Lab_1: [Linux File System]

Objective: This assignment is intended to provide an introduction to Linux. The lab consists of performing basic system operations such as file management, text editing, and permission management. The objective of this lab is to make students familiar with Linux command-line environment and develop the skills of shell scripting.

System Requirement:

Linux OS

Assignments:

- 1. Use the *who* command and redirect the result to a file called **<roll number_myfile1>**. Use the *more* command to see the contents of **<roll number_myfile1>**. Example of file name: 1912001_myfile1.
- 2. Use the *date* and *who* commands in sequence (in one line) such that the output of date will display on the screen and the output of who will be redirected to a file called **<rollnumber_myfile2>**. Use the *more* command to check the contents of **<rollnumber_myfile2>**.
- 3. Write a *sed* command that *swaps* the first and second words in each line in a file.
- 4. Generate a text file with name <**rollnumber_myfile3**>. Define; what is operating system, what is process and memory management in *three paragraphs* having almost 150 words in the text file you have created. Then apply these following commands on that file in the terminal and record results in another file named *myfile3_out*. The commands are: { awk, cat, cut, diff, grep, head, less, split, tail, tr, uniq, wc }.
- 5. Generate a text file with name <**rollnumber_myfile4**>. Explain in short with example the following commands and save it in the text file you have created. The commands are: { netstat, telnet, tcpdump, ssh, ping, dmesg, ps, kill, sleep, xargs }

- 6. Write a shell script that accepts one or more file name as arguments and converts all of them to uppercase, provided they exist in the current directory.
- 7. Write a shell script that takes a command-line argument and reports on whether it is a directory, a file, or something else.
- 8. Write a shell script that determines the period for which a specified user is working on the system.
- 9. Write a shell script that accepts a file name, starting and ending line numbers as arguments and display all the lines between the given line numbers.
- 10. Write a shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it.

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