CS 1033

Multimedia and Communications

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

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 will 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.
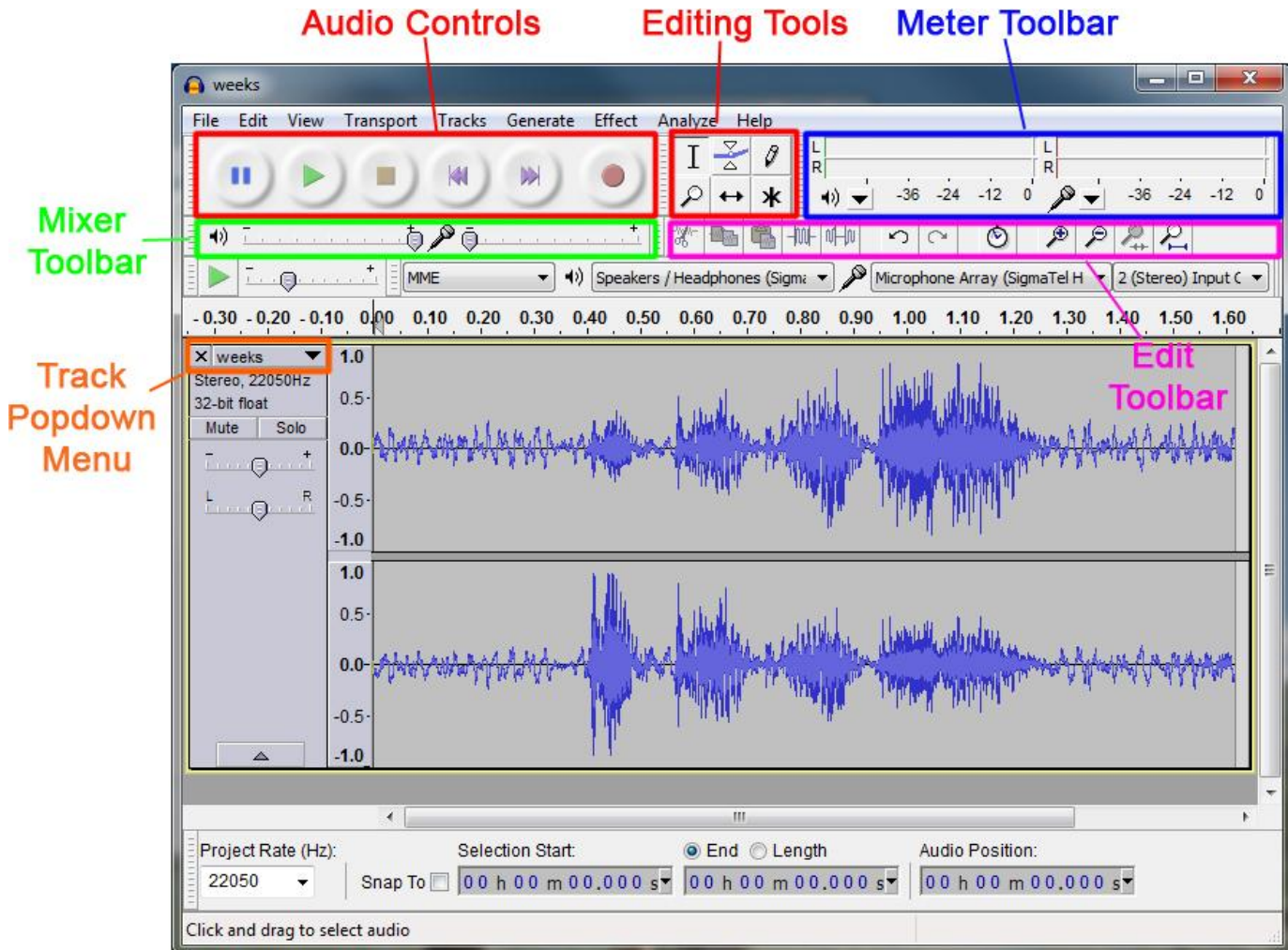
Although Audacity is a very powerful audio editor that works with an unlimited number of tracks of virtually any size, it cannot do everything. It cannot:
  ➢ record more than two channels at once on many systems,
  ➢ edit MIDI files, although it can open them.

LAB #10 - Tutorial 1

Objectives:
- ➢ **Becoming familiar with the Audacity interface**
- ➢ **Opening, saving and working with WAV, MP3, and AUP (Audacity Project) files**
- ➢ **Editing a sound clip: cutting, amplifying, fading**

Copying the Updated Material from the Instructor's Area:

- Download the file *lab10.zip* from the website (http://www.csd.uwo.ca/~lreid/cs1033labs/lab10) to your memory stick in your cs1033 folder (to F:\cs1033).
- Right click on the *lab10.zip* file and select **Extract all...**
- On the window that appears, make sure the Destination folder is your lab10 folder
  - o **(ex. F:\cs1033\lab10)**
- Select **Extract**
  - o There should now be a *lab10* folder in your cs1033 folder, and the lab10 folder should contain files and folders.

