Lecture 2 Introduction to Linux Notes

1. ## What is an Operating System?

   1. 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?

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

   1. Command-Line Shells, Graphical User Interfaces, Utility and Productivity Programs, Libraries.

4. ## What is linux and linux distribution?

   1. Linux is a **Unix-like Operating System** popular in academic and business environments. A complete Linux system package is called a Linux Distribution.

5. ## List at least 4 linux characteristics:

   1. Open Source Software, Free of charge, Unix tools, Highly scalable.

6. ## What is Ubuntu?

   1.Ubuntu is a **Linux Distribution** freely available with both community and professional support.

7. ## What is Debian?

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

8. ## List and define the different types of licensing agreements

   1. **open Source**: the software may be distributed for a fee or free. The source code is distributed with the software.
   2. **Closed Source**: the software is not distributed with the source code. The user is restricted from modifying the code.
   3. **Freeware**: the software is free but the source code is not available
   4. **Shareware**: the software is frre on a trial basis.

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

   1. **Freedom 0**: Use the software for any purpose

2. **Freedom 1**: examine the source code and modify it as you see fit
3. **Freedom 2**: redistribute the software
4. **Freedom 3**: redistribute your modified software

10. What is virtualization?

1.virtualization is defined as creating virtual versions of something. is often used to let **multiple OSs run on one physical machine** at the same time