

Freeware Project

10th Grade IT

Freeware Software Grade 10

Freeware has always

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Investigation

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**Freeware Software
Grade 10****Freeware**

Freeware has always been software that everyone wants. Free reliable and good software that fills our needs without spending tens to hundreds of euros on finding the program that you want.

Many software writers spend days writing programs. Why would they launch them on the net and offer them for free?

Some people believe that it is unfair to buy a computer for 500 Euro and then have to pay 100 + - for a program to run on it. Those software writers, design and write programs and offer them on the Net for free. They then leave a link to their e-mail, bank account or website so that if you are thankful, you might just leave them a sum for their hard work.

This project is aimed on finding a program that is educational (not a game) and create a manual for it. It needs to be freeware. There are thousands of freeware programs on the net, and an unlimited choice, ranging from music editing to word processing, picture editors and designing.

I personally chose audio editing, because it is very hard to find a decent, and easy to use freeware audio editing program. And I know how much I do with my music editing program. At home I use Nero 7 Premium: Nero Wave Editor. It is a set of professional media software, ranging from Video to Music to Burning. I would like to find a program that is similar in its simplicity, audio formats, its processes (what it can do) and its layout.

I have searched the internet and found many programs that are music editing software and out of those I chose 2 programs that I believe match up the most to Nero 7 Premium: Nero Wave Editor.

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Choosing the correct program for this project.

To choose the best software for me to create a manual on, I will first compare two pieces of Audio Editing software and choose the simpler and more efficient one.

I created a simple criterion for the comparison and decision, so I judge each one of them fairly. Here it is:

Measure →	Score ↓	Layout	Simplicity	File Formats	Processes
	1				
	2				
	3				
	4				
	5				

The two programs I will be comparing are:



Audacity – Audio Editing, Mixing, Recording and Cutting



WavePad – Audio Editing, Mixing, Recording and Cutting

The two programs are freeware and can be downloaded from the Internet.



The downloads are available from most browsers on:



Audacity – <http://Audacity.sourceforge.net/>



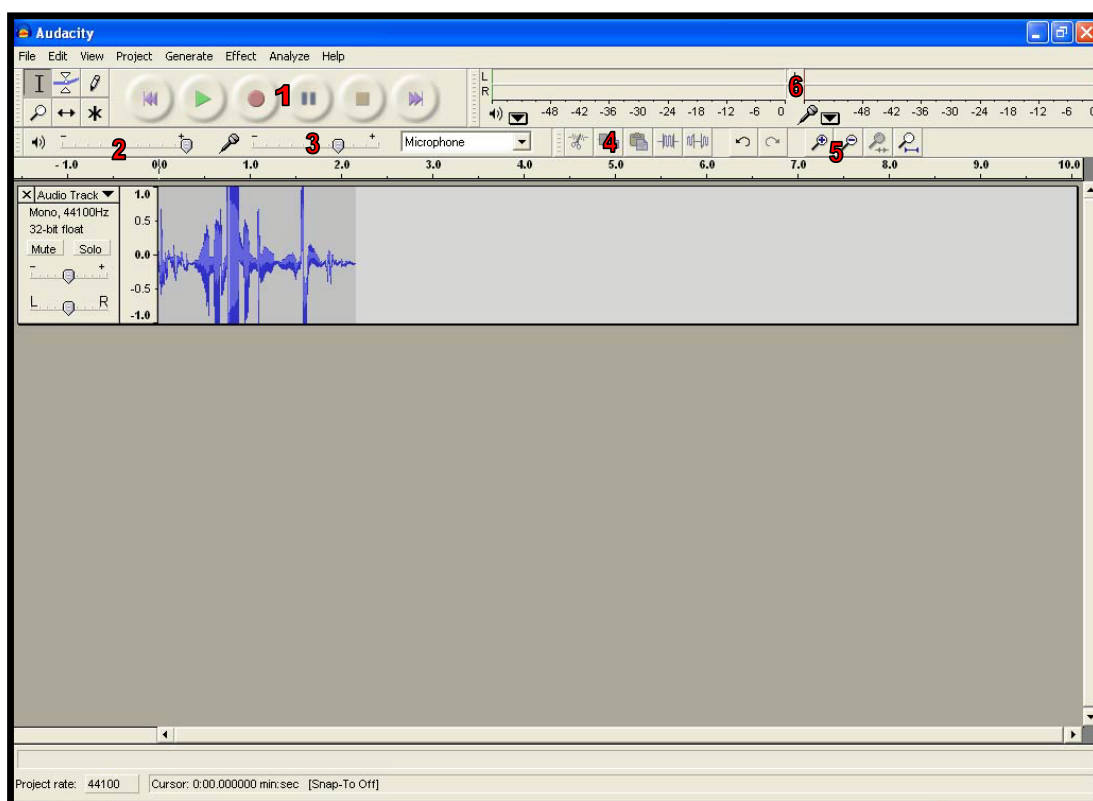
WavePad – <http://www.nch.com.au/WavePad/>

