Introduction to Linux Notes

1. What is an Operating System? An Operating System (OS) is system software that manages computer hardware and software resources and provides services for programs. It acts as an interface between the user and the hardware.
2. What is a kernel? The kernel is the core component of an operating system. It manages the CPU, memory, devices, and system calls. It also It acts as a bridge between applications and hardware.
3. Which other parts aside from the kernel identify an OS? Aside from the kernel, an OS is identified by:

- User interface (GUI or CLI)
- System utilities
- Package manager
- Libraries
- Default applications

4. What is Linux and a Linux distribution? Linux is the Linux kernel while Linux distribution is a complete operating system built around the Linux kernel, including software packages, desktop environment, and package management tools.

Q#5 is missing

6. List at least 4 Linux characteristics:
7. Open source
8. Multi-user
9. Multi-tasking
10. Secure
11. Stable
12. Customizable
13. What is Debian? Debian is a free, open source linux distribution known for its stability, security, and large software repository.

Q#8 missing

9. List and define the different types of licensing agreements *Proprietary License: Software owned by an individual/company. Source code is not shared.* Open Source License: Source code is available and can be modified. *Freeware: Free to use but source code is not available.* Shareware: Trial software that requires payment after a trial period.
10. What is Free Software? Define the 4 freedoms. Free Software is software that respects users freedom.

The 4 freedoms: 1. The freedom to run the program for any type of purpose. 2. The freedom to study how the program works and modify it to be what you want. 3. The freedom to redistribute copies freely. 4. The freedom to distribute modified versions freely.

11. What is virtualization? Virtualization is the process of creating a virtual version of a computer system without actual physical hardware thats completely separate, allowing multiple operating systems to run on a single physical machine. Basically a computer in a computer.