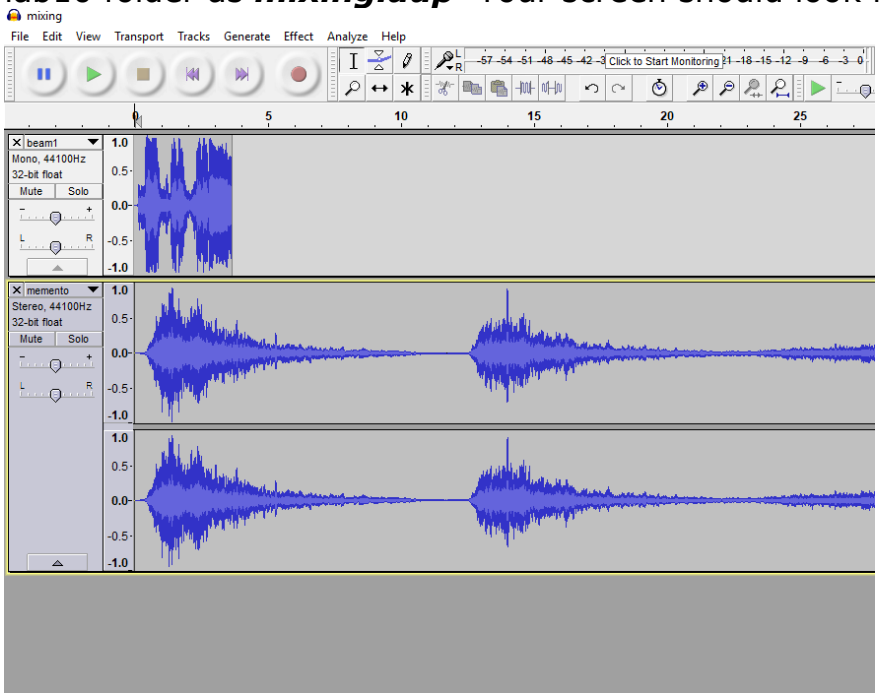
Objectives:

Upon completion of tutorial 2, you should be able to:

- Import a more than one sound clip and create sounds that overlap with other sounds.
- Use the Time Shifting Tool to move clips to different sections of the sound file
- Zoom in and out of the tracks.
- Create an .mp3 file with tags associated with it such as Artist and Album Name.

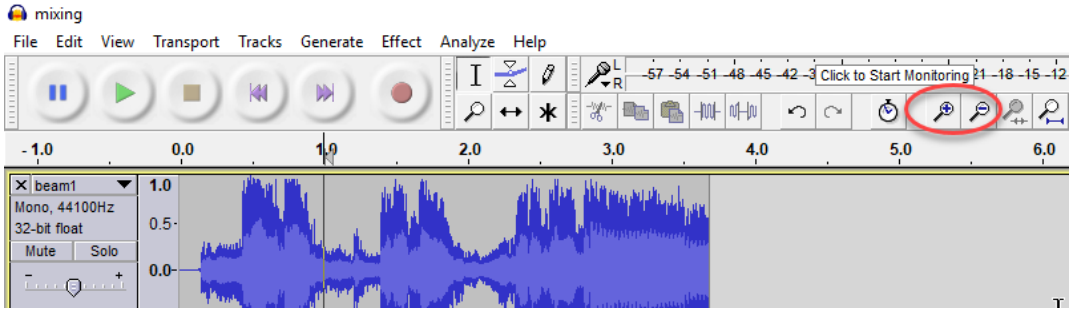
OVERLAPPING (MIXING) SOUNDS TOGETHER, CREATING A MULTI TRACK SOUND.