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Comparing **Audacity**

Now I will start with the comparison, I will start with *Audacity*.

First of all the installation of a freeware program makes an impression on the user, and *Audacity* has a professional installation process. And also importantly, there are no spy-ware, mal-ware or extra toolbars and programs that no one wants. Next when you run the program it looks pretty professional but simple.



You can see the buttons rewind, play, pause, stop, forward¹. You can see the volume pad² and the recording pad³. You have simple Cut, Copy and Paste⁴. Zoom in / Zoom out⁵ and a volume display⁶ on the top right. There are a few simple buttons on the top right that do simple tasks such as draw, select, magnify and crop. For simplicity I have to give this program a 5.

Audacity's layout is very simple. Most of the "every day use" buttons are on the toolbars when you open the program. Therefore I will give layout a 4.

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File Formats

Audacity Project format (AUP) is a simple format that allows *Audacity* to open projects and save them quickly with a high quality.

Audacity supports the following file formats:

- Sun Au / NeXT
- WAV (Windows Wave format)
- AIFF (Audio Interchange File Format)
- IRCAM (Institut de Recherche et Coordination Acoustique/Musique)
- MP3 (MPEG I, layer 3)
- Ogg Vorbis

Although most music editors, mixers etc, only use WAV, AIFF and MP3, Ogg Vorbis, is a simple music file used in portable devices, Sun Au / NeXT is used in telephones and is not high quality, IRCAM, used mainly by music researchers and is not a file format that many media players can play.

<http://Audacity.sourceforge.net/manual-1.2/fileformats.html>

For File Formats I will give *Audacity* a 3.

Processes

Audacity is a simple audio editing, recording and mixing software. It can

1. Record
2. Insert
3. Import
4. Export
5. Mix
6. Cut
7. Edit

These are the simple processes that an audio recording system should do. So this again is simple. But its also very easy to use and accurate. So although *Audacity* doesn't have much "Professional" tasks it has advanced processing capabilities and is again, very simple. I will give *Audacity* a 4 for Processes.

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Here are Audacity's final scores.

Audacity Measure →	Score ↓	Layout	Simplicity	File Formats	Processes
1					
2					
3				√	
4		√			√
5			√		

Adding them up I get a total 16 points.

