**SDLC**: Software Development Life Cycle

🡪Developers (GitHub)

🡪 Build (Maven, Jenkin,

🡪 Test (Selenium needs Java)

🡪 Quality Assurance

🡪 Deploy (Chef/Ansible, Docker/Puppet/Kubernetes)

🡪 Maintenance

🡪 Monitoring (Nagios/CloudWatch)

**Waterfall Model** -> Step by step methodology cannot go back once the step has been completed.

AWS Cloud.

Why we need it?

Ans: Basically, to avoid large Capital expenditure. Like we’d need suppose 50 servers, software license, networking (router, switch, gateway, cabling, ac, etc.), maintenance, employees to maintain those servers. The upfront money involved would be large without even starting the actual business. So, the companies like Microsoft, Amazon offers online Public Cloud so that it would become easier for clients as they would not have to buy all of those items by themselves and rent it from companies like Microsoft has Azure, Google Cloud, Alibaba are market leaders. They provide servers and how much servers they would use monthly we could pay accordingly.

Benefits of these are: that before we’d need like 10 employees to setup 50 servers now only one could do it that too easily.

Windows and Linux:

Architecture:

Windows: Hardware interacts with OS. The layer above OS is Shell and User interacts with Shell.

Linux: Hardware interacts with Kernel. The layer above Kernel is Shell and User interacts with Shell.

-The main difference is layer OS and Kernel.

- In windows User request Shell, Shell request to OS and the whatever is needed to open the requested software the needed hardware is used.

- OS interacts with Hardware and Shell interacts with User.

- Linux is faster cause we interact directly using command prompt.

**- Folder in Linux is called Directory.**

**- Administrator in Linux is called root user.**

**- File is also file in Linux.**

**- Software installed like adobe photoshop, etc is called Package in Linux.**

File System Hierarchy:

/🡪 Top Level root directory

- /home 🡪 home directory for other users.

- /root🡪 home directory for root users. working as an administrator.

- /boot🡪 It contains bootable files for Linux e.g.-> initrd.

- /etc🡪 It contains all Configuration files. All the hardware information is stored here e.g.-> 4GB ram etc.

- /usr🡪 by default software are installed in this directory.

- /bin🡪 It contains Commands used by all Users.

- /sbin🡪 It contains Commands used by only root user.

- /opt🡪 optional application software Packages.

- /dev🡪 Essential device files. This include terminal devices, usb or any device attached to the system.

How to create a file in linux?

1. Cat command: popular cmd, can create file; cat>filename (any name), cannot edit using this cmd.

2. touch command: empty file create but there is much to it.

To create an empty file: touch file1 file2 file3 hit enter 3 files would be created.

3. Vi/vim command: editor can edit with this cmd, can also create file.

4. nano command: editor can edit with this cmd, can also create file.

You can use any command to create, edit no matter which command you used to create it.

sudo: full form is super user do switch user.

**Cat Command:**

The Cat Command is one of the most universal tools, yet all it does is Copy Standard Input to standard output.

Cat is used in 4 major ways:

- Create file: Creating single file.

- Concatenate file: Cat came through concatenate and main purpose or major work of Cat is to concatenate files. Not to edit but join various files.

- Copy file: To copy the Content of x into y.

- tac: To see the content in Bottom to top. E.g. Hi, Hello, Bye Bye the output from using this tac command would be Bye Bye, Hello, Hi. The content would be shown from bottom to top.