



Workshop Learning Resource 7 Working with Audio and Video

Overview:

Installing multimedia software. How to play media files. The difference between the most common file formats. How to begin to edit audio. What else would you like to do?

1. What else would you like to do?

Last week we asked if you would like to do something else other than look at multimedia, so, we have a number of options this week, including, installing and using Skype, web searching and social networking sites and using GIMP.

2. Installing multimedia software

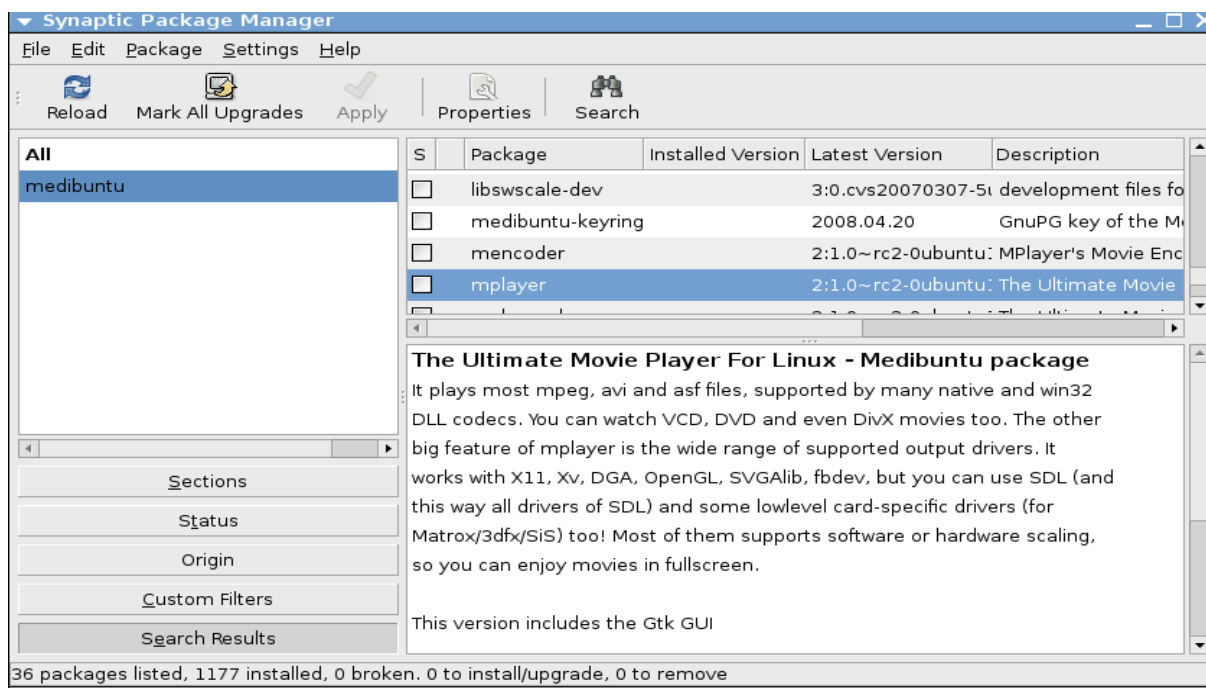
In the second session you began to download and install software from the web using apt.

Today we're going to install multimedia software, a file format converter and some codecs (these allow the computer to read different types of media file).

Medibuntu

Medibuntu is special software repository containing some useful multimedia software and codecs which will perhaps make playing media files easier.

To install these use Synaptic in the System menu under Administration.



Click on Search at the top of the main window and type in medibuntu.



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When Synaptic has finished searching, in the right hand window you will see all the software at the medibuntu repository.

In Session Two you installed using Synaptic. Install all the software at medibuntu.

Next, open a terminal and install the software below.

```
sudo apt-get install ffmpeg
```

```
sudo apt-get install vlc
```

```
sudo apt-get install lame
```

```
sudo apt-get install audacity
```

```
sudo apt-get install kino
```

```
sudo apt-get install k3b
```

Next you will need to install a file converter - MobileMediaConverter. You can download a package for Ubuntu here:

<http://www.miksoft.net/mobileMediaConverterDown.htm>

I have the MobileMediaConverter file and I can copy it to your desktop if there are problems downloading it.