1. Start up the Audacity program again by clicking on the icon on the desktop
2. From the menu, select ***File > Import > Audio…***, and select the file in the folder lab10 called ***beam1.mp3*** (human voice)
3. From the menu, select ***File > Import > Audio…***, and select the file ***memento.mp3*** (song)
4. From the menu, select ***File>Save Project As*** and save your project in the lab10 folder as ***mixing.aup*** Your screen should look like this:

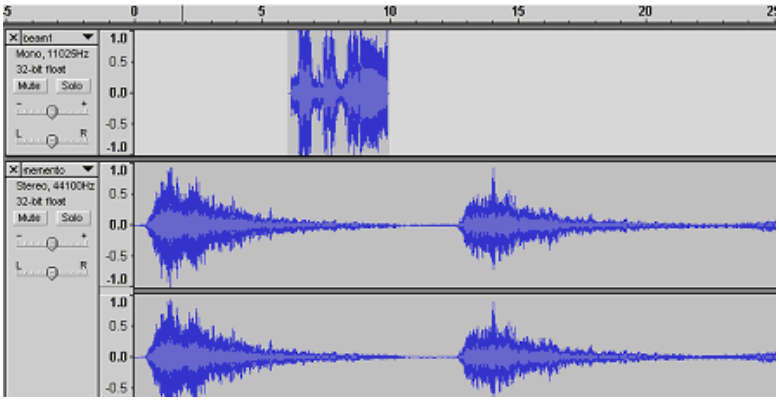


5. Press the Play button and listen to the first 20 seconds (both will play simultaneously). The first clip is 4 seconds long, while the second is over a minute. Note the beam1.mp3 file is in mono with only one sound wave, while memento.mp3 is in stereo with two (separate sound wave for left and right speakers).

6. To listen to each track separately, use the "Mute" button to temporarily de-activate one track from playing. Experiment by setting the "Mute" for the first track and playing, then with the second. When you're done, make sure "Mute" is off for both tracks.
7. Zooming In/Out on Tracks: Notice that the first track is much shorter than the second track. In order to work on the first track at a closer level, simply click on the track, and click the Zoom In (+) or Zoom Out (-) buttons.  . Zoom until the top track occupies a bit more of the screen horizontally, as shown below:

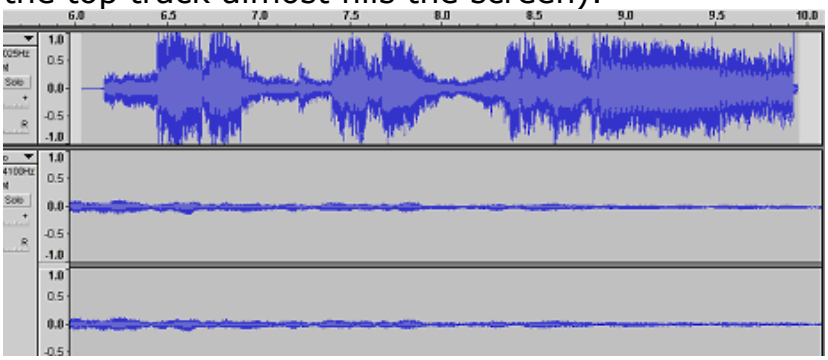


8. Using the Time Shift Tool: First, zoom out until you can see at least the 30 seconds timeline in the screen. Click the **Time Shift Tool**  . This tool allows you to change the relative positioning of tracks relative to one another in time. With the **Time Shift Tool** selected, you simply click in a track and drag it to the left or right. Drag the top frame so it starts at the 6 second mark, as shown below. Once you are done, listen to the first 15 seconds again to see the result.

