GUJARAT TECHNOLOGICAL UNIVERSITY
MASTER OF COMPUTER APPLICATION
SEMESTER: II

Subject Name: **Operating Systems (OS)**
Subject Code: **3620003**

Practical List

A. List of Practical Related to Operating Systems:

Part I Shell Commands

- date, ls, who, cal, ps, wc, cat, uname, pwd, mkdir, rmdir, cd, cp, rm, mv, diff, chmod, grep, sed, head, tail, cut, paste, sort, find,awk

Part II: Single Line Commands

1 Write a command to display all lines which begins with "NOKIA" string from an prd.lst file. [prd.lst file should exist with data]

2 Delete first, last and all the blank lines from the specified file.

3 Searches for a line which does not start with the vowel letter in any specific file

4 Display all such files from your login which has size >= 50.

5 Display all the files with read and write permissions throughout your login and save output in file and

6 Write a command to substitute ,,/" with ,,:" throughout the file with all occurrences of /etc/group

7 Using awk command Count number of lines found in a file

8 Using awk command find Sum of fields (Marks)
File Format roll#,name,mark1,mark2,mark3

9 Using awk command Remove duplicate lines (similar to uniq) from file.

10 Using awk command Delete all Blank lines

11 Using awk command Print Last Line of a file

12 Using awk command find and replace "Hindustan" or "Bharat" to "INDIA"

13 Using awk command Print first line of a file

14 Using awk command search for IND, BHA and HIN

15 Using awk command search for IND and BHA and HIN (in that order)

16 Using awk command print only lines of less than 65 characters

17 Using awk command print section of file between two regular expressions (inclusive)

18 Using awk command print lines between 5 and 8 the line

Part III: Shell Scripts

1 Write a script to compare identically named files in two different directories and if they are same, copy one of them in a third directory.

2 Write a script to copy the file system from two directories to a new directory in such a way that only the latest file is copied in case there are common files in both the directories.

3 Write a script to make following file and directory management operations menu based:

1. Display current directory
2. List directory
3. Make directory
4. Change directory
5. Copy a file
6. Rename a file
7. Delete a file

4 Write a script which reads a text file and output the following

1. Count of character, words and lines.
2. File in reverse.
3. Frequency of particular word in the file
4. Lower case letter in place of upper case letter.

5 Write A Script To Perform Following String Operations Using Menu:

1. COMPARE TWO STRINGS.
2. JOIN TWO STRINGS.
3. FIND THE LENGTH OF A GIVEN STRING.
4. OCCURRENCE OF CHARACTER AND WORDS
5. REVERSE THE STRING.

6 Write a shell script to add the statement #include <stdio.h> at the beginning of every C source file in current directory containing printf and fprintf.

7 Write a script that behaves both in interactive and non-interactive mode. When no arguments are supplied, it picks up each C program from current directory and lists the first 10 lines. It then prompts for deletion of the file. If the user supplies arguments with the script, then it works on those files only.

8 Write a script that deletes all leading and trailing spaces in all lines in a file. Also remove blank lines from a file. Locate lines containing only printf but not fprintf.

9 Write a script to display the files
1) Having size more than user entered from given directory.
2) Files not accessed in last Month
3) List zero size files
4) Delete all output files (files with extension lst and out).

Part IV: Practicals for OS Conceptual clarity (desirable)

1	Write a C program for implementing concurrency using producer, consumer problem using process or thread under LINUX.
2	Write a C program for implementing dining philosopher problem under LINUX.
3	Write a C program for implementing UNIX Processor Scheduling algorithms 1) FCFS 2) RR 3) SPN 4) SRT