

### List of Assignments (Jan-Apr 2025)

**Subject – Operating Systems Lab**

**Course Code : CSL 403**

**Class – SE (Computer Engineering )**

**Sem : IV**

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**1. . Explore the internal commands of linux like**

**LO1**

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|---|-----------|-----------|
| 1. ls   | 2. Mkdir  | 3. chdir  |
| 4. rmdir  | 5. Cat    | 6. rm     |
| 7. mv   | 8. Cp     | 9. head   |
| 10. tail  | 11. Sort  | 12. wc    |
| 13. chown   | 14. Chmod | 15. chgrp |
| 16. umask   | 17. Ps    | 18. pipe  |
| 19. Redirection operators   |           |           |
| 20. Explore commands for following:   |           |           |
| a. Display top 10 processes in descending order,  |           |           |
| b. Display the process with highest memory usage,   |           |           |
| c. Display current user logged in and logname,  |           |           |
| d. Display current shell, home directory, operating system type, current path setting, current working directory, |           |           |
| e. Display OS version, release number, kernel version.  |           |           |

**2. Write Shell Programs to**

**LO1**

1. Add 2 numbers
2. Check if a number entered is even and odd
3. Find sum of n numbers
4. Determine if a person is eligible to vote or not
5. Display all filenames beginning with character 'a' and displays its contents
6. Find Factorial of a number
7. Check validity of a username and password with a function defined in the code

**3. Process Scheduling Algorithms** **LO2**

WAP to simulate Non Pre-emptive Priority Scheduling Policy

**4. Memory Allocation Techniques** **LO4**

Write programs to simulate the Bestt Fit Memory Allocation Technique

**5. Page Replacement Policies** **LO5**

WAP to simulate following LRU Page Replacement techniques

**6. Write a program to simulate Paging technique** **LO5**

**7. Write a program to implement the SSTFDisk Scheduling Policiy** **LO6**

**8. Write a program to implement the following SCAN Disk Scheduling Policy** **LO6**

**9. WAP to simulate Bankers Algorithm** **LO3**

**10. Write program to simulate Linked File Allocation Technique** **LO6**

**11. Written Assignment1** **LO6**

**Topic : File Management**

1. Explain all File Organization techniques with one example for each
2. Explain File Allocation Techniques with one example and advantages and disadvantages of each technique

**12. Written Assignment 2** **LO1**

**Topic : Mobile OS**

Explain the following points

1. What is Mobile OS ??
2. Explain features of IOS and Android OS
3. Mention differences and similarities between Android OS and IOS