**PROGRAM CYCLE-CSL204-OS LAB**

1. To learn Linux basic commands and directory structure, file execution and directory operations such as WHO, date, mkdir, touch, rmdir ,cat etc.
2. To implement all the following programs using shell script

a) Write a program to print the normal calculator.

b). Write a program to check whether a given year is leap year or not.

c). Write a program to sort a set of numbers using for loop

d). Write a program to find the factorial of a number using functions.

e). Write a Shell Script to print Floyd's Triangle

            1

            2 3

            4 5 6

            7 8 9 10

1. a) Write a program to implement fork() ,getpid(),exec(),wait(),and exit()system calls in Linux operating system.

b)Write a program to implement stat(),opendir(),readdir() and close() system calls in Linux operating system

1. Write a program to open two files ,read from the first file and write the contents of the first file to the second file.
2. Implement Producer-Consumer Problem using shared memory.
3. Implement the following CPU scheduling algorithms

a)FCFS b)SJF c)Non Preemptive Priority d)Round Robin Scheduling(TQ=3s)

1. Implement Dining Philosopher’s Problem using semaphores.
2. Implement Banker’s algorithm for deadlock avoidance.

9. Implement the Memory Allocation methods for fixed partition

a)First Fit

b)Worst Fit

c)Best Fit

10.Implement page replacement algorithms

a)FIFO b)LRUc)OPT

11. Simulate file allocation strategies

a) Sequential

b) Indexed

c) Linked

12. Simulate disk scheduling algorithms

a) FCFS

b) SSTF

c) SCAN

d)C-SCAN

e) LOOK

f) C-LOOK