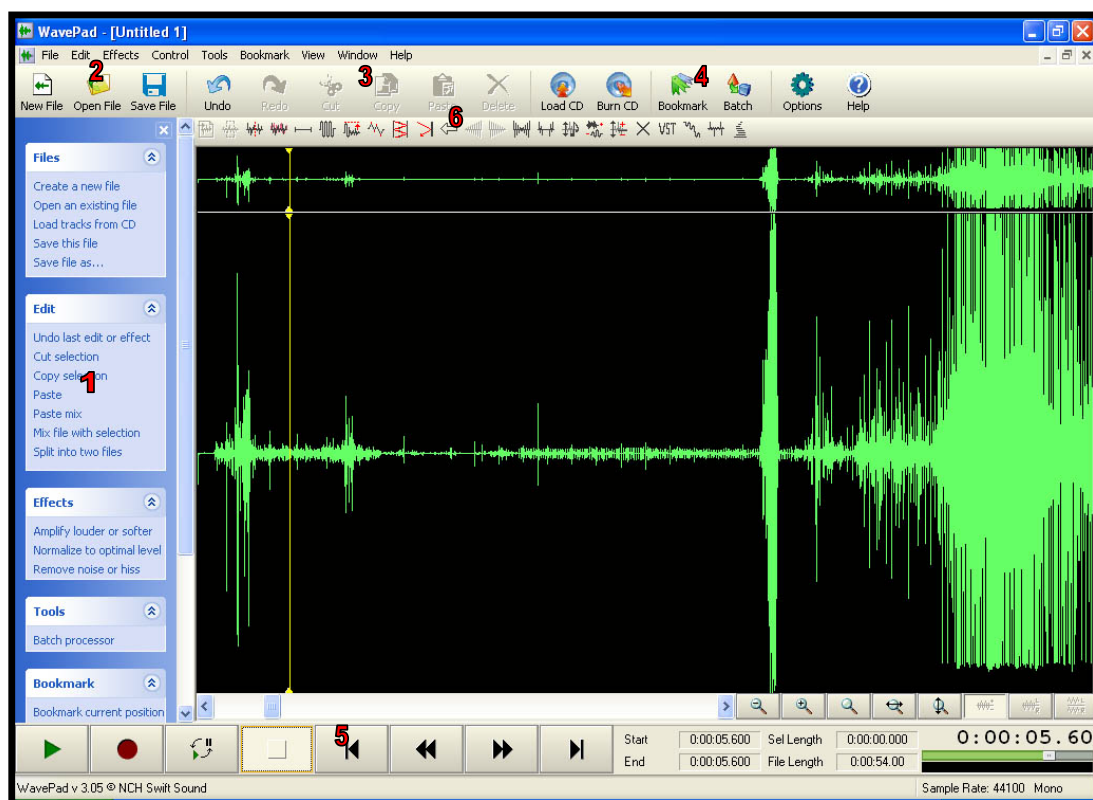
Audacity won many of them for simplicity, layout and its great processes.

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Comparing WavePad

Now let's compare WavePad.

The installation of WavePad is professional looking and simple. With a few clicks you are already installing the program. Through the installation you are asked if you want to install a few plugins for WavePad. The user may decide if he wants to or not install those programs.



WavePad looks somewhat like a Windows program. You can see the “visual options” on the right¹. Those make it simple for a first time user who enters the program. On the top of the window, there are 15 large icons that do simple to pro tasks. The first 3, New, Open and Save² are simple buttons that most programs use. Next to those buttons we have some more simple and everyday use buttons, Undo, Redo, Cut, Paste and Delete³. The next few buttons, except for Help and Options, are more advanced, used for Burning, Batching and Bookmarking⁴. At the bottom of the window you can see that all familiar Play, Record, Loop, Stop, Frame Back/Forward Rewind/Fast forward⁵. Under the simple

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buttons on the top, there are more advanced buttons, cutting, mixing, splitting etcetera⁶.

Simplicity

Although *WavePad* has a lot of simple features it also has a complete advanced toolbar that is automatically on. It has many simple buttons and there fore it will get a 4 for simplicity.

Layout

WavePad's layout is pretty simple, although it does have some more buttons and processes it is fairly simple. It deserves a 4 for its simple layout and large and easy to recognize icons.

File Formats

WavePad has many file formats including:

- WAV
- MP3
- Vox/Raw
- OGG
- AAC/M4A
- FLAC
- RSS
- M3U
- PLS
- WPL
- AMR

You can see that *WavePad* has many of the well known audio formats including, WAV, MP3, AAC, M4A and AMR, but it also includes some different formats including OGG, FLAC, RSS, M3U, PLS and WPL.