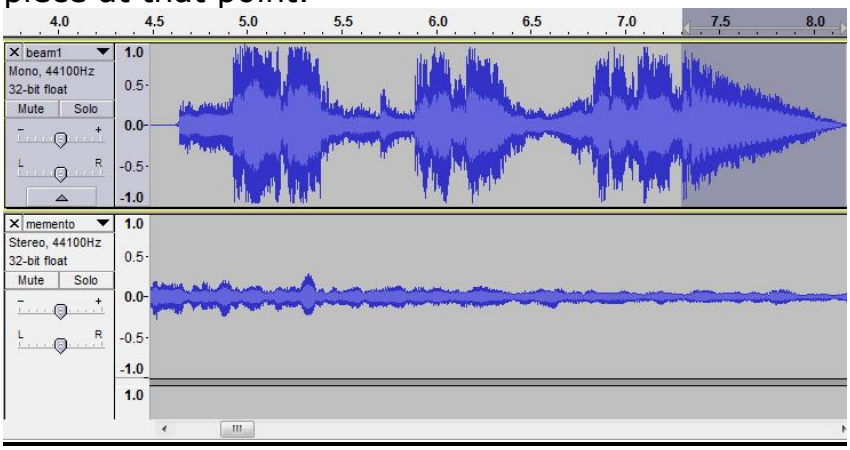


9. Fading In/Out with the Effects Menu: Now you will modify the **beam1** track (top track) so that awful sound at the end of the track fades out so that it is easier on the ears.

a. First zoom in on the track so that you can work with it easier (zoom so the top track almost fills the screen):

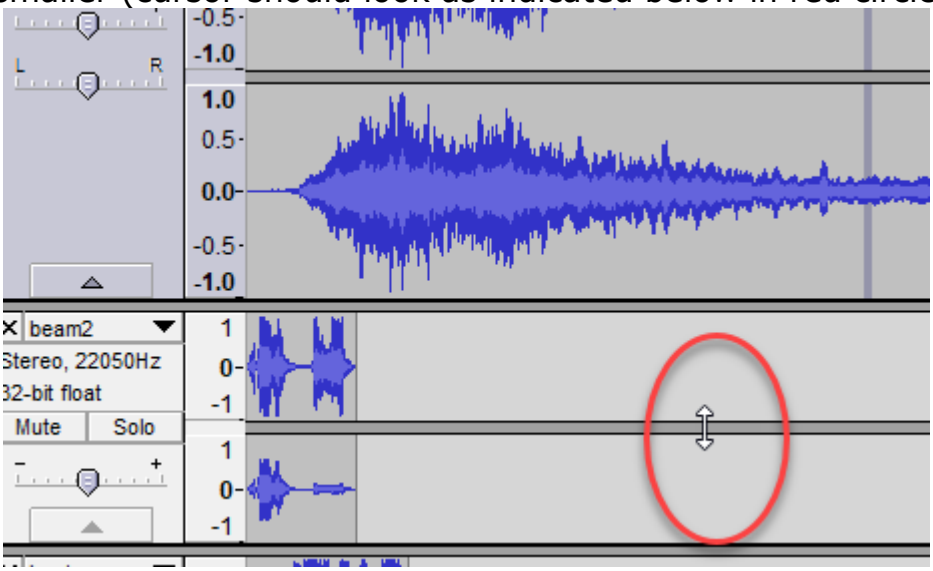


b. Next, using the I beam (make sure you click on the I Beam), highlight the end of the top clip. To fade the select from the menu, **Effects > Fade Out** and watch the highlighted section taper off. Now play the piece at that point.



