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Wks Mapped with the course

WK1	WK2	WK3	WK4	WK5	WK6	WK7	WK8	WK9
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Mark Distribution:

Total Marks	CIE Marks	ESE Marks	ESE Duration
100	50	50	3 hrs

Continuous Internal Evaluation Pattern:

Attendance: 5 | Preparation/Pre-Lab Work, Viva, Timely completion of Lab Reports/Record: 25 | Internal Examination: 20 | Total: 50

End Semester Examination (ESE): Procedure/Algorithm: 10 | Conduct/Programming: 15 | Result/Output: 10 | Viva voce: 10 | Record: 5 | Total: 50

Note: Students shall be allowed for the end semester examination only upon submitting the duly certified record.

List of Experiments:

1. Working with Linux Commands for File Management, Data Extraction, Sorting, Filtering, and Basic Terminal Navigation
2. Shell programming for System Information, Simple Arithmetic Operations, File Handling, and String Manipulation
3. Implementation of System Calls for Parallel Processing using fork, wait (join), exec, getpid, and pipe
4. Implementation of CPU Scheduling Algorithms: (1) First Come First Serve (FCFS), (2) Shortest Job First (SJF), (3) Round Robin, (4) Priority Scheduling
5. Implementation of Inter-Process Communication (IPC) using: (1) Shared Memory, (2) Semaphores
6. Implementation of Banker's Algorithm for Deadlock Avoidance
7. Implementation of Page Replacement Algorithms: FIFO, Optimal, LRU
8. Implementation of Disk Scheduling Algorithms: FCFS, SCAN, C-SCAN

Text Books:

1. Silberschatz, A., Galvin, P. B., & Gagne, G. (2019). Operating system concepts (10th ed.). John Wiley & Sons.
2. Tanenbaum, A. S., & Bos, H. (2022). Modern operating systems (5th ed.). Pearson.
3. Stallings, W. (2019). Operating systems: Internals and design principles (9th ed.). Pearson.

Reference Books:

1. Crowley, C. (2017). Operating systems: A design-oriented approach. McGraw Hill Education.