When you have it, double click on it and gdebi, the graphical installation tool, will help you install it.

3. Media players - how to use them

Earlier this session you downloaded vlc (Video Lan Client) using apt. This is a media player for a large range of audio and video files.

But double clicking on a media file will open it in the default application, for instance, Movie Player. If you want another player to automatically open when you double click on a media file right click on the file - at the bottom of the menu you'll see "properties", click on this and choose "open with" along the top of the window. Then choose the media player you want to use, for instance vlc.



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4. Common file formats.

You will come across a number of different media file formats when on the web. Here's list of some of the most common ones and a brief explanation of what they are:

audio

wav - this is a native Windows uncompressed audio file format - CD quality audio is wav

aiff or aif - native Apple uncompressed file format - high quality like the wav format

mp3 - a compressed (smaller) file format for use on the web. Proprietary format.

ogg - similar files sizes to mp3 but this format is Open Source

mp4- a compressed file format often used by "pay for" download sites.

amr - a compressed format (very small) for mobile phones

video

avi - native Windows file format

mov - native Apple file format

flv - Flash video format, usually compressed, for use on the web, e.g. Youtube

ogg - this compressed format is Open Source

mp4- a compressed file format often used by "pay for" download sites.

mpg - a compressed file format for use on the web

3gp - very compressed format for use with mobile phones.

Compressed files will be smaller than uncompressed ones, that is, a higher quality file will be much larger than a lower quality one.

A CD quality stereo wav audio file is 10 times larger than a fairly good quality stereo mp3.

Bear in mind that once a file is compressed (made lower quality) it can't be uncompressed (made higher quality) again.

5. How to convert one file format to another

Earlier you downloaded and installed Mobile Media Converter.

Go to the applications menu, go to "sound and video" and click on MobileMediaConverter.

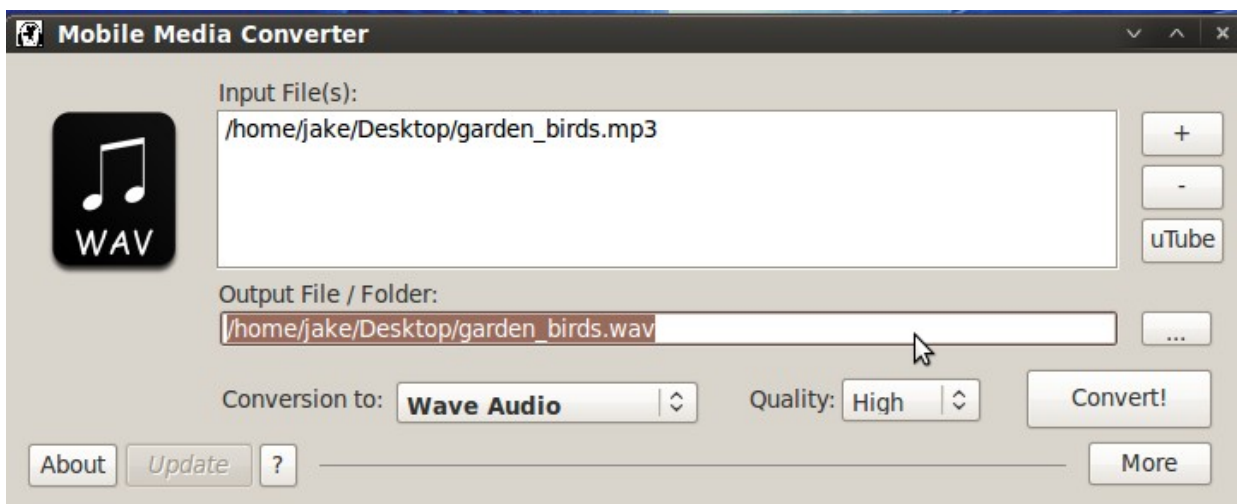
It has a drag and drop interface. Just drag and drop the file you want to convert into the main window and then choose what format you want to convert it to (the "conversion to" box at the bottom of the interface). Choose what quality



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you want (high, medium or low) and where you want the new file to be put. Then press "Convert!".

