

## OPERATING SYSTEMS LAB

### B. Tech II Year II Semester- CSE-DS

**Course Code:**

| L | T | P | C |
|---|---|---|---|
| 0 | 0 | 2 | 1 |

#### Course Outcomes:

1. Implement various CPU scheduling algorithms
2. Apply the memory management techniques
3. Implement Page replacement Techniques
4. Analyze File allocation strategies
5. Implement Deadlock avoidance

#### Programs:

1. Simulate the following CPU Scheduling Algorithms using C program:
  - a. FCFS
  - b. SJF
2. Simulate the following CPU Scheduling Algorithms using C program:
  - a. Priority
  - b. Round Robin
3. Write a C program to implement the producer-consumer problem using semaphores.
4. Write a C program for implementing memory allocation method for fixed partition using First fit.
5. Write a C program for implementing memory allocation method for fixed partition using Best fit
6. Write a C program for implementing memory allocation method for fixed partition using Worst fit
7. Simulate Paging Technique of Memory Management using C program.
8. Write a program to implement FCFS page replacement algorithm
9. Write a program to implement Optimal page replacement algorithm
10. Write a program to implement LRU page replacement algorithm
11. Write a C program to simulate the following file allocation strategies.
  - a) Sequential
  - b) Indexed
  - c) Linked
12. Write a program to implement Banker's algorithm for deadlock avoidance.