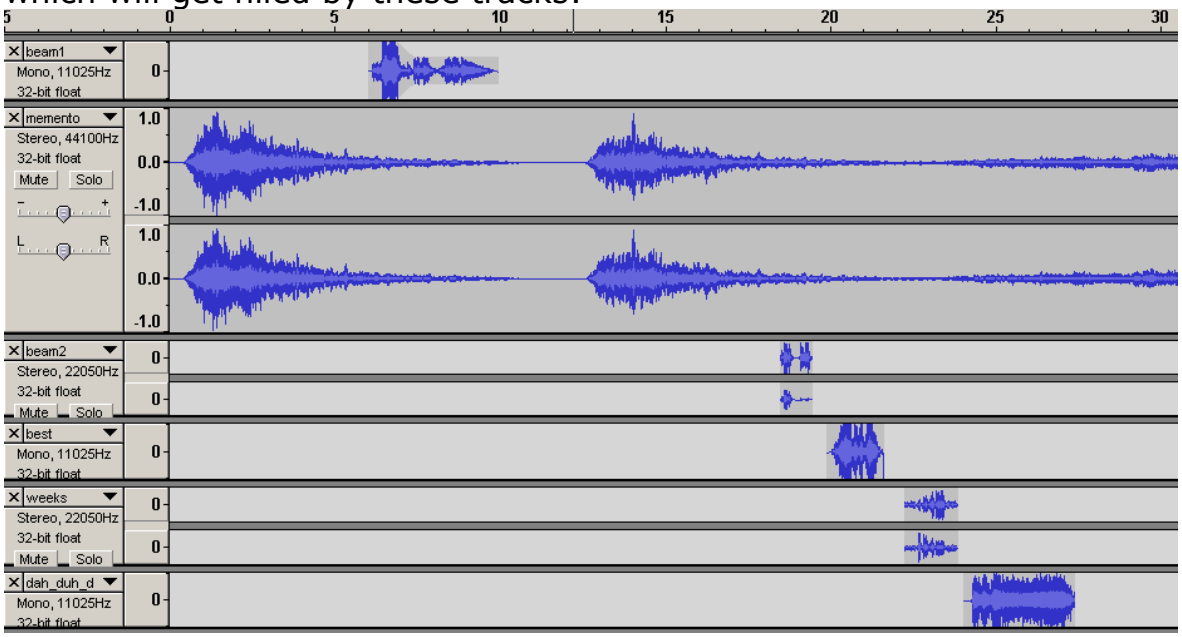
10. Next, you will be adding additional tracks. Import the following files in the order listed below, using **File > Import > Audio…**
    a. beam2.wav (stereo)
    b. best.mp3 (mono)
    c. weeks.wav (stereo)
    d. dah_duh_duh.mp3 (mono)

11. To help get all the tracks on the same screen, you can adjust each track window just like in Windows. First, **zoom** until you can only see about 30 seconds worth of audio. Then click on the dark grey area between two tracks and hold down your mouse button, and drag the window up to make it smaller (cursor should look as indicated below in red circle):



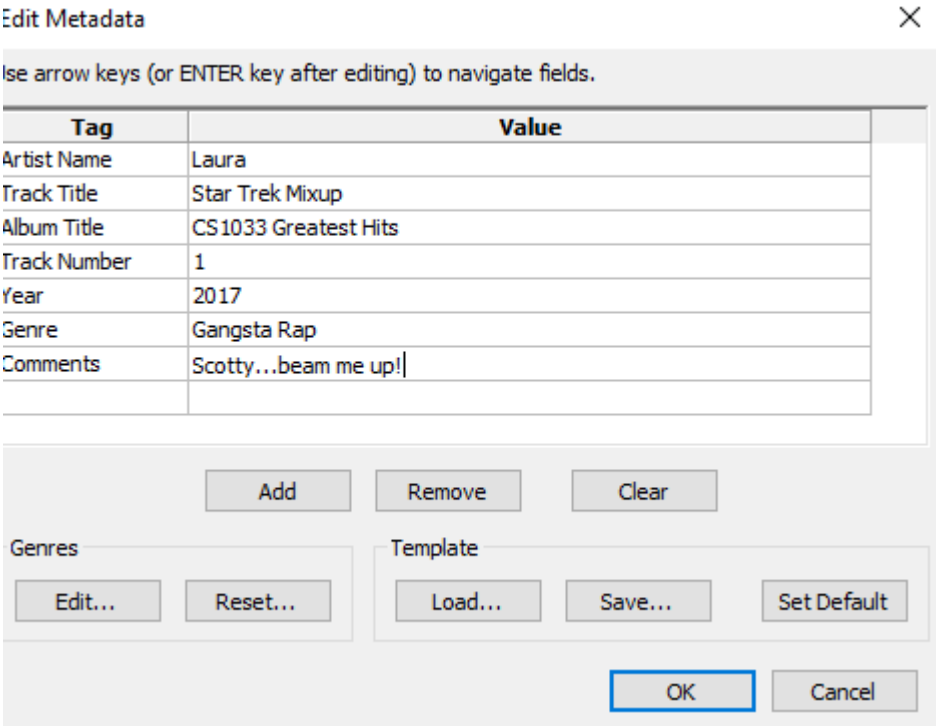
Repeat to make each track window smaller.