Don't forget to convert an audio file into an audio file format and a video file into another video file format!



6. Burning CDs of music

If your computer has a CD burner you can use K3b to create CDs. You'll find K3b in the "sound and video" section of the applications menu.

K3b has a drag and drop window for adding files to burn.

To create data CDs you can use any file format, but to create audio CDs that will play in a CD player all the files need to be in wav format - please ask if you need help with this.

7. Beginning to edit audio using Audacity.

Today we're going to look at Audacity, an Open Source, cross platform, audio editor.

First you'll need some audio files to play and experiment with.

Creative Commons audio files are available from FreeSound. You will need to register to use the site but it is very quick to do.

<http://www.freesound.org/>

I have some audio files if you'd like to use them.



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Once you have your audio files, check what file format they are.

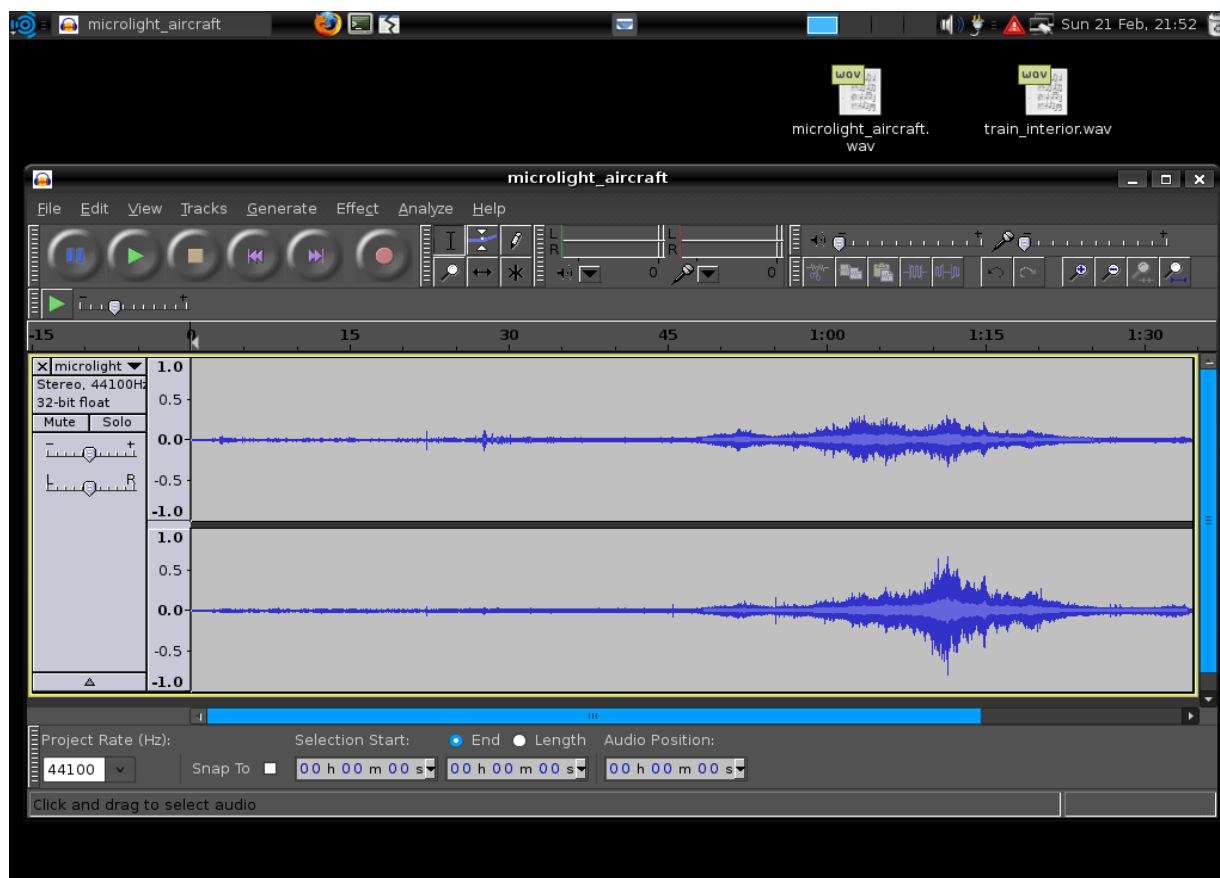
Although you can open a large number of different audio file formats in Audacity, to make it easier when you are beginning to edit use only wav files.