1. Start the program by selecting the **Audacity** shortcut from the Desktop.

2. You will notice that the **SELECTION TOOL** is highlighted by default (see screenshot below). This tool is often called an **"I Beam"** because it looks like a capital letter I.
   Next you will notice a series of round buttons which have controls similar to a CD Player. We will be using the **PLAY** and **STOP** buttons. Other controls will be mentioned as needed.
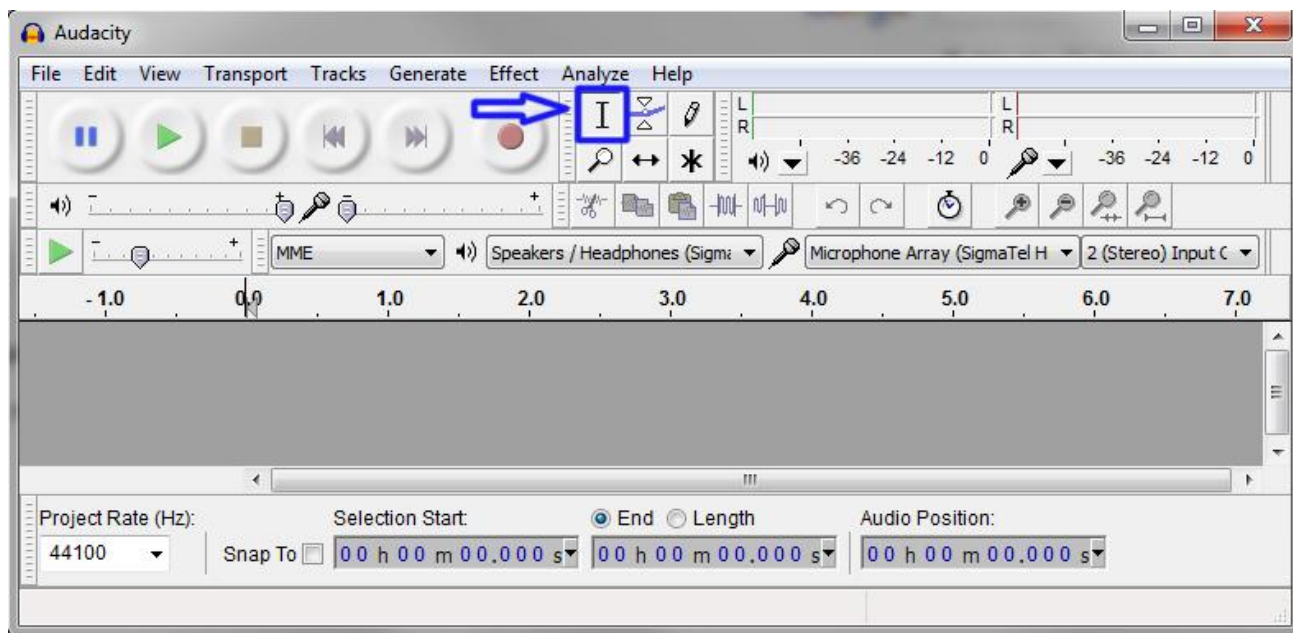
3. From the **Menu Bar**, select **File > Import > Audio**. Browse to the *lab10* folder you copied to your memory stick and open the file **bart.wav**. If a screen pops up, select **Make a copy of the files before editing (safer)** and press **OK**.

4. 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**.

5. Press the **Play** button ▶ to play the sound file.

6. To play the sound file starting at different spots on the sound wave, select the **I-Beam** I 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.

Replay the sound file again and try out the Audio buttons: **Stop**, **Pause**, **Skip to Start**, and **Skip to End**.

7. Find the "door closing" sound: Play the sound a few times until you "See" where the door sound is in the wave pattern. The door sound is indicated by the red outline indicated in the diagram below:
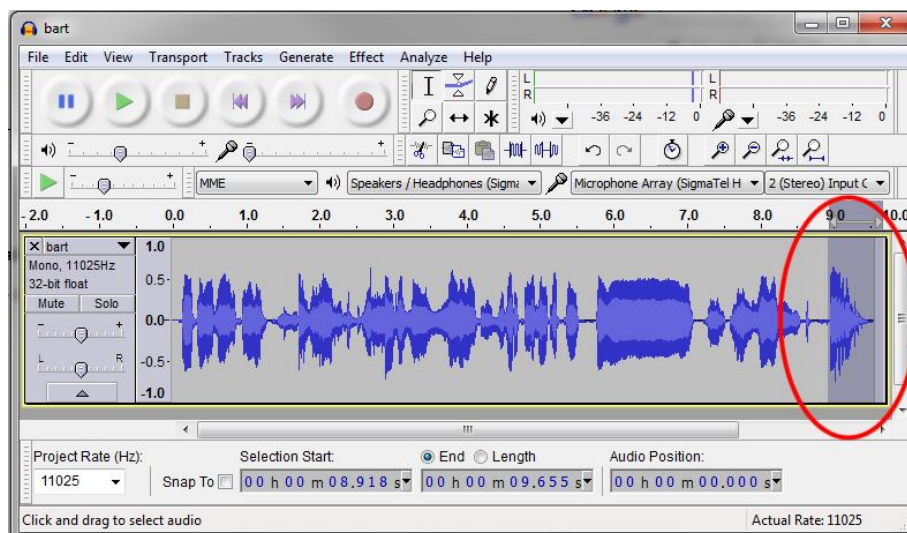

8. Removing the "door closing" sound: Select the **I-Beam** tool I, and click down at the beginning of the section outlined in red above, and highlight to the end of the wave. Now from the **Menu Bar**, select **Edit > Remove Audio >Delete** to delete the section.

9. Amplify Bart's excuse for missing the makeup test, "*Ohhhhh my ovaries*":

   a) To **AMPLIFY** we first find and select the section using the **Selection tool** I .
   b) Then to change the amplification, use the menu item **Effect > Amplify**. Use the default amplify settings (4.3 dB)**.**
   c) **And Play from that spot on.**
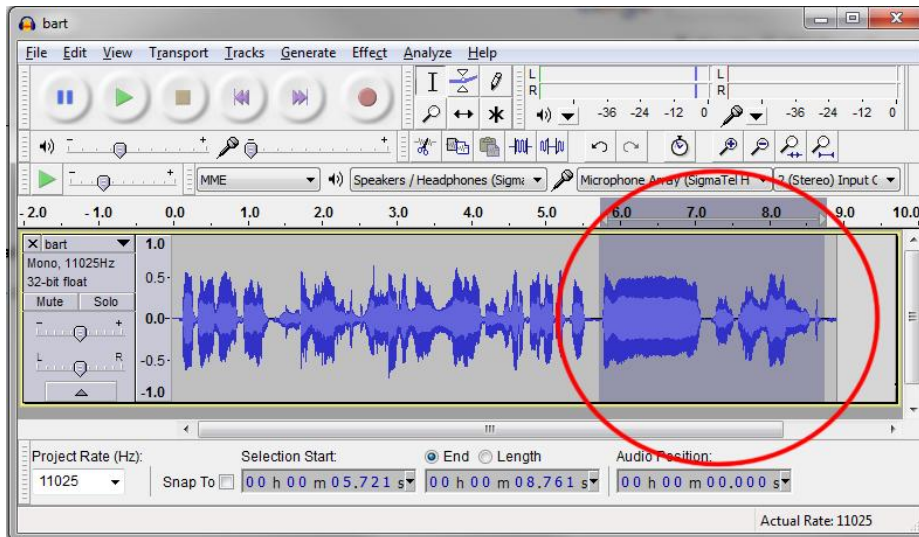
10. **Change the amplification to -15.0** and press the Preview button to hear the sound. The higher the amplification, the louder the sound. The lower the amplification, the fainter it becomes. Press OK.
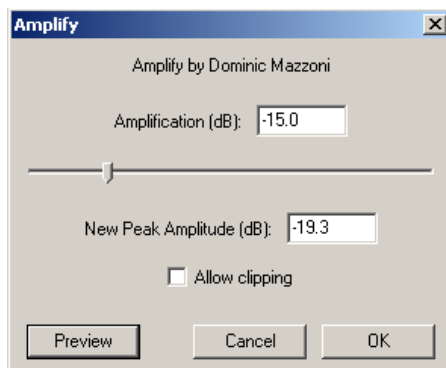
11. Fade Out the last half of Bart's "Ohhh" exclamation**:**

   a) To do this, simply select the right-most half of the "*OHHHHhhhhhh*".
   b) Use the menu command **Effect > Fade Out.** Once completed, this should make this section of the wave pattern have a "bullet"-like appearance (see below). Try playing the full clip and watch the fading effect take place as it travels across the sound wave.

