

## Lecture 2 Introduction to Linux Notes (this is the title of the document - Heading 1 formatting please!)

1. What is an Operating System? An operating system provides all basic software features of a computer. An OS allows you to use the computer's hardware providing you simple tools that make the computer reliable. All of it rely on the OS's kernel. Other OS features are require additional programs that run above the kernel
2. What is a kernel? A software component that's responsible for handling low-level features of a computer, includes the following: managing system hardware, memory allocation, CPU time, and program to program interaction.
3. Which other parts aside from the kernel identify an OS?

### Command-Line Shell

- Before GUI's, CMDs were the norm by typing commands in a shell; for instance, DOS, Unix, and Apple II's used it. CLI was used to mainly navigate and control the whole system.

### Graphical User Interfaces or GUI's

- GUI's mainly know for the icons, menus, and a mouse cursor for the user interaction. Linux uses the X window system while, Windows uses Explorer. Utility and productivity programs
- Tools like web browsers, document processors and text editors. Libraries
- Libraries are collections of programming functions that can be used by a lot of programs.

4. What is Linux and Linux distribution? A Unix-like operating system that has a vast amount of distro's to choose. Linux distribution is any OS that runs the Linux kernel; for example, Linux Mint is a Linux distro.

5. List at least 4 Linux characteristics:

- An open source software
- Available free of charge
- Highly adjustable and customizable
- Linux can be installed on almost any system as it supports almost every architecture like PowerPC from a Powerbook G4.

6. What is Debian?

- Debian is an all-volunteer organization dedicated to creating free software and promoting ideals of the Free Software community
- Debian began back in 1993, when Ian Murdock assembled a group of developers to create a coherent Linux distribution.
- Debian is an old distribution along with Slackware and OpenSUSE (Known as SUSE Linux prior to December 7th, 2006)
- Other distro's were created after Debian to suit other people's needs, Linux Mint is one of them.

7. List and define the different types of licensing agreements

8. What is Free Software? Define the 4 freedoms.

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

6. What is virtualization?

Virtualization is to create virtual versions of something.

- It is often used to let multiple OS's run on one real machine at the same time.