1. What is Linux?

Linux is the kernel developed by Linus Torvalds. It is the main component of Linux operating system and is the core interface between a computer’s hardware and its processes.

1. What is the difference between Linux and Unix? Linux is the kernel while Unix is an Operating system.
2. What is Linux Kernel? Is it legal to edit Linux Kernel?

Linux Kernel is the main component of Linux operating system and is the core interface between a computer’s hardware and its processes. Linux kernel is free and can be modified by anyone.

1. What is LILO?

LILO (LInux LOader) is a [boot loader](https://www.techtarget.com/searchdatacenter/definition/boot-loader-boot-manager) (a small program that manages a dual boot) for use with the [Linux](https://www.techtarget.com/searchdatacenter/definition/Linux-operating-system) [operating system](https://www.techtarget.com/whatis/definition/operating-system-OS). It permits to select which OS in a machine needs to be used

1. What are the basic components of Linux?

* Bootloader
* Kernel
* Init System
* Daemons
* Graphical server
* Desktop Environment
* Applications

1. Which are the Shells used in Linux?

* [Bourne Shell](https://en.wikipedia.org/wiki/Bourne_shell) (sh)
* [GNU Bourne-Again Shell](https://www.gnu.org/software/bash/) (bash)
* [C Shell](http://bxr.su/NetBSD/bin/csh/) (csh)
* [Korn Shell](http://www.kornshell.com/) (ksh)
* [Z Shell](https://ohmyz.sh/) (zsh)

1. What is Swap Space?

Swap space is a space on a hard disk that is a substitute for physical memory. It is used as virtual memory which contains process memory images. Whenever our computer runs short of physical memory it uses its virtual memory and stores information in memory on disk.

1. What is the difference between BASH and DOS?

* BASH commands are case sensitive while DOS commands are not.
* In BASH, / character is a directory separator and \ acts as an escape character while in DOS, / serves as a command argument delimiter and \ is the directory separator
* DOS follows a convention in naming files, which is 8-character file name followed by a dot and 3 characters for the extension. BASH follows no such convention.

1. What command would you use to check how much memory is being used by Linux?

We can use **free** command to check how much memory is being used by Linux

1. Explain file permission in Linux.

The basic Linux permissions model works by associating each system file with an owner and a group and assigning permission access rights for three different classes of users:

* + The file owner.
  + The group members
  + Others (everybody else)

All the three owners (user owner, group, others) in the Linux system have three types of permissions defined. Nine characters denotes the three types of permissions.

1. **Read (r):** The read permission allows us to open and read the content of a file. But we can't do any editing or modification in the file.
2. **Write (w):** The write permission allows us to edit, remove or rename a file.
3. **Execute (x):** In Unix type system, we can't run or execute a program unless execute permission is set. But in Windows, there is no such permission available.

**Example - File permissions for (-rw-rw-r--)**

|  |  |  |
| --- | --- | --- |
| **Position** | **Characters** | **Ownership** |
| 1 | - | denotes file type |
| 2-4 | rw- | permission for user |
| 5-7 | rw- | permission for group |
| 8-10 | r-- | permission for other |