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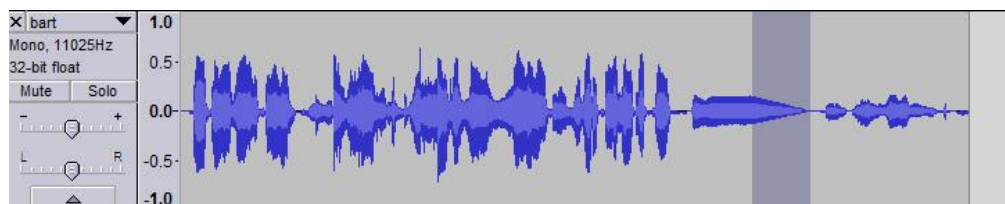
12. Saving to WAV Format:
    a) First, save your project file again (as bart.aup).
    b) To save in the universal WAV format, from the menu bar select **File > Export.**
    c) Make sure *Save as type:* is set to **WAV** and save it as **bart-edited.wav** in your *lab10* folder.
    d) Press **SAVE.**

13. Saving to MP3 Format:
    a) MP3 is another universal audio format that many of you may be familiar with.
    b) To save in MP3 format, from the menu bar select **File > Export**
    c) Make sure *Save as type:* is set to **MP3** and save it as **bart-edited.mp3** in your *lab10* folder.
    d) On the next screen select **OK.**
    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.

        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.

14. Close Audacity, browse to your *lab10* folder, and 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:
➢ **Mixing a Multi-Track Project**

Audacity makes it easy to mix different sounds together. In this tutorial, you will be mixing background music (memento.mp3) with voiceovers (various Star Trek .wav files).

1. Opening two tracks at once:
   Start up Audacity. Instead of using **File > Open** (which opens up only one file), you can open two files by doing the following:

   a) select **File > Import > Audio...**, and point to the file **beam1.mp3** (human voice)

   b) select **File > Import > Audio...**, and point to the file **memento.mp3** (song)

   c) Save the Project as **mixing.aup**. Your screen should now look like the image below:
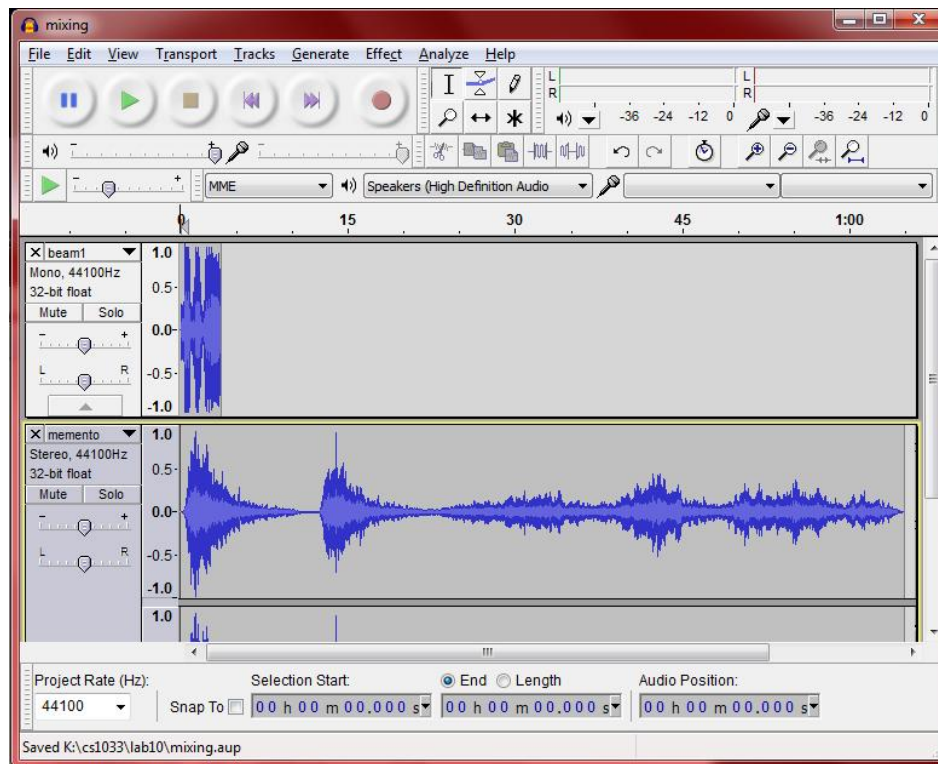
2. Press **Play** and listen to the first 20 seconds (both tracks will play simultaneously). The first clip is 4 seconds long, while the second is over a minute. Note the **beam1.mp3** file is in **mono** with only one sound wave, while memento.mp3 is in **stereo** with two (separate sound wave for left and right speakers).

3. 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.

4. Zooming In/Out on Tracks: The first track is much shorter than the second track.

   **a)** 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:
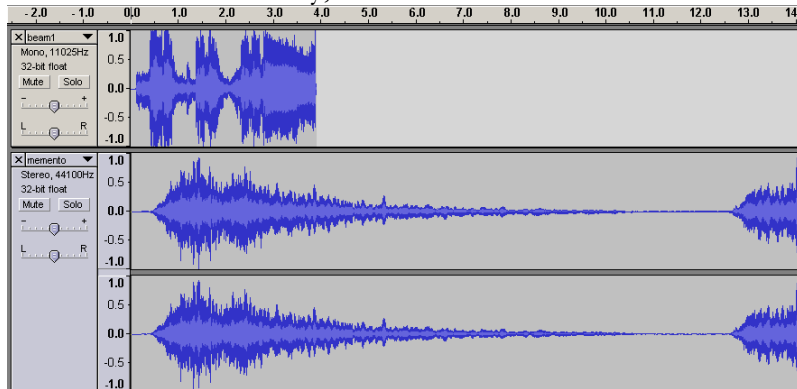
5. Using the Time Shift Tool: First, zoom out until you can see at least the 30 seconds timeline in the screen. Click the **Time Shift Tool** . This tool allows you to change the relative positioning of tracks relative to one another in time. To use this tool, you simply click in a track and drag it to the left or right.