Those formats are different ways of compressing the audio and some are playable on different devices and systems.

WavePad Help (In Program)

For File Formats I will give *WavePad* a 4.

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Processes

WavePad is a simple audio editing program that can do mixing, cutting, editing, importing, exporting...and much more. But its main tasks that any user needs in an audio editing program:

8. Record
9. Insert
10. Import
11. Export
12. Mix
13. Cut
14. Edit

Although *WavePad* offers the same processes of *Audacity* including Burning, it is different. The buttons of *WavePad* are harder to recognize and understand what they do. *WavePad* does do the processes with great quality and also exports the audio files with great quality.

For its processes, *WavePad* deserves a 4.

Here are *WavePad*'s final scores.

<i>Audacity</i>	Score ↓				
Measure →		Layout	Simplicity	File Formats	Processes
	1				
	2				
	3		√		
	4	√		√	√
	5				

Adding them up I get a total 15 points.

WavePad won many of them for Audio Formats and its great processes.

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Final Scores

Now here are the final scores for each of the programs:

Audacity:

Audacity Measure →	Score ↓	Layout	Simplicity	File Formats	Processes
	1				
	2				
	3			√	
	4	√			√
	5		√		

Adding them up I get a total 16 points.

WavePad

Audacity Measure →	Score ↓	Layout	Simplicity	File Formats	Processes
	1				
	2				
	3		√		
	4	√		√	√
	5				

Adding them up I get a total 15 points.

This was a very tight comparison and *Audacity* won by 1 point. I believe that *Audacity* should have won this, while playing around with both of the programs, I like *Audacity* much more than *WavePad*, because of its simplicity.

To conclude the comparison, I believe that both of the audio editing software that I chose to compare are decent and worthwhile. While *WavePad* might be used for more professional use, many audio formats and a few more processes, *Audacity* is a great program for home use and is perfect for people who just want to edit a small piece of audio.

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I chose Audacity as my audio editing software. Now I will write a brief description of what the manual I will create could be like.

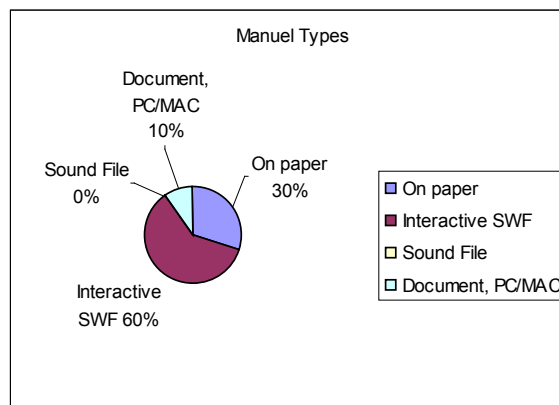
When writing a manual for a program, the first and most important thing, is to allow the learner to be able to use the program, and use the manual at the same time. So that cancels out a few easy options including PowerPoint, Movie Clip and any other presentation programs. I was thinking that it would be possible to either make a flash movie (.swf) that has a small window (doesn't cover the whole screen) and has buttons for Next, Back, Home, Repeat etc. It will be "pinned" which will mean that it will always be at the top of the screen.

When I want to learn how to create a program, I like having visuals, images, arrows sometimes even an animation of how to do the thing I am trying to learn.

I will run a quick questionnaire and ask people what kind of manuals they prefer, either:

- On paper
- Interactive With Animations and Images (.swf)
- Read File on PC/Mac
- Sound File

	On paper	Interactive SWF	Sound File	Document, PC/MAC
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				



Here is the survey that I made in class. I found that most people would like an interactive "teacher" to help them learn the program. I am thinking of creating a Flash based tutorial with text and sound. Using a "speech" program I would get the computer to "speak" because I would prefer not to use my own voice. (It sounds funny on a mike...and I am not the perfect narrator).

