CA2L1   **UNIX PROGRAMMING LAB**   **Credits : 2**

Lab Hours : 4 periods / week   Internal assessment : 25   Marks
                                                         Semester and Examination: 50   Marks

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Note: Student needs exposure to all programs, but expected to complete at least 15

1. Write a shell script for sorting, searching and insertion/deletion of elements in a list
2. Write a shell program to display the good morning, good afternoon, good evening and good night depending on the users log on time
3. Write a shell script which works similar to the wc command. This script can receive the option -l, -w, -c to indicate whether number of lines/ words/characters
4. Write a shell script which deletes all lines containing the word "UNIX" in the files supplied as arguments to this shell script
5. Write a shell script which displays a list of all files in the current directory to which you have read, write and execute permissions
6. Write a shell script which deletes all lines containing the word "xx"
7. Write a shell script containing a function mycd() using which, it is possible to shuttle between directories
8. Write a shell program for basic network commands
9. Write a shell script for renaming each file in the directory such that it will have the current shell's PID as an extension. The shell script should ensure that the directories do not get renamed
10. Write a program which demonstrates the shared memory functions
11. Program using system calls : create, open, read, write, close, stat, fstat, lseek
12. Program to implement inter process communication using pipes
13. Program to perform inter process cots : sniffer
14. Create two processes to run a for loop, which adds numbers 1 to n, say one process adds odd numbers and the other even
15. Create a file that is shared among some users, write a program that finds whether a specific user has created read and write operations on the file
16. Write a program demonstrating semaphore operation on a shared file for reading but not writing

17. Write a program demonstrating mutual exclusion principle
18. Write a program which reads a source file name and destination file name using command line arguments and then converts into specified format (i.e. either from lower case to upper case or upper case to lower case or inverse of each)
19. Write a program which takes a set of filenames along with the command line and print them based on their size in bytes either ascending or descending order
20. Write a program which takes directory name along the command line and displays names of the files which are having more than one link
21. Write a program to demonstrate the use of exec family functions
22. Write a program to demonstrate the locking mechanism while accessing the shared files