Lecture 2 Introduction to Linux Notes

Important concepts:

- **Operating System:** An operating system provides all the fundamental software features of a computer.
- **Kernel:** Is a software component that is responsible for managing low level features of the computer, including the following: Managing system hardware, memory allocation, CPU time, and program to program interactions.
- **Components of an operating system:** Commands-Line Shells, Graphical user Interfaces, Utility and Productivity programs, and Libraries
- **Linux :** Unix like operating system.
- **Linux Characteristics:** Applications, Graphical Desktop Environment, Daemons, Shells, Linux Kernel, and Hardware.
- **GNU Toolchain:** Complies code to produce a program or library.
- **Linux Distribution:** Any operating system that runs the Linux kernel.
- **What is Ubuntu:** A linux distribution
- **Ubuntu Release cycles:** There are two Interheim and LTS(5 years each).
- **What is Debian:** Popular operating system.
- **Different software licensing models (open source vs closed source):** They help each other one is free to the public and the the other is private.
- **The 4 Freedoms of Free Software:** Use software for any purpose, examine the source code and mobility it as you see fit, redistribute the software, abd to redistribute your modified software.
- **Virtualization:** Defined as creating virtual versions of something.
- **Hypervisor and types:** Or the virtual Machine Manger has two types 1(runs directly on hardware) and 2(an application that runs on an operating system).
- **VirtualBox:** Open source software to the public.

List of the main Linux distributions

- Debian
- Red Hat
- Slackware

List of some of the Debian Based Linux distributions

- Steam OS
- Parrot OS
- Kali Linux

List of some of the Red Hat-based Linux distributions

- Fedora
- Alma Linux

List of some of the Ubuntu Based Linux Distributions

- Linux Lite
- Linux Mint
- Pop OS