**Freeware Software
Grade 10*****Design Brief***

I will design a training package that will teach users to use the program Audacity quickly and easily. The package will include a training *program* for a Student to Computer, and a Teacher in front of class Situation. Both *programs* will be created using Macromedia Flash 2004 with the assistance of the program Camstudio and Audacity.

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Considerations

That I need to take while designing the training package.

How will I design it?

I will use Macromedia Flash 2004 and some help from the IT support people at ISA.

Which sources could I use?

I will use the internet as my main source of information including downloads and images. I will use students and teachers in my class to help me with surveys and tests.

What will the person who wants to learn how to use the program require on his PC?

A modern computer with speakers and a sound card. Running windows 98 or Newer. The computer must have Flash Player 7 installed.

- Speakers
- Sound Card
- Windows 98 +
- Flash Player 7
- CD Rom Drive
- 10 MB free memory for Audacity
- Internet Connection for Audacity

How will my tutorial be spread?

Via CD or a downloadable file from the internet.

Who would want to use it?

People who don't like to read long manuals and want to get started quickly.

People who are very slow readers or people that don't learn well through reading. People who might have difficulties with English reading, but can understand speech. There is also a visual after the speech from the tutorial so that even an English limited person could understand.

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Design Specification

I want to create an interactive teaching program for the learner, and another one for a teacher in front of class situation.

This program that I am creating will be based on the animating program Macromedia Flash 2004. I picked that program because I know how to use it and it is easy to export into a file. Most computers these days can run the files that it creates and it has pretty good quality.

In my tutorial program there will be a woman speaking. That technology is called text to speech or TTS. It does not work on all computers because it uses Java technology. But because I am using CamStudio to record what's happening on the screen it becomes a video files, which I will then import into the Macromedia Flash 2004. Using Flash, I will then export it into .swf format which almost every computer can run.

The tutorial will basically open with a list of available tutorials and each one of the tutorials will be clickable and will lead to that tutorial. Each tutorial will be based on a "scene". The scene will have a woman speaking and explaining about the tutorial. There will be a start button and a

The program that I am making MUST be under 600 MB. So that it can go on a CD. I am not sure how big the final file will be, the test file is around 3 MB, and it is only 1 tutorial. The final program will be at least 20 times bigger, so around 60 MB. That will be ok because a 60 MB file downloads in about 21 minutes on Dial-up. Here is my calculation:

Speed of average Dial-Up Connection

$$60 \times 1024 / 48 / 60 = 21$$

Size of File Kilobytes in a Megabyte Minutes in an hour Minutes to download

This means that if the file is 60 MB it will be ok for the learner to download. Audacity is a fairly small program to download so this might look a little edgy next to the small program you need to download, Audacity.

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The “teachers” edition will be much smaller(in Megabytes), as there will be much less video in it and more images with transitions and arrows.

To run the program smoothly the computer will need to have speakers and Macromedia Flash Player 7 or higher.

These are design the specifications of my project.

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Notice

After working with Audacity and reading its help contents, I understand that there will be lots of tutorials that I will need to create. That means more recording of the speaking woman and more low quality sound. I am thinking that it will be better to use CamStudio to record the desktop while showing the tutorial and use a different program such as Nero 7 Premium: Nero Wave Editor to record the sound coming out of the speakers (Wave Out Mix).

I think that is a better idea because the sound quality will be much better, I know this because I use Audacity to record sounds that are being played from the speakers, and it produces great audio quality.

I will need to discuss this with _____ before taking this step. It will mean a new design specification. Here is a new possibility for the design specification.

New Design Specification

I want to create an interactive teaching program for the learner and another one for a teacher in class situation.

The program that I am creating will be based on the animating program Macromedia Flash 2004. I picked this program because I know how to use it and it is easy to export into a file that most computers can run. It has good quality and gives a range of options for the program that I want to make. One of the important things is that I can create buttons such as Play, Next, Back, Home.

