

# Week Report 3

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## Summary of presentations

### Introduction to Linux

**What is an operating system?** An operating system provide the basics tools to be able to use the computer's hardware. A operating system allows to have all the fundamentals software functionalities of a computer.

**Aside from a kernel, what other parts make an operating system?** Command-Lines shell, Graphical users interfaces, utility and productivity programs, libraries.

**What is a Linux distribution?** Linux is a Unix-like operating system popular in academic and business environment. In addition, some of its characteristics are that it is a open source software, available free charge, it can be installed on almost any system as it supports almost every processor architecture.

**What is Ubuntu?** Ubuntu is a Linux distribution, free and with community and profession support. It includes pieces of software such as, LibreOffice, Web browser Firefox, Email client and AppStore.

**Define the following terms: Open Source, Closed source, free software** Open source: It is a development method for software that harnesses the power of distributed peer review and transparency of process. It means that 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 not permitted to modify the code. Free software: The software is provided with the code . It can be free of charge or can have a fee.

**What are the 4 freedoms defined by the free software foundation?** Freedom 0: Use the software for any purpose. Freedom 1: Examine the source for any purpose. Freedom 2: Redistribute the software. Freedom 3: Redistribute your modified software.

### The basics of Virtualization

**What is virtualization?** Virtualization is defined as creating virtual versions of something. It is often used to let multiple OSs run on one physical machine at the same time.

**List 3 benefits of virtualization** 1- Allow application to be tested before installing them on a host machine. 2- Offers the ability to save the state of machine at given time and roll it back or forward. 3- Allows running multiple OSs on one machine without dual booting.

**What is a hypervisor?** Hypervisor/ Virtual Machine Manager (VMM), is a software or hardware in charge of creating, managing, and running virtual machines. There are two types of hypervisor: Type 1, which run directly on the hardware and type 2 which is an application that runs on top of an operating system.

**What is virtualbox** VirtualBox is a powerful x86 and AMD64/Intel64 virtualization product for enterprise as well as home use.

### Exploring Desktop Environment

**What is a desktop environment? (Provide 3 examples)** A desktop environment (DE) is an implementation of the desktop metaphor made for a bundle of programs running on top of a computer operating system, which shares a common GUI, sometimes described as a graphical shell. Some examples of desktop environment are KDE, GNOME and Cinnamon.

**List 4 common elements of desktop environments** 1- Panels 2- Menus 3- Launcher 4- File Manager

**What is Ubuntu's default desktop environments?** GNOME 3 is the defaulted Ubuntu DE.

**What are the official flavors of Ubuntu?** Canonical offers an official flavor of Ubuntu with the xfce DE called Xubuntu.

What is a Shell?

**What is Bash?** Bash shell is a program that provides interactive access to the Linux system. It runs as a regular program and is normally started whenever a user logs in into a terminal.

**How do you access the Linux CLI?** A command-line interface is a means of interacting with a computer program where the user issues commands to the program in the form of successive lines of text. To access the CLI can be via terminal emulator or Linux console.

**What is a console terminal?** It text the Linux system out of graphical desktop mode and place it in text mode. A virtual console is a terminal session that runs in Linux system memory.

**What is a terminal emulator?** A terminal emulator is a program that allows you to access the command line interface. Some of the terminal emulator are Konsole, Terminology and GNOME terminal.

**Provide 3 examples of Linux commands** 1- Ctrl + R, search the history backwards. 2- Ctrl + L, clear the screen. 3- Ctrl + Z, suspend/stop the command.

## Managing Software

**Which command is used for updating ubuntu** sudo apt update; sudo apt upgrade -y

**Which command is used for installing software. Provide an example.** install. Ex. Sudo apt install Spotify

**Which command is used for searching for software. Provide an example.** apt search "google chrome"

**Definition of the following terms:**

Package: It archives that contain binaries of software, configuration files and information about dependencies. A box containing all the necessary stuff to install the program you want.

Library: Reusable code that can be used by more than one functions oor program.

Repository: A large collection of software available for download.