If the files you have downloaded are mp3s use Mobile Media Converter to convert them to wav (wave) files.

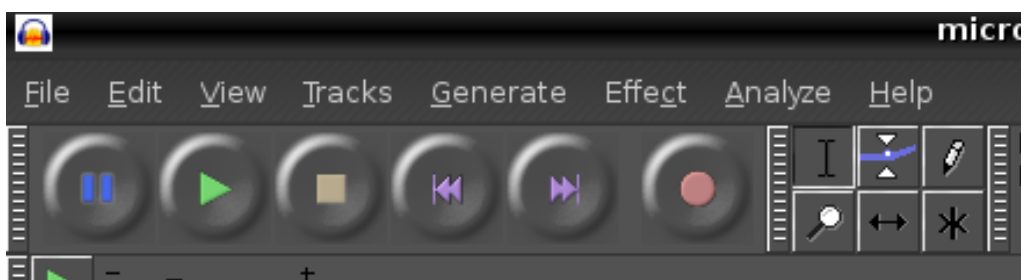
Wav files can have different "sample rates" e.g. 44100 Hz or 48000 Hz. If you have files with different sample rates let me know and I'll show you how to convert them.

First open Audacity by going to the applications menu, sound and video section.

When you first open it you will be asked which language you want to use. Then the main interface will appear.

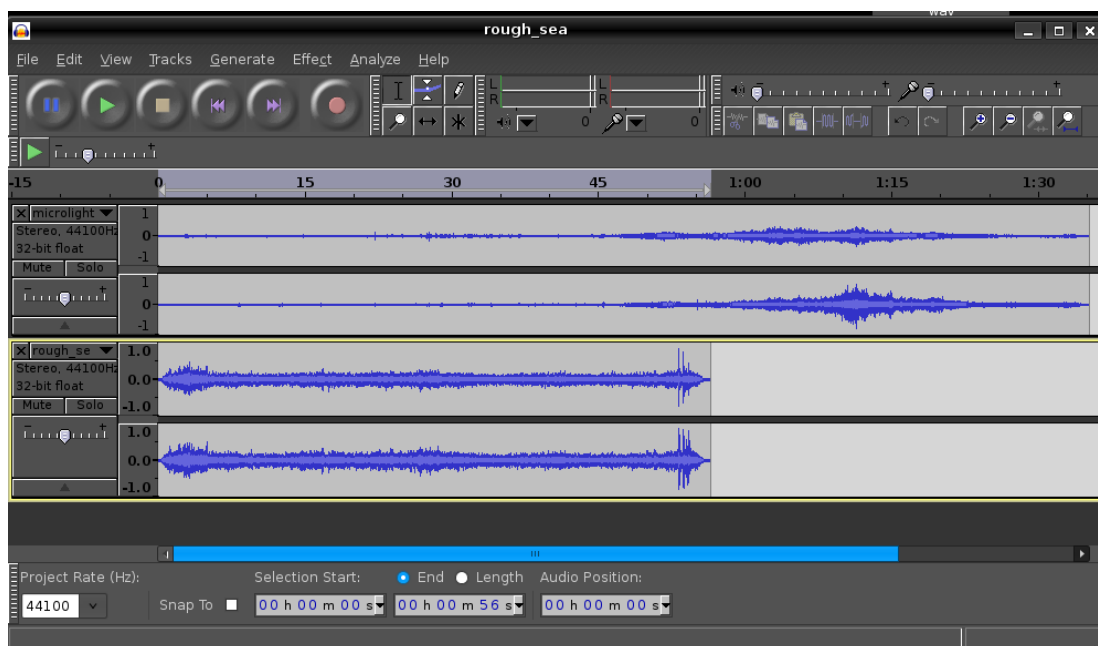


Drag a wav file into the window and it will open in Audacity like in the above screen shot.

