

Lecture 2 Introduction to Linux Notes

What is a Operating System?

- an **Operating System** provides all fundamental software features of a computer.
- Enables you to use the computer's hardware providing you the basic tools that make the computer useful.

What is a Kernel?

- An **OS Kernel** is a software componet that's responsible for managing low-level features of the computer, including the following:
 - Managing system hardware
 - Memory Allocation
 - CPU Time
 - Program to Program interaction

Which other parts aside from the kernel identify an OS?

- Command-line Shells
- Graphical User Interfaces
- Utility and productivity programs
- Libraries

What is Linux and Linux Distributions?

- Linux is a **Unix-like Operating System** popular in academic and business environments.
- Consists of a **kernel, libraries, and utilities** that make up the entire Operating system.
- Linux is available in many **distributions** (any OS that runs the Linux kernel)

Linux Characteristics

1. Open Source Software
2. Free of charge
3. Highly scalable
4. Run on any system

What is Ubuntu?

- A **Linux distribution** freely available with both community and professional support

What is Debian?

- Debian is an all-volunteer organization dedicated to developing free software and promoting the ideals of the Free Software community.

Licensing Agreements

- 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 same source code.
 - Freeware: the 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.
 - Freedom 0: use the software for any purpose
 - Freedom 1: examine the source code and modify it as you see fit
 - Freedom 2: redistribute the software
 - Freedom 3: redistribute your modified software

Virtualization

- Defined as creating virtual versions of something.