6. With the **Time Shift Tool** selected, drag the top frame so it starts at the 6 second mark, as shown below. Once you're done, listen to the first 15 seconds again to see the result.
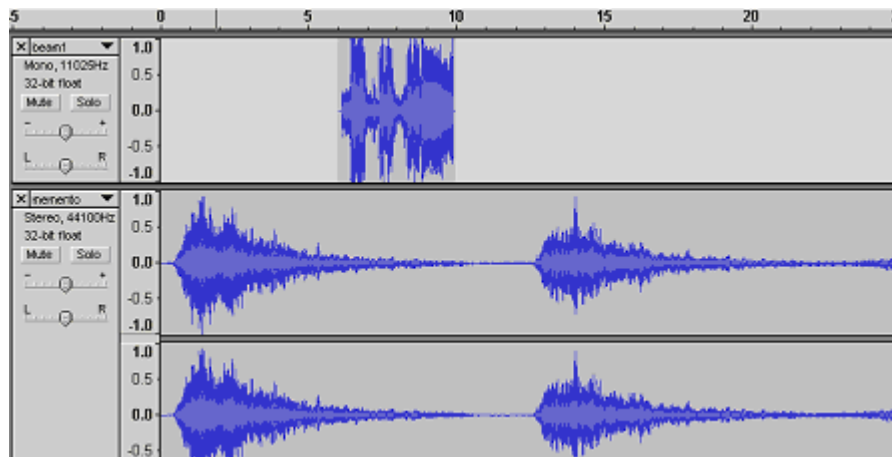
7. Fading In/Out with the Effects Menu:
    a) Now you will modify the **beam1** track so that awful sound at the end of the track fades out so that it is easier on the ears.
    b) First zoom in on the track so that you can work with it easier (zoom so the top track almost fills the screen):
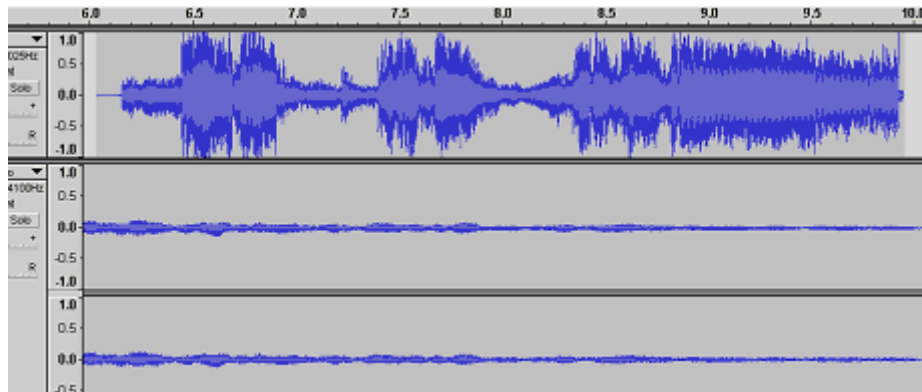

    c) Next highlight the section as shown below. To fade the select from the menu, **Effects > Fade Out** and watch the highlighted section taper off. Now play the piece at that point.
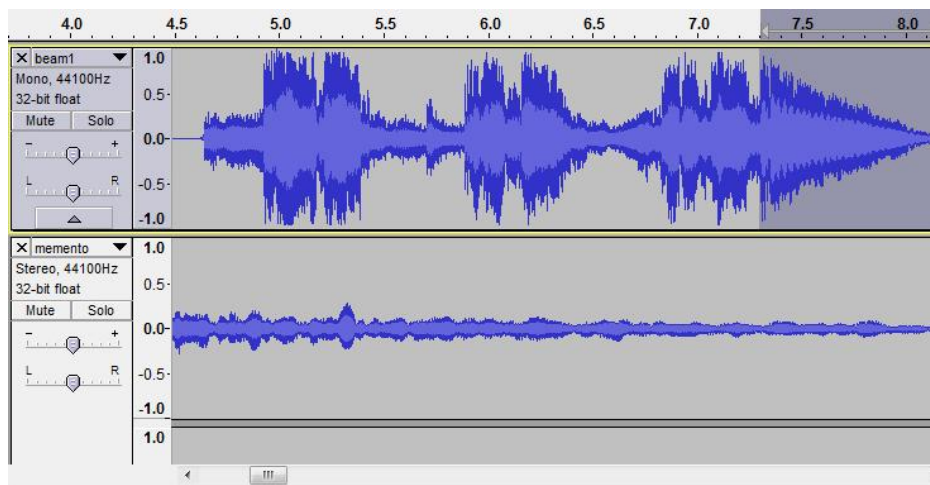
8. Next, you will be adding additional tracks. Import the following files in the order listed below, using **File > Import > Audio...**:
    a) beam2.wav   (stereo)
    b) best.mp3   (mono)
    c) weeks.wav   (stereo)
    d) dah_duh_duh.mp3   (mono)

9. To help get all the tracks on the same screen, you can adjust each track window just like in Windows.
    a) First, **zoom out** until you can only see about 30 seconds worth of audio.
    b) 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. Repeat to make each track window smaller.