In my tutorial program there will be the sound of a narrator that will explain what is going to be taught in this tutorial and then a visual of Windows Desktop will appear and animate the tutorial step by step.

This is a perfect way to learn because you can listen and see and use Audacity while learning how to use it.

The tutorial will basically open with a list of available tutorials and each one of the tutorials will be clickable and will lead to that tutorial. Each tutorial will be based on a "scene". Each scene will have an introduction to the tutorial, which will be read out by a speaker using Text To Speech. Then a next button will appear and the tutorial will start step by step, using visuals of the windows XP desktop and sound from the woman speaking and explaining how to continue, step by step.

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The training package that I am making must be under 700 MB, which will include the learner and the teacher in front of class situation programs.

The program shouldn't be too big, because it will be mostly sound and partly video, which will finally be exported into flash format, .swf. A rough guess of the file size, I would say would be about 50 - 100 MB, the total training package.

Here is a calculation of an average internet connection via Dial-Up and how much time it would take to download a file.

Speed of average Dial-Up Connection

$$75 \times 1024 / 48 / 60 = 26.$$

Size of File Kilobytes in a Megabyte Minutes in an hour Minutes to download

This means that if the file is 75 MB it will be ok for the learner to download. Audacity is a fairly small program to download so this might look a little edgy next to the small program you need to download, Audacity.

The “teachers” edition will be much smaller(in Megabits), as there will be much less video in it and more images with transitions and arrows.

To run the program smoothly the computer will need to have speakers and Macromedia Flash Player 7 or higher.

These are design the specifications of my project.

Testing against the Specification

1. If all files fit on a CD then it is under 600 Mb
2. Test teachers tutorial with a teacher who may have to use Audacity (Head of English)
3. Test students tutorial on a number of students in the music department
4. Test download time on school network
5. Test download time from school to home

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6.

Areas of Interaction

This project relates to health and social education, community service and approaches to learning.

Health and Social education

I am not sure if this relates to health, but it does relate to Social Education. This program will teach users how to use a freeware program called Audacity. The teaching program is interactive (interact : socialize) which relates to social. As the program will have Next, Stop, Play buttons the user will be able to learn at his/her pace.

Community Service

Community service involves helping and serving the community. I am doing this through this project, by creating a manual that will teach users for free* how to learn the free*ware program Audacity. I believe that this is a great way to serve the community, by giving them free tools that will help them use free software.

Approaches to Learning

Creating this program includes lots of Approaches to Learning. I am learning the best ways to teach someone, I am learning how to create teaching programs and how to test them. This is a great experience.

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Grade 10****Investigation Evaluation**

The investigation process of this project was pretty long and dragging but I did learn a lot of things that will help me later on in the planning and the creation stage. I am very VERY happy with the investigation and the way it looks right now. I ran through the checklist a few times and everything is in place.

The investigation part is very important as a base for the rest of the project. Without the investigation the planning can't go on.



Through the investigation stage I decided on much of how my project will look like. I believe that this will change a bit while planning, and finally creating. As I will crash into difficulties and problems, and then will need to solve them.

I am confident and am ready for the planning stage. In the planning stage I will begin laying out steps to the creation of the project.

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Bibliography

ISA Computer Technology Tutorials
Really useful tutorials as a part of ISA CT course

<http://audacity.sourceforge.net/>

Main source of the software I will use, it is all freeware.

http://www.kirupa.com/developer/flashcs4/intro_animation_flashcs4_pg1.htm

Brilliant site for Flash animation tutorials. I need to spend some time exploring this site.

<http://www.adobe.com/devnet/flash/>

Loads of links to Flash help and tutorials

<http://www.learnflash.com/>

Excellent tutorial and video to consolidate some of my knowledge of Flash

The main site for working with Flash. Really helpful, but a bit lacking in detail

<http://www.volunteeringaustralia.org/files/R3Q9Y0OQY0/Revised%20Writers%20Guide%202.pdf>

Great Australian website with ideas on writing tutorials