

CS8461 OPERATING SYSTEMS LABORATORY

DETAILED SYLLABUS

OBJECTIVES

- To learn Unix commands and shell programming
- To implement various CPU Scheduling Algorithms
- To implement Process Creation and Inter Process Communication.
- To implement Deadlock Avoidance and Deadlock Detection Algorithms
- To implement Page Replacement Algorithms
- To implement File Organization and File Allocation Strategies

LIST OF EXPERIMENTS

1. Basics of UNIX commands
2. Write programs using the following system calls of UNIX operating system fork, exec, getpid, exit, wait, close, stat, opendir, readdir
3. Write C programs to simulate UNIX commands like cp, ls, grep, etc.
4. Shell Programming
5. Write C programs to implement the various CPU Scheduling Algorithms
6. Implementation of Semaphores
7. Implementation of Shared memory and IPC
8. Bankers Algorithm for Deadlock Avoidance
9. Implementation of Deadlock Detection Algorithm
10. Write C program to implement Threading & Synchronization Applications
11. Implementation of the following Memory Allocation Methods for fixed partition
 - a) First Fit
 - b) Worst Fit
 - c) Best Fit
12. Implementation of Paging Technique of Memory Management
13. Implementation of the following Page Replacement Algorithms
 - a) FIFO
 - b) LRU
 - c) LFU
14. Implementation of the various File Organization Techniques
15. Implementation of the following File Allocation Strategies
 - a) Sequential
 - b) Indexed
 - c) Linked