12. Use the **Time Shift** tool to move each track so it is placed as in the picture below. Note you are moving each of the tracks to the 18 to 27 second range, with each track playing right after another (no overlaps). The 18 to 27 second range is filled with an area of "silence" in the background music, which will get filled by these tracks:

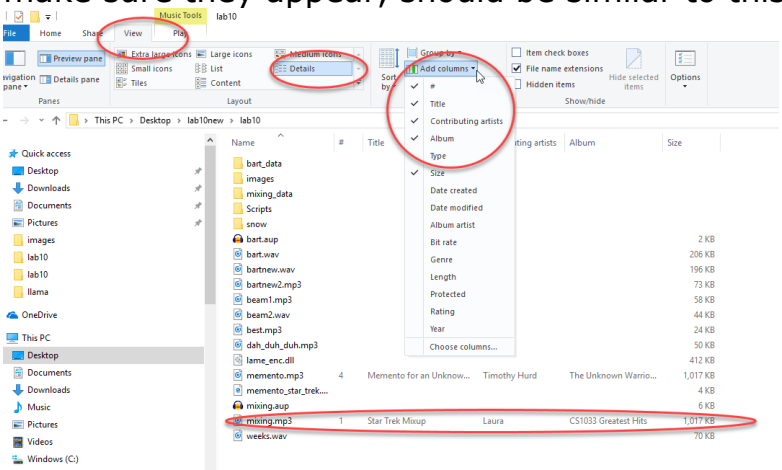


13. Play the clip to make sure it works.

14. Exporting the new sound as an MP3 with attributes: Save the project again just to be on the safe side.
    a. From the menu select ***File>Export Audio…*** Make sure Save as type: is MP3 Files and give the File name: ***mixing*** and hit the ***Save*** button***.*** Then hit **OK** if prompted with **"Your tracks will be missed down to two-stereo channels in the exported file."**
    b. Then when you get the **Edit Metadata** screen, put in the following information (but with your own name as the Artist)… This information will be shown in Windows Media Player, Realplayer:, and your browser later in this tutorial!



15. Exit Audacity. Open the mixing.mp3 file in your lab10 folder and preview your track.
16. In Windows Explorer, click on the View Tab and select Details and select Add Columns and make sure Contributing Artists and Album are selected and make sure they appear, should be similar to this:



Lab 10 - Tutorial 3

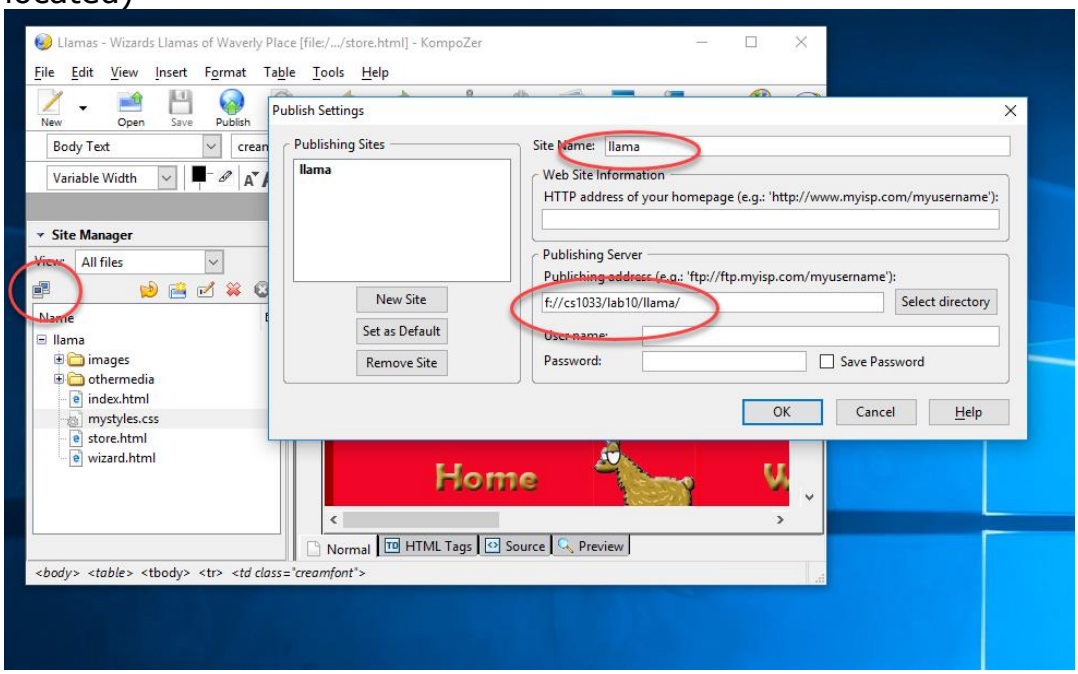
Objectives:

