

# Lecture 2 Introduction to Linux Notes

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## 1. What is an Operating System?

An operating system provides all fundamental software features of a computer. An OS enables you to use the computer's hardware providing the basic tools that make the computer useful.

## 2. What is a kernel?

An OS kernel is a software component that's responsible for managing low level features of the computer.

## 3. Which other parts aside from the kernel identify an OS?

Three key components of an operating system (OS) include the hardware, kernel and shell.

## 4. What is linux and linux distribution?

Linux is a Unix-like Operating System. Linux distribution is a complete Linux system package.

## 5. List at least 4 linux characteristics:

- Linux is open source software
- Linux is free of charge
- Linux is highly scalable and customizable
- You can install Linux on almost any system

## 6. What is Ubuntu?.

Ubuntu is a Linux distribution, freely available with both community and professional support.

## 7. What is Debian?

Debian is an all-volunteer organization dedicated to developing free software.

## 8. 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.

## 9. What is Free Software? Define the 4 freedoms.

Free software is a critical force in the open source world.

- **Freedom 0:** Use the software for any purpose
- **Freedom 1:** Examine the source code and modify as you see fit
- **Freedom 2:** Redistribute the software
- **Freedom 3:** Redistribute your modified software

## 10. What is virtualization?

Virtualization is a technology that creates virtual versions of physical hardware, operating systems, and storage devices.