

# Week Report 3

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## Summary Of Presentations

### Introduction To Linux

#### What is an operating system?

Provides all of the fundamental features of a computer.

#### Aside from a kernel, what other parts make an operating system?

- Command - Line Shells
  - Commands on a shell to interact with computer
- Graphical User Interface
  - Icons, Menus, and mouse pointer to interact with computer
- Utility and Productivity Programs
  - Tools like
    - Web Browsers
    - Document Processors
    - Text Editors
- Libraries
  - collections of programming functions

#### What is a Linux distribution?

Linux Distribution is the complete Linux system package Made up of

- Linux Kernel
- Core Unix Tools
- Supplemental Software
- Startup Scripts
- An Installer

#### What is Ubuntu?

A Linux Distribution based on 4 principles

- Free Of Charge
- Usable by people in local language and with any disabilities
- Freedom to Customize and Alter
- Software to whatever they see fit

#### Define the following terms: Open Source, Closed source, free software

- Open Source
  - The software may be distributed for a fee or free. The source code is distributed with the software
- Closed Source

- the software is not distributed with the source code. The user is restricted from modifying the code.
  - Freeware
    - Software is free but the source code is not available
  - Shareware
    - the software is free on a trial basis
- Free Software
  - The software is distributed with the source code. The software can be free of charge or obtained by a fee.

### **What are the 4 freedoms defined by the free software foundation?**

1. Freedom 0
  1. Use the software for any purpose
2. Freedom 1
  1. Examine the source code and modify it as you see fit
3. Freedom 2
  1. Redistribute the software
4. Freedom 3
  1. redistribute your modified software

## **The Basics Of Virtualization**

### **What is virtualization?**

Creating virtual versions of a computer, allowing you to run multiple machines inside of one

### **List 3 benefits of virtualization**

- Multiple OS Running At Same Time
- Reducing Cost Of Physical Hardware By Not Having To Purchase An Entire Network
- Save State Will Allow You To Save A Computers State Before Any Changes Are Made To Test For Bugs Or Errors

### **What is a hypervisor?**

Software or Hardware in charge of creating, managing, and running virtual machines.

### **What is virtualbox**

An Application/Program That Allows For Virtualization

## **Exploring Desktop Enviornments**

### **What is a desktop environment? (Provide 3 examples)**

An implementation of the desktop metaphor made up of a bundle of programs running on top of an Operating System

- Desktop Settings
  - Programs that allow you to make configurations

- Display Manager
  - Choose between desktop environments and users
- File Manager
  - This Program Allows you to perform file maintenance

#### **List 4 common elements of desktop environments**

- Icons
- Menus
- Favorites Bar
- Desktop Settings

#### **What is Ubuntu's default desktop environments?**

Gnome DE is the default desktop in ubuntu.

#### **What are the official flavors of Ubuntu?**

Ubuntu Flavors are a unique way to experience Ubuntu. They all carry their own default applications and settings. Developed mostly to fit specific groups of people.

- Edubuntu
  - Crafted specifically for education world. Comes with a large ecosystem of education softwares and educational tools.
- Kubuntu
  - Productivity based applications like office, email, photography and music.
- Lubuntu
  - Mainly on Using the Internet, chatting, and playing
- Ubuntu Budgie
  - fast, fully customizable version of Ubuntu
- Ubuntu Cinnamon
  - Provides a traditionally more modern experience in using Ubuntu
- Ubuntu Kylin
  - Chinese based version of Ubuntu primarily focused on new users
- Ubuntu MATE
  - Usable with very old computers since it requires so little specs to run properly
- Ubuntu Studio
  - Focused on studio work applications such as, musicians, graphic designers, or streamers
- Ubuntu Unity
  - Unity is focused on presenting a slick and elegant way of having a designated workflow
- Xubuntu
  - usable on older and newer computers Xubuntu prioritizes a smooth desktop experience

#### **What Is A Shell**

##### **What is Bash?**

A program that provides interactive access to the Linux system.

##### **How do you access the Linux CLI?**

Runs as a regular program that is started whenever a user logs into a terminal

### **What is a console terminal?**

A console terminal is a text interface for your machine that uses Command Line Interface

### **What is a terminal emulator?**

A program that allows you to access the linux CLI (Command Line Interface)

### **Provide 3 examples of Linux commands**

`sudo apt install pink-pony`

- Installs the racing game on Ubuntu using apt package from Debian

`clear`

- clears the terminal

`python3`

- Allows the Bash Shell to access and run python code

## **Managing Software**

### **Which command is used for updating ubuntu**

`sudo apt update`

- sudo gives you administrator control
- apt is the Debian package for official Ubuntu updates and software
- update is the command that tells the computer to update

**\*\*Which command is used for installing software. Provide an example.**

`sudo apt install pink-pony`

- Installs the racing game on Ubuntu using apt package from Debian

### **Which command is used for removing software. Provide an example.**

`sudo apt remove pink-pony`

- Removes the game pink-pony from your machine since it cannot run the game smoothly and it is trash.

### **Which command is used for searching for software. Provide an example.**

`apt search "racing game"`

- will give you a list of software that matches the description of what is between the quotes.

### **Definition of the following terms:**

Package

- archives of software, configuration files, and info on dependencies. (The same as a .exe file on windows) Library
- Reusable code that can be used by more than one function or program Repository
- Large collection of software for downloading
  - Linux has
    - Main - Canonical free and open source (from the distributors)
    - Universe - Community maintained
    - Restricted - proprietary drivers for devices
    - Multiverse - restricted by copyright or legal issues