Upon completion of tutorial 3, you should be able to:

- Insert an animated gif on a webpage.
- Create a link inside a webpage that links to a sound file.
- Insert the controls for a sound file, using a HTML audio tag, that play a sound when the user clicks on the controls.
- Insert the controls for a video file, using the HTML video tag, that allows the user to play the video.
- Create a link to a youtube video inside a webpage.
- Fix a HTML video tag when the video file changes location.
- Change the time at which the youtube video starts.

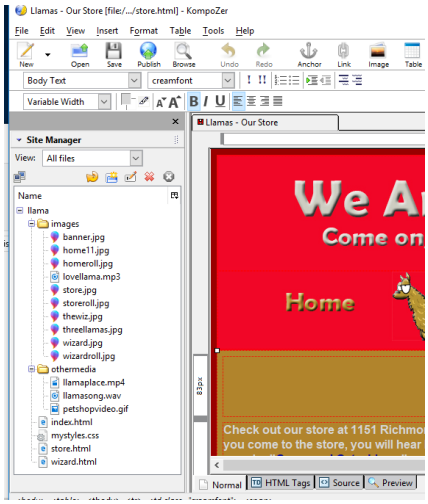
SETTING UP THE WEB FOLDER IN KOMPOZER

1. Open up KomoZer and create a site called Llamas and point it the folder called f:\\cs1033\lab10\llama (or wherever your lab10\llama folder is located)



2. In KompoZer, click on the + next to the ***images*** folder to expand it and see the files in that folder.

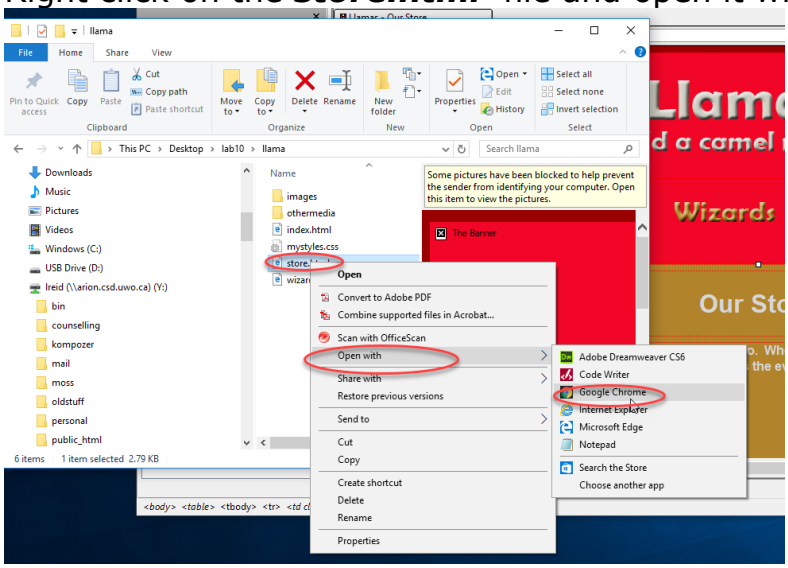
3. Click on the + next to the ***othermedia*** folder to expand it and see the files in that folder. Notice that there is a file in this folder called ***llamasong.wav***
4. Open the webpage ***store.html*** by double clicking on it
5. Highlight the words "Come and Get a Llama" and create a link to ***othermedia/llamasong.wav***
6. Save ***store.html***



