Why Do you need to learn linux?

- Linux runs in a lot of devices. Example: laptops, desktops, servers, smartphones, IoT devices, etc
- Linux powers the cloud
- Linux is used by a lot of companies even Microsoft ##What is Linux?
- Linux is a kernel. A kernel is the core of any operating system.
- An operating system that uses the Linux kernel is called a Linux Distribution. Example: Ubuntu and Android.
- Linux is multitasking, multi-user, and multipurpose OS.
- Linux is a modular operating system. ##Linux books I can use:
- Linux Administration A Beginner's Guide 8th Edition by Wale Soyinka
- CompTia Linux+ Study Guide by Christine Bresnahan
- The Linux Command Line by William Shots

Linux Distributions

There are a large number of Linux distributions.

There are two main Linux Distributions:

- Debian
- Redhat

There are also other independent distribution

- Slackware
- Arch
- Gentoo

Linux Architecture

Linux is modular which means that users can remove and add/remove whatever they need or don't need.

- Kernel = the core of the operating system. Manages the hardware.
- Daemons = background programs that run independent of the user.
- Shells = the interface that accepts user input and translates it so that the kernel can use it.
- Graphical Desktop Environment = a collection of software that makes the graphical interface.
- In Linux everything is a file.

Type of files:

- Device files
- Directory files
- Binary files
- Regular files

Software licensing agreement

- A license agreement outlines the rights a user has to given software

Types of licensing agreement:

- Open source: Software can be distributed for free or a fee The source code must be distributed with the software.
- Closed Source: Software can be distributed for free or a fee. The end user has limited access to the software and the source code is not available .
- Free software: Software can be distributed for free or a fee. The user has total control of the software and the source code.The software must comply with the 4 freedoms.

The 4 Freedoms

- Freedom 0: the user can run the program as you wish, for any purpose .
- Freedom 1: the user can study how the program works, and change it.
- Freedom 2: the user can redistribute copies.
- Freedom 3: the user can distribute copies of your modified versions.

Advantages/Disadvantages of Open Source software

Advantages	Disadvantages
• Software is "generally" available for free • The user can modify the code • General more reliable	• Can be risky • User friendliness • Lack of corporate support

What is Ubuntu?

Ubuntu is a Linux distribution, free and available for community and professionals. Ubuntu aims to achieve these The software should be free and configured as the user wants Is available despite any disability someone might have Is suitable both for desktop and server use Ubuntu was created to be a user friendly version of Debian which is know to be the Grandfather of all linux distributions.

Examples of Linux distributions based on Ubuntu and Debian : Ubuntu > Linux Lite, Linux Mint, Peppermint Debian >Kali Linux ,Parrot OS, Steam