

## OPERATING SYSTEM LAB SYLLABUS

**Implement the following programs on Linux platform using C/C++ language.**

S. No.	Division of Experiments	List of Experiments
1	Process Management	1. Practice all the system calls related to process management and process synchronization. 2. Write a C program to create a process and its child process and print their Ids and PCBs.
2	CPU Scheduling	1. Write a C program to simulate the following CPU scheduling algorithms to find turnaround time and waiting time. a) FCFS b) SJF c) Round Robin d) Priority 2. Write a C program to simulate multi-level queue scheduling algorithm considering the following scenario. All the processes in the system are divided into two categories – system processes and user processes. System processes are to be given higher priority than user processes. Use FCFS scheduling for the processes in each queue.
3	Process Synchronization and Communication	1. Write a C program to simulate the concept of Dining-Philosophers problem. 2. Implement the Pipelining and Shared memory concept using C language.
4	Memory Management	1. Write a C program to simulate the MVT and MFT memory management techniques. 2. Write a C program to simulate the following memory allocation techniques a) First-fit b) Best-fit 3. Write a C program to simulate paging technique of memory management.
5	Deadlock Management Techniques	1. Write a C program to simulate Bankers algorithm for the purpose of deadlock avoidance. 2. Write a C program to simulate safety algorithm.
6	Disk Scheduling	1. Write a C program to simulate the following disk scheduling algorithms. a) FCFS b) SSTF c) SCAN d) CSCAN e) LOOK
7	Page Replacement Algorithms	1. Write a C program to simulate the following page replacement algorithms. a) FIFO b) Optimal page replacement c) LRU 2. Write a C program to show the Belady's anomaly in FIFO algorithm.
8	File Allocation Strategies	1. Write a C program to simulate the following file allocation strategies. a) Sequential b) Indexed c) Linked