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10. 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.
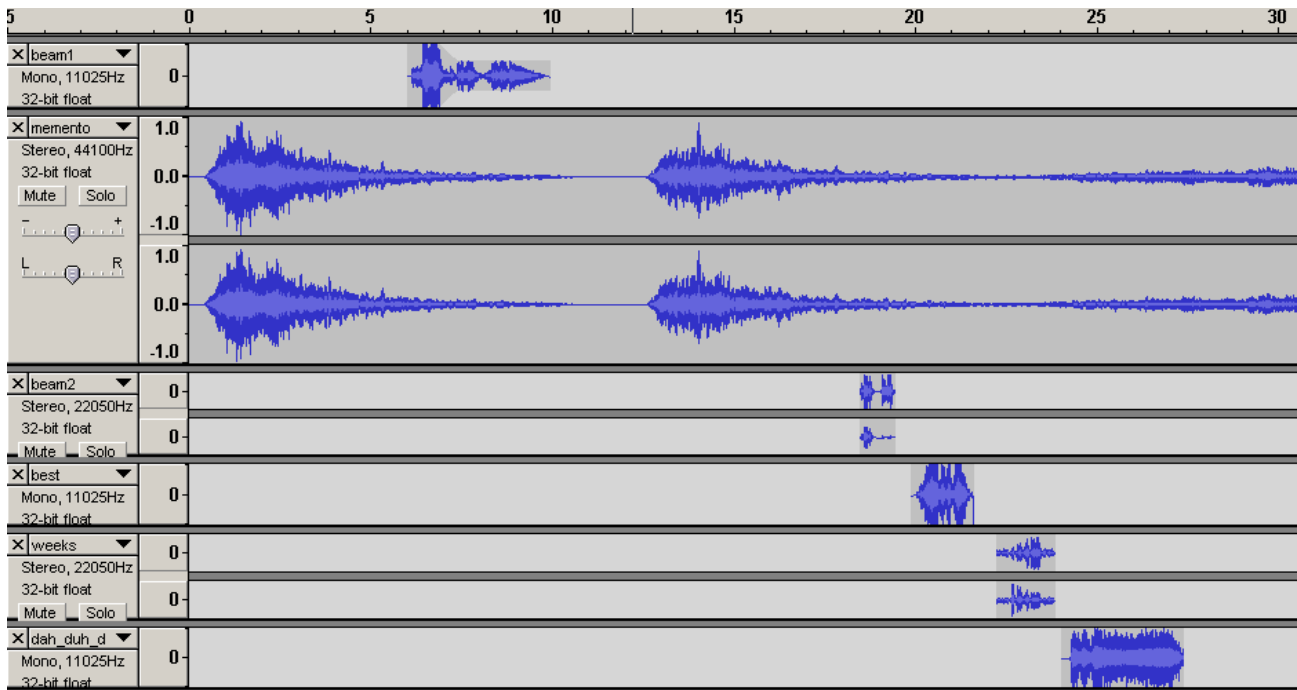
11. Exporting as MP3 with attributes:
    a) First save the Project as **mixing.aup** once again.
    b) Then export to **mp3** format as you did before (to **mixing.mp3**), but when you get to the **Edit Metadata** screen, put in the following information (but with your own name as the Artist and Album)… This information will be shown in Windows Media Player, Realplayer:, and your browser later in this tutorial!

12. Exit Audacity. Open the mixing.mp3 file in Windows Media Player to preview your track.

LAB #10 - Tutorial 3

Objectives:
- ➤ **Adding Sound to a Webpage: Linking**
- ➤ **Adding Sound to a Webpage: Embedding**

There are several different types of sound files and formats that can be put in Webpages, including .wav, .midi, and .mp3.. Some factors to consider before deciding on a format and method for adding sound are its purpose, your audience, file size, and sound quality.

NOTE Sound files are handled very differently and inconsistently by different browsers. You may want to put a sound file in a Flash SWF file then embed the SWF to improve consistency.

Linking to an Audio File:

Linking to an audio file is a simple and effective way to add sound to a web page. This method of incorporating sound files lets visitors choose whether they want to listen to the file, and makes the file available to the widest audience.

1. Open up Dreamweaver and open the webpage "**memento_star_trek.html**".

2. Save this file immediately as "**music_link.html**" so you don't overwrite the original webpage.

3. **To create a link to an audio file:**
   - Highlight the text "Play the Song". This will be the link to the audio file.
   - In the Property Inspector, in the Link field, click on the folder icon to browse for the audio file "**mixing.mp3**"

4. Save your file, Preview the webpage and try it out. The default audio player for your computer (QuickTime, RealPlayer, or Windows Media Player) should begin playing the song. Alternatively, a website visitor could right-click and save the file to their computer.

Notice how the download time (bottom right corner in Dreamweaver) is only about 4-5 seconds using this method.

Embedding an Audio File

Embedding audio incorporates the sound directly into the page, but the sound only plays if visitors to your site have the plug-in for the chosen file type. Embed files if you want to use the sound as background music, if you want to control the volume, the way the player looks on the page, or the starting point of the file.

TIP When embedding sound files, carefully consider their appropriate use in your web site, and how visitors to your site use these media resources. Always provide a control to either enable or disable the playing of the sound, in the event that visitors don't want to listen to the audio.

5. **To embed a audio file:**
   - In the Design view, place the insertion point where you want to embed the file. For this exercise, place it in the middle of the yellow panel to the right of the pictures.
   - From the Menu Bar, click **Insert > Media > Plugin**.
   - In the pop up box, point to the audio file **mixing.mp3**. A plug in icon will appear.

6. Save your file and Preview the webpage again. Notice how the music starts playing automatically.

Notice how the download time has increased significantly using this method. This method is not a good way of embedding a file since it is so large.

7. Click on the Plug in Icon , then in the **Property Inspector** change the **Width** and **Height** values to **300** and **100** respectively. These values determine the size at which the audio controls are displayed in the browser.

8. Next, click the "**Parameters**" button, and add the following to disable the autostart:
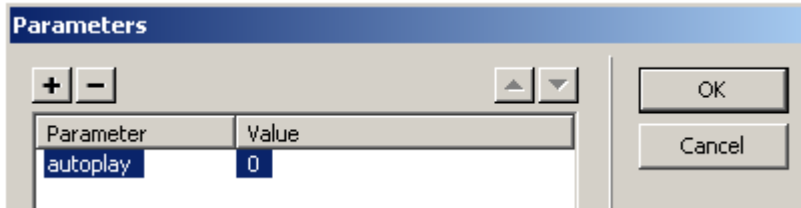
   NOTE: The autoplay feature can't be disabled in all browsers. Changing this Parameter will work in some browsers, but in order to have more control we will learn another method for converting to a more universal format!

9. Save your file and Preview your webpage again to ensure the audio controls display properly

You can also use other "parameters" to control other aspects of the sound plugin. Adding the *loop* parameter and setting its value to *true* will cause the sound to repeat. Similarly, the hidden parameter can be used to hide the plugin from the user.


