

# Deliverable 1

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## Project Description

This project will be about a web server I will show you how in a virtual machine on ubuntu how it can run a website. A little summary of what a virtual system is it is a virtual machine that emulates a computer system which is cool. My web server will be about where you can rate what movies, shows, and anime you will be able to also leave comments on your rates as well. You'll also will be able to create an account, note that the only way to rate and comment is to have a an account. There will also be a ranking system to where based of how many people agree with your review you will level up each level will have a name title. My goal of making this webserver is to be able host an website from a virtual machine to where people can give reviews.

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## Project hardware and software requirements

- OS: Ubuntu 20.04 64Bits
- HDD: 50 GB
- RAM: 2GB
- Video: 64 MB or Higher
- CPU: 2 Cores

### software requirements

CPU and number of cores Amount of RAM Amount of Free Storage

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## What is Linux?

Linux is an free open source (OS) operating system that anyone can use and do whatever they want with it such as coding. Linux runs everything such as smartphones and home appliances like alexa or a touch screen toaster that shows how long will it take or how long to set time for. Linux is way faster and more secured then windows. Windows have some much unnesscery programs that are installed and linux doesn't. linux also is used in other important stuff such as networking devices such as a router which linux can be used for its OS.

### Short history of linux

- Event 1: On October 5, 1991 Linus has announced the first official version of Linux.
- Event 2: After Linus released Linux 0.02 he began working on version 1.00 of Linux Kernel.
- Event 3: Linux Kernel was released in 1994.
- Event 4: Linux operating system was created in the 1990s.
- Event 5: The mascot for Linux was announced in 1996.
- Event 6: Linux was originally called freax.
- Event 7: Linus Torvalds is the one who created Linux.
- Event 8: in 1992 Linus licenses Linux under the GPL.
- Event 9: in 1998 announced to support linux.

- Event 10: The IBM runs an famous Linux AD durning a superbowl.

## Linux distribution

Linux Distribution or another name for it distro is an operating system that >have's linux kernel which where there's a bunch of other operating systems to be downloaded. Also all of those operating systems like Ubuntu are free to use so there is no need to paying anything which make's operating systems like ubuntu out performs windows. Another thing is some distro can be run on smartphone which is another cool thing about theses free open source operating system. **Slackware**



Slackware is an advanced Linux operating system which it is know for how easy it is to use this can help many people who is beginning to learn linux. Slackware has always been reliable on for results and plus slackware tools are all written in shell which is amazing. Many people finds slackware so easy to use because of not needing really to install allot of software and for it's simplicity which again can really be good for beginners. Slackware up to this day is still live and well and what is surprising is that slackware is one of the oldest linux distro. Because of slackware simplicity many linux users considered it to be one of the most advanced and technically. In summary slackware brings to people and easy to use and being one of the oldest distribution.



**Debian**

Debian is an free operating system that can be depended on and can be accessed by anyone debian comes over 59000 packages. Gaming on this linux operating system is also a good option as from windows games won't run well as debian. Most devices will be ables to use debian because it's supported by linux kernel which makes it and amazing (os) operating system. most other linux distributions like Ubuntu adn Tails are based on debian. Some company who have numerous amount of customers logging onto there website can cause lag or shutdown which is debian can come into play as it is known for having good server hosting. Debian is a free os that can be reliable on for both gaming and have servers as it's OS which debian is also easy to manage.



**Ubuntu**

Ubuntu is a open source software operating software based on debian GNU/Linux ubuntu GUI is customizable. It was designed for many devices such as computers, smartphones and network servers which is very cool how the canonical Ltd company made it possible to compatible for those devices. If there's other disros that is to hard to use Ubuntu will be the best choice because it is also good for beginner's, highly recommend it. One thing is that Ubuntu outperformed windows 11 because in windows installing are very slow, Ubuntu have's faster install times and fast browsing. Ubuntu is mostly used on personal computers and ubuntu let's users install any other browser. Ubuntu being an open source OS and is able to even be installed in a smartphone is amazing.



