Introduction to Linux

Delve into all the basic concepts of Linux Shell.

Linux is a free open-source operating system that works just like Windows and Mac OS X. It is a `Unix` clone, multi-tasking and a multi-user operating system that was developed by *Linus Torvalds* with the collaboration of the developers around the world.

Linux - A Kernel, not an Operating System

Strictly speaking, Linux is a kernel, not an entire operating system. A kernel provides access to computer hardware and a controlled access to system resources such as:

- Security and firewall
- GNU libraries and utilities
- Other management and installation scripts
- Logged in users
- Running and loading programs to memory
- Networking systems
- Files and data
- Process management
- Device management
- I/O management

Shell Classification

- Command line shell
- Graphical shell

Command Line Shell	Graphical Shell
Shells can be accessed by users using a program called **terminal** in Linux/macOS and **command prompt** in Windows. **For example**, Bash, Ksh, Csh etc.	They provide a graphical user interface (GUI) for the user to interact with the system. Users do not need to type in command for every action. **For example**, Window OS, Ubuntu OS etc.

Introduction to Linux Shell

> A shell is an environment provided for the user to interact with the machine.

Shell is not a part of Linux kernel, but it uses the kernel to execute programs, create files etc. Several command line shells are available for Linux including:

- **BASH (Bourne-Again SHell)** - It's the default open source shell on many Linux distributions today
- **CSH (C SHell)** - The C shell's syntax and usage are very similar to the C programming language
- **KSH (Korn SHell)** - It is a high-level interactive command language
- **TCSH** - It is an enhanced but completely compatible version of the Berkeley UNIX C shell (CSH)
- **ZSH** - It is an interactive shell that incorporates features of other Linux shells including some unique ones too
- **Fish (Friendly Interactive Shell)** - It is a smart and user-friendly interactive shell along with some other features