13
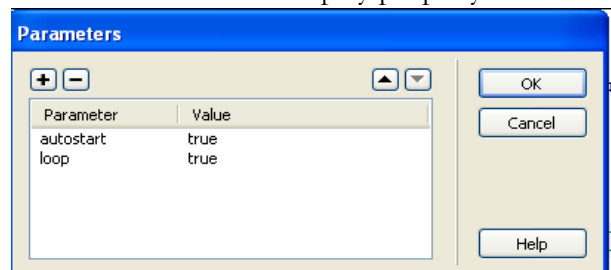
LAB #10 - Tutorial 4

Objectives:
  ➢ **Inserting animation into a page**

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1. Open Dreamweaver and create a new site called *Snow*. Point this site to the folder called *F:\cs1033\lab10\snow.* Open the file called *home.html*.

2. Adding flash video to the webpage:
   a. Make sure you are in design mode with the file you opened. Click before the word *Welcome* to place your cursor there.
   b. This is where we will place our Flash animation. Then select **Insert>Media>SWF**.
   c. You will be asked which file to insert. Browse the *musicvideo* folder and select the file called *snowmananimation.swf* and click on **OK**.
   d. Give it the title **Snowman Melting**. Leave the **Access Key** and **Tab Index** fields empty and hit **OK**.
   e. You should see a large gray square where the animation will be displayed.
   f. Save your file and preview it. If you are asked to copy any files, press **OK.** Notice the animation is very large and it repeats.

3. Let's change the size of the animation. Go back into design mode and click on the gray box where the animation is to be displayed. Then in **properties window** change the **width** to be *110* and the **height** to be *80*. Save the file and preview it again.

4. Now let's make it play only once. Go back into design mode and click on the gray box where the animation is to be displayed. Then look at the **properties window**. On the left hand side of the screen deselect the **Loop** checkbox. Save the file and preview it again. Now the animation only plays once.

5. Finally, let's make a splash screen.

   a. Create a new page, immediately save this page with the name *index.html*.
   b. Click on the **Page Properties** button at the bottom of the screen.
   c. Set the background colour to be #**FFFF99**, then hit OK
   d. Add the text *"Welcome to the CS1033 Snow Web Page*", then hit enter 4 times and then add the text: "*Click here to enter the site".*
   e. Give the page the title: "*Let It Snow!*" Your page should look like this:
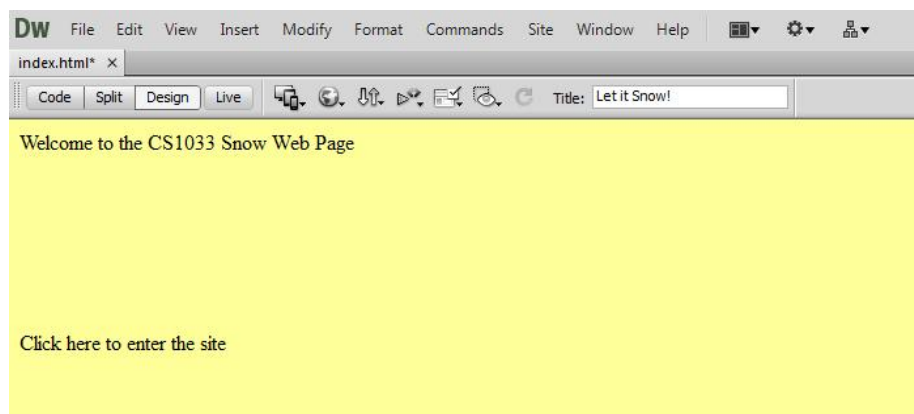
6. Now we will format the text:
   a. Highlight the top line of text.
   b. From the **Properties Pane**, select the **Format** drop down box and then select *Heading 1*.
   c. Highlight the second line of text
   d. In the **Properties Pane** beside the *link* box, put the name of your home page: **home.html** and hit enter.
   e. Now put your cursor between the two lines and insert the animation. Select **Insert>Media>SWF** and find the **snowmananimation.swf** again in the musicvideo folder, then hit **OK**.
   f. When you are prompted for a title, put "**Snowman Melting**". Leave the access key and tab index empty, then hit **OK**. Now you should see a big gray box where your snowman will be displayed.
   g. Finally, center everything on the page by putting your cursor at the top left of the screen (just before the Welcome) and highlighting EVERYTHING on the page to the bottom right corner, (make sure the bottom line is highlighted) and then in the **Properties Pane**, click on the center alignment icon.
   h. Save your page. Your page should now look like this:

7. Now preview your page and make sure that the link works to the home page.

LAB #10 - Tutorial 5

Objectives:
- ➢ **Convert a video file from a .wmv format to the .mp4 format**
- ➢ **Add some video to a webpage using the new HTML5 <video> tags**