**Kali Linux** Kali Linux base is debian this os aims for security and to do more security research also it can be used for advanced penetration testing. More about penetration testing is mainly towards people who wants to test the security of a computer. Kali linux supports users to write in their own native language which is an really important for users. There are allot of tools that is bundled with kali which is appealing to people who are interested in cybersecurity. Many professionals such as Network Architects who are to ensure that networking environments is secured. Kali linux is a good testing ground to see if the security is good enough against attackers.



**Red Hat Enterprise Linux** Red Hat is an free operating system one if the contributors to Linux kernel red hat also improves security and make sure infrastructures performs and remains stable. Red had can provide storage for companies as there are many big companies. On march 26 1993 connecticut and the founder of red hat is Bob Young and Marc Ewing, the two founders have made an fantastic OS for people with business. Red hat can also be used for designing and contracting large groups of storage. There is one tool in red hat that is called red hat satellite which is aimed for to monitor red hat enterprise linux. Red hat is an helpful free operating system for both business and for whom ever wants to try out what tools red hat have's.



**Fedora** Fedora is an very well know open source linux-based operating system, and is used by many users who are familiar with software's like red hat. Fedora is an safe and secure os and it will not steal your data such as windows which is incredibly unfair for microsoft to do that. Fedora can also be used for making webserver or an database server etc. Besides other OS Fedora doesn't really have as much repositories and that in a way is showing how there are way more less tools in fedora then other OS. Fedora is intended for GNOME desktops because it provides an nice environment that run really smooth. Even if Fedora doesn't have many repositories it's still a free to use os that have's an nice smooth interface.

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## Open Source VS Closed Source

Open source software is something that enables users to take full control of a software with no restrictions to the user. The price of open source is way less then windows or even yet allot of open sources software are free which is good because the product can gain allot of attention. Programmers can compete with each other and share their work to the public if they want to. However on the closed source there are so much restrictions on what the user can do which is saddening. Prices on closed source software is way to high for people who wants to try out their software out. For programmers they wouldn't be able to compete with each other because again prices and being a closed source.




### Advantages of open source

- You can spend less on hardware.
- Allot of the open sources provides security.
- It is free to use so no need to spend \$200 on OS system cough... cough... windows.

### Disadvantages of open source

- Some softwares will be difficult to use
- Open source is free which means any linux os can't be used.
- Not always supported on some devices.

### Example of Open Source software

Software	License	Logo
Gimp	GPL-3.0	
jquery	MIT	
LibreOffice	MPL-2.0	
PHP	PHP-3.0	

## Closed Source

Closed source is not free software where the software's publisher is in control of the software and no one can change it but the publisher. Which limits allot of freedom from the user and which it isn't right because if the user pay for the software they should be able to have full control



### Advantages of Closed Source



- You will be given full access.
- Provides more security to the user.
- More support will be given to the user.

### Disadvantages of Closed source.

- There can be security risk.
- Only the developer can view and edit the source code.
- Source code will not be released early.

### Example of Closed Source

Software	License	Logo
Skype	LGPL	
mac OS	LGPL	

Software	License	Logo
Opera	LGPL	
Windows	LGPL	

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## The Free software movement

The free software movement that people want to be able to have full control over their software to be able to know how can they improve it and spread the documents about the software. Now especially if the software was paid users should be able to take full advantage of that software.

### The 4 Freedoms

- To be free to run the program anytime you want.
- To be able to change the software to your liking and see how it works.
- The freedom to be able to send a copy to your friend.
- The freedom to give everyone your version copy to everyone.

### The GLP License

Thus us a GNU General Public license that gives users the ability to do whatever they want like study and modifying the software. GNU is a free software that anyone can use and also there are other multiple GPL such as GPLv2 and GPLv3 so there are many options.

## Sources

1. <https://openedreader.org/chapter/stallmans-four-freedom/>
2. [https://learning.lpi.org/en/learning-materials/010-160/1/1.3/1.3\\_01/](https://learning.lpi.org/en/learning-materials/010-160/1/1.3/1.3_01/)