

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE-RAIGAD
Department of Computer Engineering**

B.Tech. Second Year A.Y.-2022-2023

Semester: - IV (EVEN) Subject: - Operating Systems Laboratory

Subject Code: - BTCOL406

Subject Co-ordinator: - Mr. Tejas Bhaise

Laboratory Name: - B3

List of Experiments:

1. Hands on UNIX Commands
2. Shell programming for file handling.
3. Shell Script programming using the commands grep, awk, and sed.
4. Implementation of various CPU scheduling algorithms (FCFS, SJF, Priority).
5. Implementation of various page replacement algorithms (FIFO, Optimal, LRU).
6. Concurrent programming; use of threads and processes, system calls (fork and v-fork).
7. Study pthreads and implement the following: Write a program which shows the performance.
8. Improvement in using threads as compared with process. (Examples like Matrix Multiplication.
9. Hyper Quick Sort, Merge sort, Traveling Sales Person problem).
10. Implementation of Synchronization primitives – Semaphore, Locks and Conditional Variables.
11. Implementation of Producer-Consumer problem, Bankers algorithm.
12. Implementation of various memory allocation algorithms, (First fit, Best fit and Worst fit), Disk.
13. Scheduling algorithms (FCFS, SCAN, SSTF, C-SCAN).
14. Kernel reconfiguration, device drivers and systems administration of different operating systems. Writing utilities and OS performance tuning