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13. We are going to convert a regular video format into a smaller more universal format:
- *a)* Got to Start Menu, and open **Adobe Media Encoder CS6.** It may be in the **Adobe** folder in the Start Menu.
- *b)* We have worked with this program when we were converting videos in the Flash tutorials.
- *c)* Press the ✚ symbol in the top left corner.
- *d)* Find the folder *f:\cs1033\lab10\snow\musicvideo* and select the file called :*weather.wmv*
- *e)* The queue should now look like this:
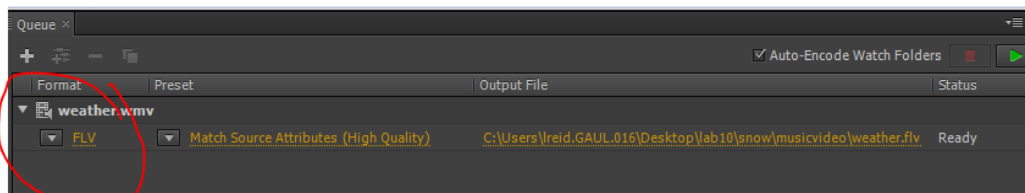
- *f)* Click on the drop down on the left (next to flv) and change that to H.264(Legacy) so that the Output File has the extension .mp4. It should now look like this:
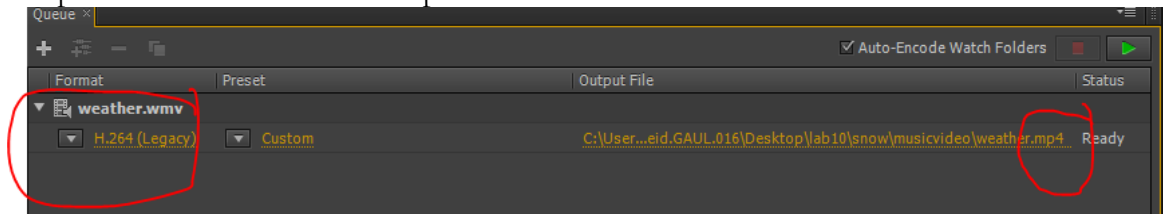
g) Click on the Yellow word Custom, then the following dialog box should appear:
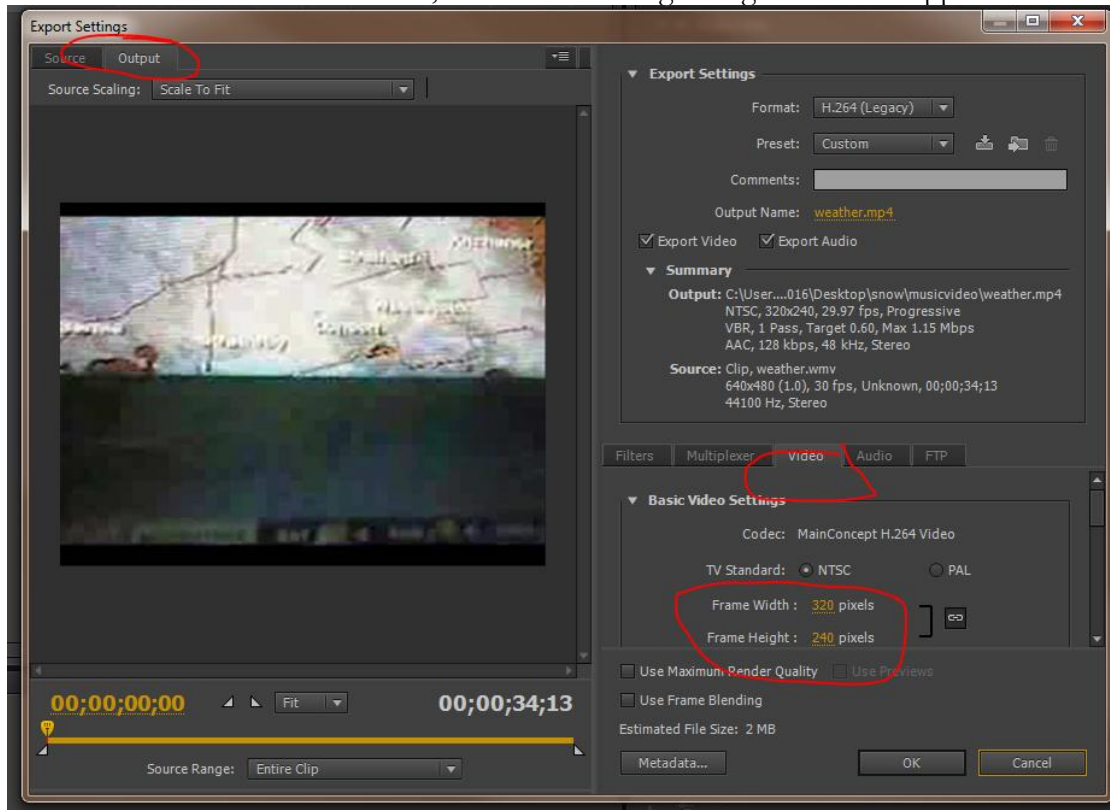
h) Make sure the Output tab at the top left is selected and the Video tab in the middle right is selected.

i) Change the width to 200 pixels, the height should change automatically. *NOTE: making the width smaller than the default size will SIGNIFICANTLY decrease your video file size. Whenever working with video, try to make it as small as possible (so that it just fits in the area you want), in order to keep the size of any of your video files smaller. When you are handing in your final major assignment, ONLY include the final compressed video in the folder that contains the video file, you do not need to submit any of the other preliminary videos used to create the final video.*
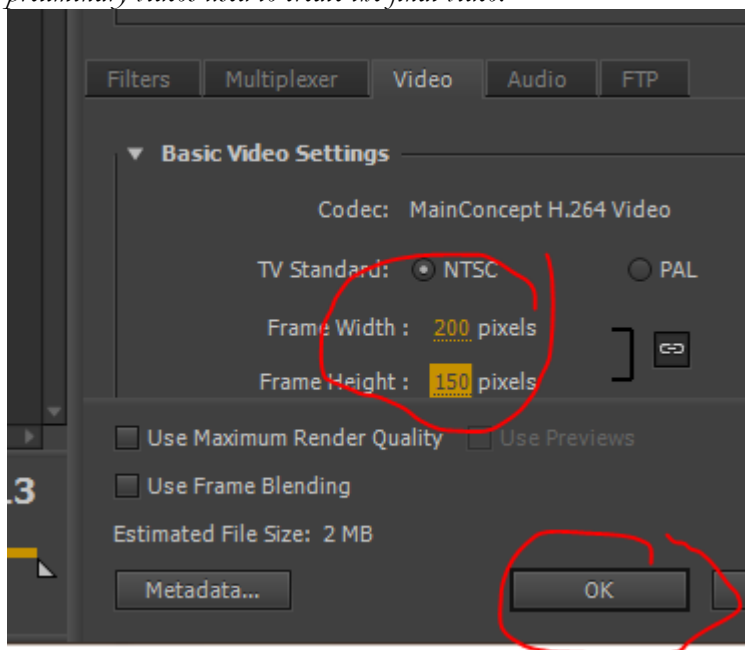

j) Press the Start Queue button to convert the video.

k) The output file will be saved in the same location as the original.

