

# **UI/LINUX FULLSTACK SYLLABUS**

## **Unix Training Content**

- Introduction to UNIX/LINUX
- History of UNIX/LINUX
- Features and Benefits of UNIX/LINUX
- Different flavors of UNIX/LINUX
- Difference between UNIX, DOS, Windows and LINUX
- Architecture of UNIX

## **UNIX File System Architecture**

- Boot Block
- Super Block
- Inode Block
- Data Block

## **File System of UNIX**

- Ordinary Files
- Directory Files
- Device Files
- The Structure of UNIX File system

## **Different UNIX Commands**

- pwd, who, whoami
- exit, date, cal, exit, banner

## **Links**

- Hard Link
- Soft link or Symbolic Link
- Unlink

## **Complex Filters**

- tr, comm., tee, sed, nl

## **Working with Files**

- cat, touch, rm
- cp, mv, ln, wc

## **Working with Directories**

- mkdir, cd, rmdir, rm

## **Displaying Files**

- ls, ls with options

## **Simple Filters**

- pg, more, less, head, tail, paste, cut, sort

## **Zip Files**

- gzip, gunzip, zcat, compress
- Uncompress, pack, unpack and Pcat

## **Printing Files**

- lp, cancel

## **Finding Files**

- find, locate etc.,

## **Input and Output Redirection**

- Redirecting Output
- Redirecting Input
- Standard error

## **Shell Meta Characters**

- File substitution
- I/O redirection
- Process Execution
- Quoting meta characters
- Positional parameters
- Special Parameters

## **More Filters**

- grep, grep with options
- fgrep, egrep

## **Regular Expressions and Patterns**

- What is Pattern?
- Usage of regular expression
- Different types of patterns

## **How C programs are useful for solving problems in UNIX**

## **UNIX Commands**

- Uniq
- Diff
- cmp

## **Backup Utilities**

- tar, cpio

## **Piping**

- Usage of piping
- Piping with filters

## **File Permissions**

- chmod, chown, chgrp, umask

## **Communication Commands**

- write, wall, mail, mail with options

## **Networking commands**

- telnet, ftp, rlogin, finger, etc..

## **Disk Utilities**

- df, du, mount, unmount

## **Job Control**

- Foreground jobs
- Background jobs
- Killing jobs
- Nohup

## **Process Status**

- Ps
- Kill
- Pkill

## **Job scheduling**

- At
- Crontab
- Batch

## **ed, ex and vi editors**

- Command mode
- Insert mode
- Ex command mode

## **Shell Scripting**

- What is shell scripting?
- Importance of shell scripting
- Different types of shells
- Creating Shell script
- Making shell script executable

## **Shell Input and Output**

- echo, print, read

## **Backslash character constants aliases and History concept variables**

- What is a variable?
- System defined variables
- Environment Variables
- User defined variables
- Constant variables
- Local and Global variables
- Special Variables
- Comments

## **Operators**

- Arithmetic Operators
- Relational Operators
- Relational ASCII operators
- Logical Operators
- Assignment Operators

## **Flow Control Structure**

- If, if...else
- If... elif
- Case

## **Looping**

- while, until, for, break, continue

## **Formatted I/O**

## **Namespaces in UNIX**

## **Introduction to Message Queues**

## **Introduction to Different Types of System Calls**

## **Programming Aspects of Berkeley Sockets & Reserved Ports**

## **UNIX Domain Protocol**

## **Socket Addresses**