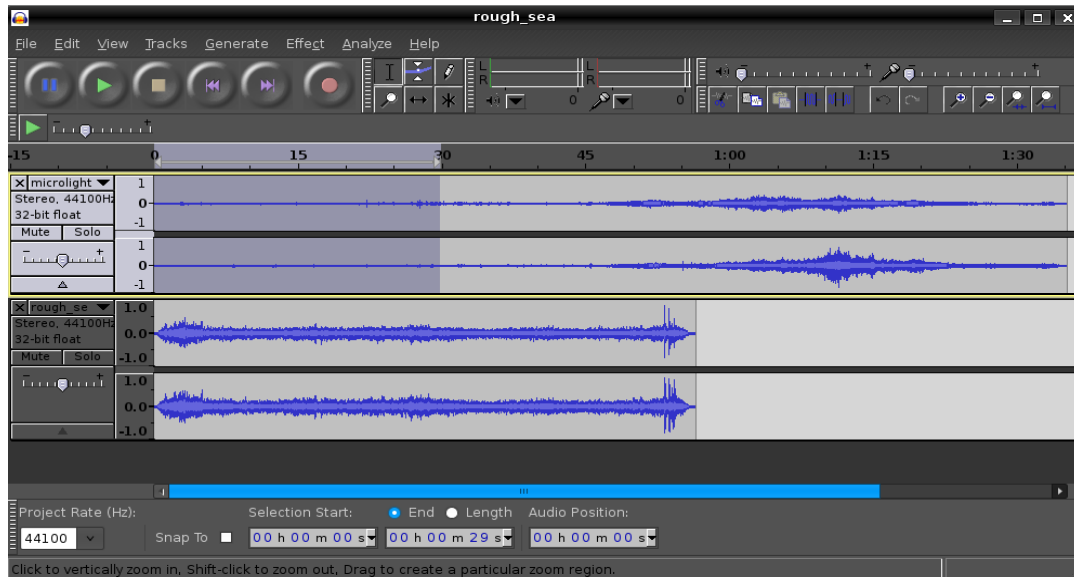


Above is the control panel. The large buttons have these functions: pause, play, stop, to the beginning, to the end and record. Please ask if you need help. On the right are the controls for different modes for the cursor (mouse). Below is a brief explanation of what they do.

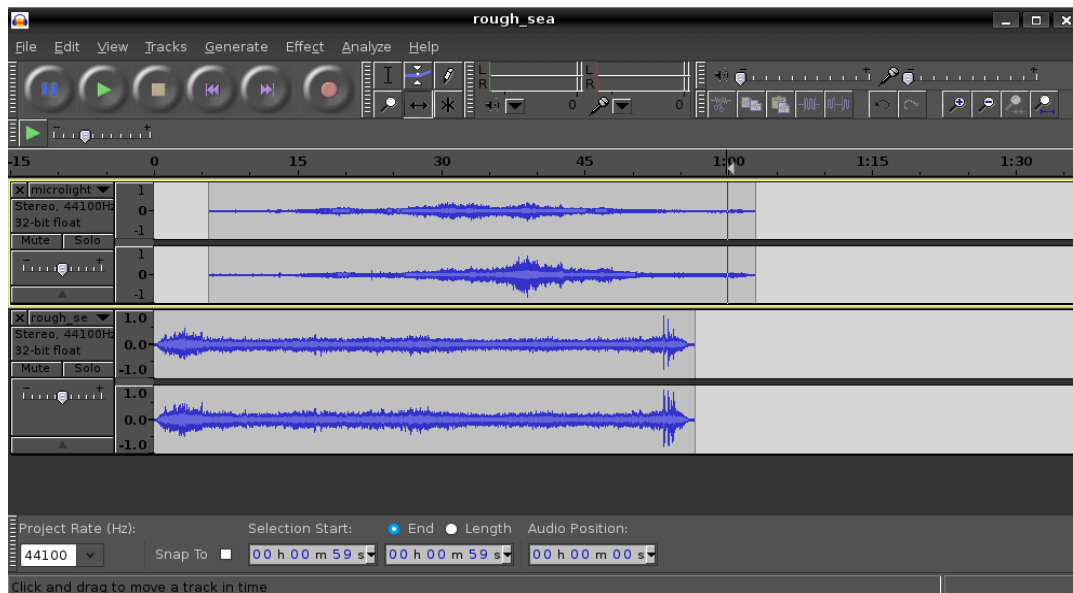
First, drag and drop another wav file into the main window.



