Week Report 3

Summary of Presentations:

Introduction to Linux

- **What is an operating system?** Operating systems provide all the necessary software to allow you to use a computer's hardware. These features are provided by the operating system's kernel.

- **Aside from a kernel, what other parts make an operating system?** Daemons and shells, graphical desktop environments and GUI's, applications, and libraries.

- **What is a Linux distribution?** A Linux distribution is an operating system that runs on the Linux kernel.

- **What is Ubuntu?** Ubuntu is a Linux distribution based on Debian and developed by Canonical.

- **Define the following terms: Open Source, Closed source, free software** Open source: The software may be free or require a fee to use, and the source code is available to the users

Closed source: The source code of the software is not available to the public to read or modify

Free software: Software where the user has the freedom to read, change, and distribute the source code.

- **What are the 4 freedoms defined by the free software foundation?** Use the software for any purpose Examine the source code and modify it as you wish Redistribute copies of the software Redistribute your own modified version of software

The Basics of Virtualization

- **What is virtualization?** Virtualization is creating virtual versions of something, such as multiple operating systems on one computer.

- **List 3 benefits of virtualization** Allowing multiple operating systems on one computer without dual booting

Allowing applications to be tested in a sandboxed environment before running them on the host machine

Allowing software that can only run on one type of operating system to be used on a different one

- **What is a hypervisor?** Software that creates, maintains, and runs virtual machines

- **What is virtualbox** Virtualbox is an open source software for creating and running virtual machines.

Exploring Desktop Environments

- **What is a desktop environment? (Provide 3 examples)** A desktop environment is a GUI running on the computer's operating system to make interacting with the operating system possible without the terminal. Commonly used desktop environments in Linux are GNOME, KDE, and XFCE.

- **List 4 common elements of desktop environments** File manager, display manager, panels, and window manager

- **What is Ubuntu's default desktop environments?** GNOME, KDE, LXQt, Budgie, Cinnamon, UKUI, Mate, Xfce

- **What are the official flavors of Ubuntu?** Edubuntu, Kubuntu, Lubuntu, Ubuntu Budgie, Ubuntu Cinnamon, Ubuntu Kylin, Ubuntu MATE, Ubuntu Studio, Ubuntu Unity, and Xubuntu.

What is a Shell?

- **What is Bash?** Bash is a Unix shell for the GNU Project used as the default shell program for the majority of Linux distributions.

- **How do you access the Linux CLI?** Either by using Linux in text mode or using a terminal emulator.

- **What is a console terminal?** An interface that provides a way of interacting with a computer through text.

- **What is a terminal emulator?** A program that allows you to access the CLI if you are using a GUI desktop environment.

- **Provide 3 examples of Linux commands** date cd clear

Managing Software

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

- **Which command is used for installing software. Provide an example.** sudo apt install 'software name'

Ex: sudo apt install mpv

- **Which command is used for removing software. Provide an example.** sudo apt remove 'software name'

Ex: sudo apt remove mpv

- **Which command is used for searching for software. Provide an example.** sudo apt search 'software name'

Ex: sudo apt search mpv

- **Definition of the following terms:**

Package: An archive that contains all of the binaries of software, config files, and information about dependencies needed to install a software.

Library: A library is a collection of reusable code that can be used by multiple programs or functions.

Repository: A collection of software hosted on a server that is available to download.