OPENING THE WEBFILE IN A BROWSER AND FIXING A BROKEN LINK AND ADDING AN ANIMATED GIF

7. Open Windows Explorer and find the ***lab10/llama*** folder

8. Right click on the ***store.html*** file and open it with Chrome



9. Click on the link you just created and make sure the sound file plays. Leave the Chrome browser open with your file loaded into it while you work on the file in KompoZer.

10. Go back into KompoZer, into the same file, ***store.html*** and find the part of the file that has XXX. We are going to put another sound file here but this time it will have controls right in the webpage:
    a. Notice that in the images folder, we have a file called lovellama3.mp3
    b. Click on the Source tab at the bottom so that you can see the HTML tags
    c. Find the location where the XXX is and replace the XXX with the following HTML tags:

```
<audio controls="">
<source src="images/lovellama.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</source> </audio>
```

    d. Click on the Normal Tab along the bottom to see the page again and save the file.
    e. Refresh your Chrome browser to see the changes. Make sure there are controls for the audio file now and that it plays.
    f. The ***lovellama.mp3*** file shouldn't really be in the ***images*** folder, it should be in the ***othermedia*** folder. Using Windows Explorer move the ***lovellama.mp3*** file to the ***othermedia*** folder. Notice that, in your webpage, your sound file no longer plays. This is because we have now broken the link. Go back into the source code for the ***store.html*** file and figure out how to FIX this code (HINT: look at the src= part) so that the sound plays again:

```
<audio controls="">
<source src="images/lovellama.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</source> </audio>
```

    g. Save the file, refresh the Chrome browser, and make sure it works again.
11. Now we are going to add the animated gif (***petshopvideo.gif***)we created in Lab 8 to the page. Notice this file is contained in the othermedia folder. Go back to Normal mode (click on the Normal tab) in the ***store.html*** file. Put your cursor just after the table that holds your sound controls and hit enter a couple of times:
12. From the menu bar select ***Insert>Image*** and put ***othermedia/petshopvideo.gif*** in the Image Location bar. Put "***Pet Shop"*** for the alternate text and hit ***OK.***
13. Save the file and refresh Chrome to make sure that it works.

ADDING A VIDEO AND A YOUTUBE CLIP TO A WEBPAGE

14. Now we are going to add a video file to the wizards page. In KompoZer open the file called ***wizard.html***
15. In Windows Explorer, find the llama folder and right click on the ***wizard.html*** file and open it using Chrome and leave that open while you work on the file in KompoZer.
16. Find where the XXX characters are located. We are going to insert the movie clip into this location using the HTML video tags.
17. Click on the Source tab along the bottom to see the HTML code.
18. Find the location where the XXX is in the html code and replace it with the following:

```
<video width="800" height="600" controls="">
<source src="**** "  type="video/mp4">
Your browser does not support the video tag.
</source> </video>
```