It will open underneath the first one as above.
The top wav file can be edited as follows...
Use the mouse to highlight the part of the track you want to edit.



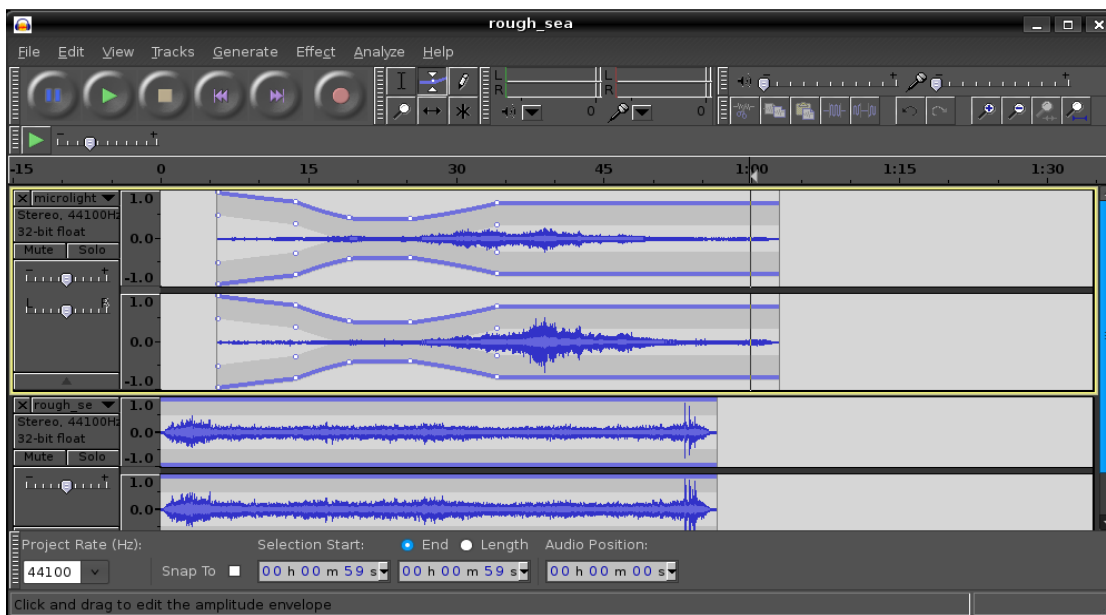
Click on the tack, then while holding the left click down move the cursor over the part of the track you want to highlight. You can now edit the highlighted piece by going to Edit at the top of the window and clicking on "delete".



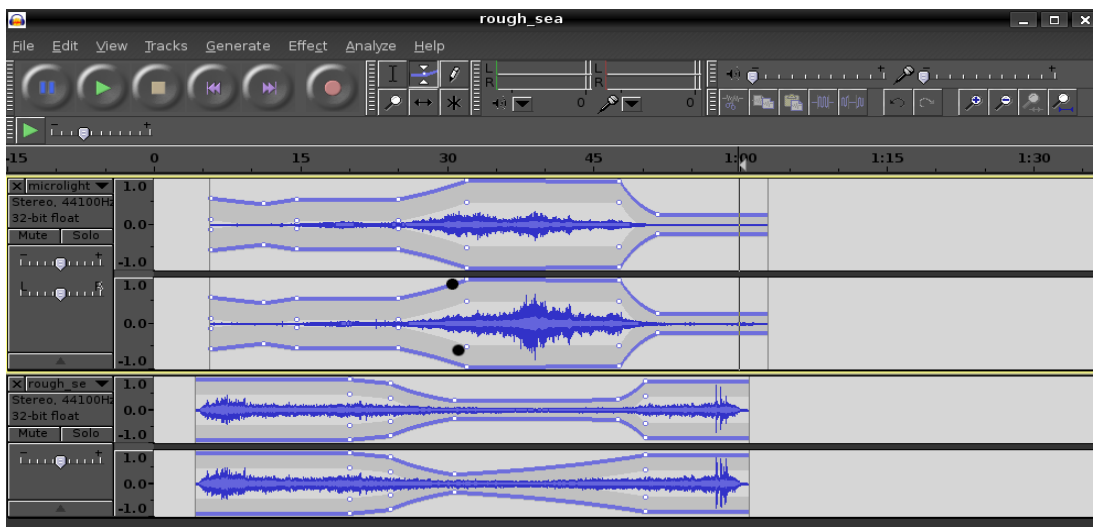
Using the "move" tool (the middle button on the second row of tools) you can move the track backward over the track underneath, as above. Just click on the track, hold down the left click and drag it using the mouse the way you want. The picture below show what you can do with the "envelope" tool (middle in