14. Now quit out of the Flash Video Encoder and open Dreamweaver again.

15. Open the file **weather.html.** In order to insert the video, we will need to modify the actual <html> codes. The first thing we have to do is make sure this page is an html5 webpage. That is set in the first line of the html code. Click on the SPLIT button to see the html code. Go to line 1 of the code, you should see something like this:
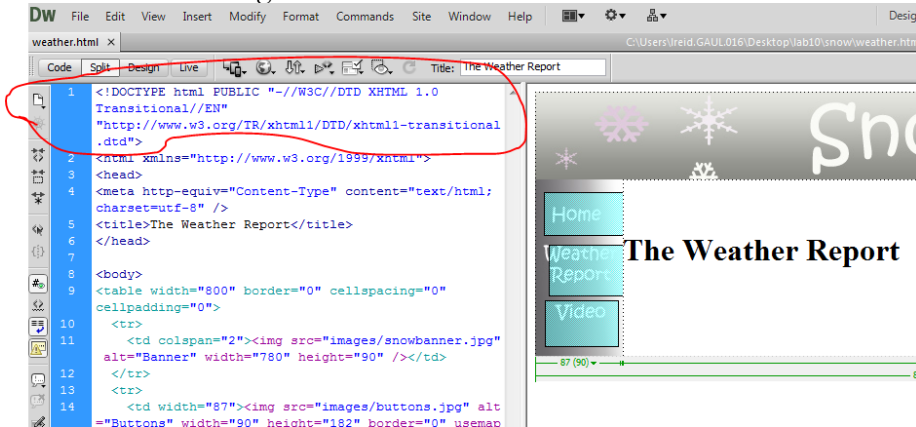
16. Line 1, circled in red above, indicates this is an HTML4 file, we need to change that line to make it an HTML5 file. You should delete line 1 and change it to this:
   <!DOCTYPE html>
    so your file should now look like this:
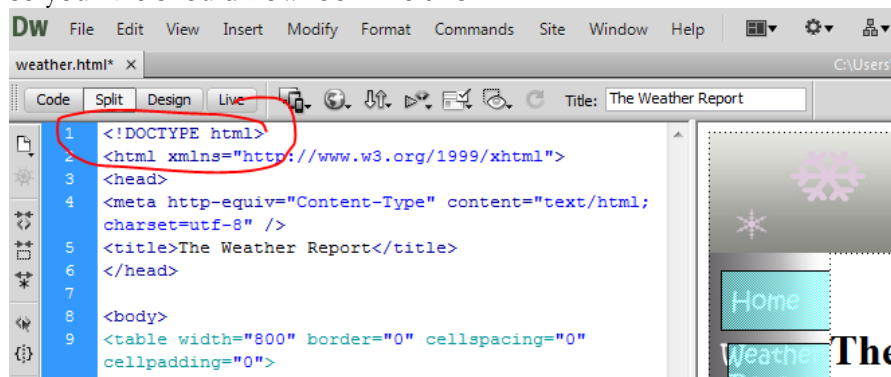
Notice the tag (the first tag on a webpage) to indicate a webpage is HTML5 is MUCH simpler than the tag that says a webpage is in HTML4 format.

17. Save your file. Now we need to add the video. While still in split view, move your cursor to right under the line: *The Weather Report* as indicated in the image below (the spots where your cursor will appear are circled in red):

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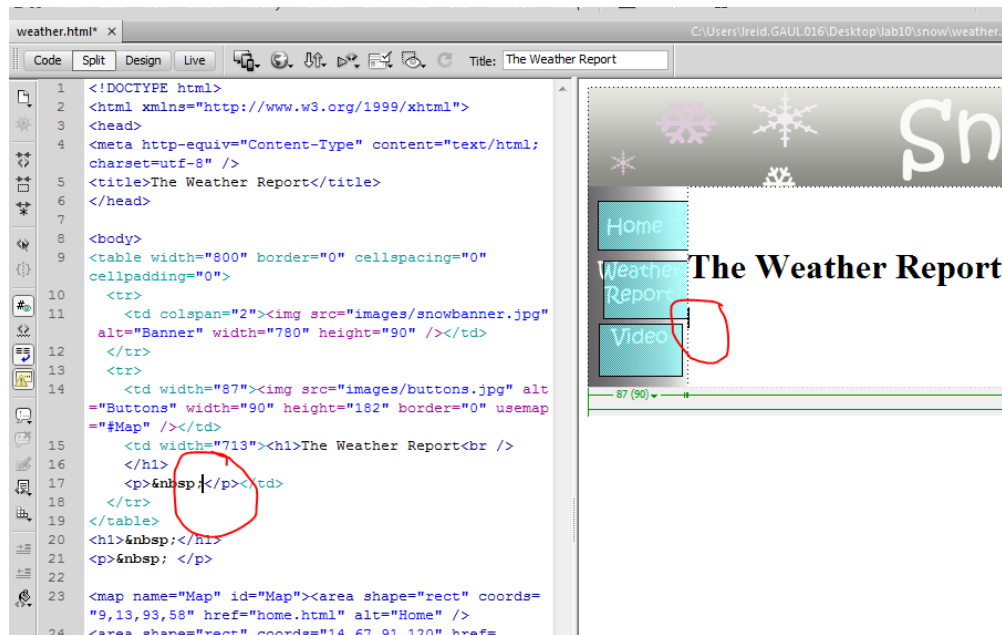
a) In the code window on the left, make sure your cursor is after the <p> tag and remove the text that says   but do NOT remove the </p> tag

b) Add the following code between the <p> and the </p>

```
<video width="640" height="480" autoplay>
  <source src="musicvideo/weather.mp4" type="video/mp4">
  Your browser does not support the video tag.
</video>
```

c) Notice the part in the code above that says **src="musicvideo/weather.mp4"** This is saying look for the subfolder called *musicvideo* in the current folder and then look for the file called *weather.mp4* inside that subfolder (that is what *src="musicvideo/weather.mp4"* means) REMEMBER: THIS IS CASE SENSTIVE, so you must type the subfolder name and the file name in with the same case as in the <source ...> tag as you name them on your directory. While it might work on a windows machine, it would not work when you SFTP the folder up to the internet, e.g. *src="MusicVideo/Weather.mp4"* would not have run if your file was named *musicvideo/weather.mp4*. Save your file and preview it in Chrome. (Please note: we had problems viewing the page in IE, please use Chrome or Firefox for this exercise)

d) Notice we have two problems: 1 the video is too big for our page and 2, we have no way to pause the video. Go back to the code and change the first <video ...> tag it to this:

```
<video width="200" height="150" controls>
```

e) Save your file and preview it again in Chrome, this time you should see controls for your video. .

18. Finally, let's tie up some lose ends.
   a) Close the **weather.html** page. Open the **home.html**.
   b) Make a hotspot on the button image on the left of the page that just covers the word **Home**.
   c) Make this hotspot link to the file **home.html**.
   d) Now, make a hotspot over the words: **Weather Report**, and make this hotspot link to the file **weather.html**.
   e) Make a hotspot over the word **Video**, make this hotspot link to the file **weather.html**. Save your **home.html** page and close it.

19. Open the page **index.html**, preview it and click on the link at the bottom of this page, then make sure that all the links you just put in your home page work.

20. Say good bye to your teaching assistant as you have now officially finished all the CS1033 labs ☺.

Good Luck on the Final Exam

and have a great break!