19. Change the part that is highlighted with **** so that is points to the correct file (the file ***llamaplace.mp4*** in the ***othermedia*** folder). Look at the audio HTML tags if you need help figuring it out. Remember you will need to put where the file is located, remember the subfolder name and the file name and it has to be in quotes.
20. Save the file
21. Go back to Chrome and refresh the page and make sure that the movie clips plays properly.
22. Now go back to KompoZer and go into source mode and find the <video> HTML tag area. Right after ***controls=""*** add with the following: ***poster="images/thewiz.jpg"*** so that it looks like this:

```
63.  style="width: 800px; text-align: left; margin-left: auto; margin-rig
64.  border="1" cellpadding="2" cellspacing="2">
65.         <tbody>
66.           <tr>
67.             <td style="text-align: center;"><video
68.  width="800" height="400" controls=""
69.  poster="images/thewiz.jpg">
70.               <source src="othermedia/llamaplace.mp4"
71.  type="video/mp4">Your browser does not support the video
72. tag.
73.               </source></video></td>
74.           </tr>
75.         </tbody>
76.       </table>
```

23. Go back into Normal mode and save the file and go back to Chrome and watch what happens now. If you want an image to show up rather than just a black screen, you need to include: ***poster="filename.jpg"***

24. In Source mode, in the <video> tag, change the ***width="800" height="600"*** to ***width="200" height="100"*** and save the file and refresh in Chrome. You can adjust the width and height of your video with these fields!

25. Go back into KompoZer. Now we are going to add a youtube video to our page. For a youtube video, you need to use the <iframe> HTML tag. Find the location where YYY is on the page. Click on the Source tab below to see the HTML tags and find the YYY in the code. Replace the YYY with the following (YOU MUST TYPE THE CASE EXACTLY AS BELOW!):

```
<iframe
src="https://www.youtube.com/embed/ieFrIvFzJd8?start=67"
height="315" width="420">
</iframe>
```

26. Go back into Normal mode and save the file and go back to Chrome and refresh the page. Make sure the youtube video is playing.

27. Go back into KompoZer and click on the Source tab to see the HTML and find the <iframe> tag. Then find the spot where it says:
?start=67
change that to:
?start=407

28. Go back into Normal mode, save the file and in Chrome, refresh and see if you can figure out what that did. If you want to start at a particular location in the youtube video you need to add ***?start=407*** to the end of the file location (in this example ?start407 means start 407 seconds into the video).

29. Close KompoZer.

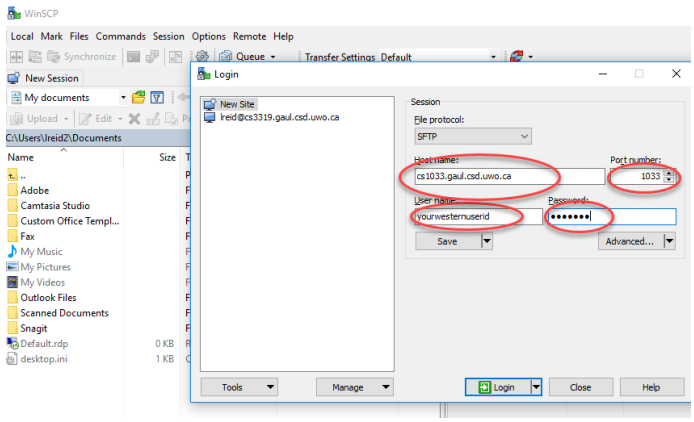
Lab 10 - Tutorial 4

Objectives:

Upon completion of tutorial 4, you should be able to:

- Upload the website you just created to a webserver.
- Find the website on the internet and make sure it works.

1. Run WinSCP (it should be an icon on the desktop or search for it using the search area in the bottom left corner).
2. Fill in the WinSCP information as follows:
    a. **Host Name:** cs1033.gaul.csd.uwo.ca
    b. **Port Number:** 1033
    c. **User Name:** Your Western UserID
    d. **Password:** Your Western Password



3. Click on the Login button.
4. On the right side find your ***llama*** folder
5. Drag the ***llama*** folder from the left side and drop it on the right side (but NOT inside one of the folders that is already there).
6. Go into Chrome and make sure everything still works by going to: http://cs1033.gaul.csd.uwo.ca/~yourwesternid/llama
7. Close WinSCP
8. Show your Teaching Assistant your final website.
9. **Say goodbye to your teaching assistant as you have now officially finished all the CS1033 labs!**