the top line of tools). This allows you to decrease the volume of a track at particular places.

Try clicking on the track. You should get something which looks like this.

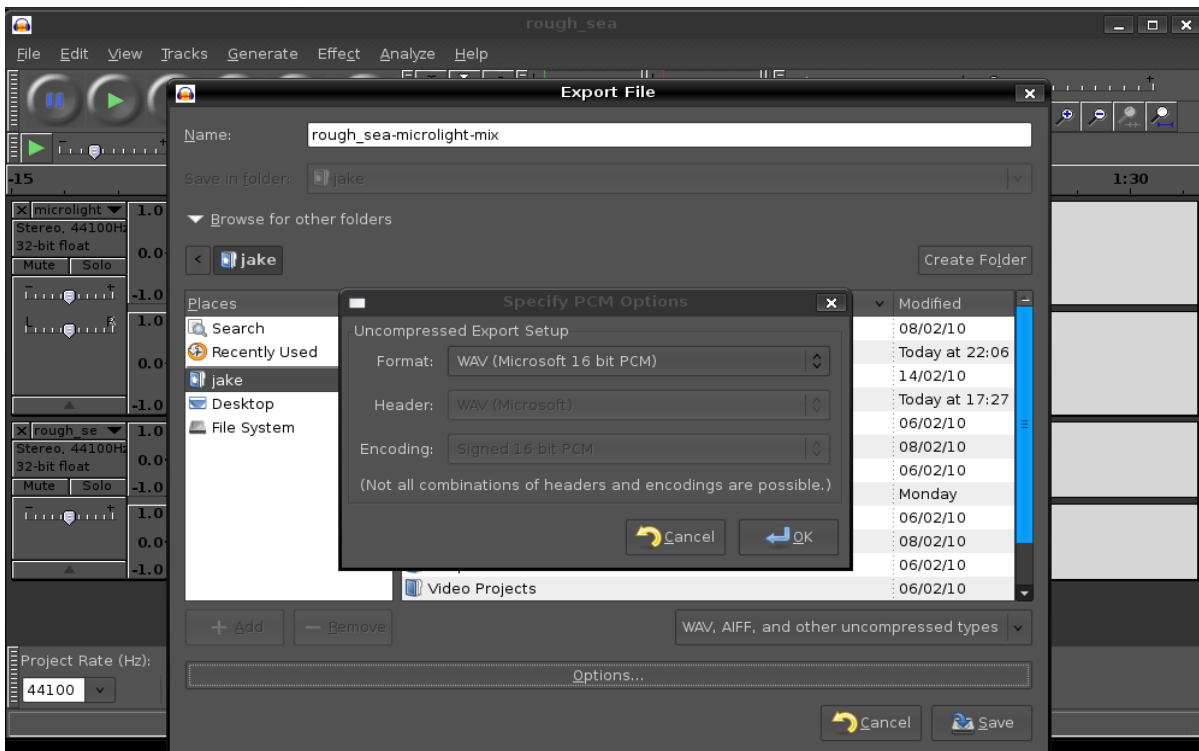


Try mixing the two tracks by fading them in and out.



When you are happy with the mix you can save it by exporting (in the File

menu). A dialogue box as below will allow you save the file in the format you want.



Conclusion:

Today you have installed multimedia software, learned how to play media files, looked at the most common file formats and begun to edit audio files using Audacity.