

Lecture 2 Introduction to Linux Notes

- What is an Operating System?

An operating system (OS) is system software that manages a computer's hardware and software resources, acting as an interface between the user and the computer.

- What is a kernel?

A kernel is the core component of an operating system that serves as the primary interface between a computer's hardware and its software, managing resources like the CPU, memory, and devices.

- Which other parts aside from the kernel identify an OS?

Besides the kernel, an operating system (OS) is identified by its shell, user interface, system libraries, and file system.

- What is linux and linux distribution?

Linux is an open-source, Unix-like operating system kernel, not a complete OS, while a Linux distribution (or distro) is a complete, user-ready operating system that includes the Linux kernel, system utilities, libraries, and applications bundled into a single, installable package.

- List at least 4 linux characteristics:

- Open source and free
- Secure
- Stable and Reliable
- Multi-user and multitasking

- What is Debian?

Debian is a free, open-source, Linux-based operating system developed by the global Debian Project of volunteers.

- List and define the different types of 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 source code. The user is restricted from modifying the 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.

- What is Free Software? Define the 4 freedoms. The Free Software Foundation (FSF) is a critical force in the open source world. The FSF defines four specific software freedoms:

- 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.
- 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.