



**SHRI G.S INSTITUTE OF TECHNOLOGY AND SCIENCE, INDORE**  
**DEPARTMENT OF COMPUTER TECHNOLOGY & APPLICATION**  
**MCA I YEAR II SEM SECTION A / B**  
**SUBJECT CODE: CT10904 /SUBJECT NAME: OPERATING SYSTEM**  
**SESSION 2026(JAN-JUN)**  
**LAB ASSIGNMENT 3**

**Experiments Date :16/2/26 / 19/2/26 / 20/2/26**

**Submission-Date : 23/2/26 / 26/2/26 / 27/2/26**

**Objective:**

To understand and Learn shell Script concept and apply them in a shell Program.and learn to make system call program.

**Prerequisites:**

Basic knowledge of Linux command line.

Access to a Linux system (local or virtual machine).

S,NO	ASSIGNMENT-3	CO	BL
1.	<b>Linux shell script program to swap two numbers Swapping using third variable and without third VARIABLE.</b>	1	2,3
2.	<b>Linux shell script program to demonstrate the '\$#' variable and Linux shell script program to print the current process id</b>	1	3,4
3.	<b>Linux shell script to demonstrate comparision operators</b>	1	4
4.	<b>Write a Shell Script Program to Checking if a File Exists or Not.</b>	1	4
5.	<b>Write a Shell script to determine if a number is positive, negative, or zero</b>	1	1,2
6.	<b>Write a shell script to manage user accounts on a Linux system. The script should allow the administrator to create, delete, or modify user accounts based on user input.</b>	1	2,3
7.	<b>Create a Sample Shell Script that removes in the Current Directory that are older than 4 days based on their file name .</b>	1	3,4
8.	<b>Create a script that counts the number of words, lines, and characters in a 2 text files.</b>	1	4,5
9.	<b>Write a Shell Script programs using Switch Case and read the following instruction for that Programs :</b> 1. Create a custom menu using echo statement and show the menu 2. Create an infinite loop using while statement that accept the user input option and generate the output continuously until the user input matches the exit pattern. 3. Take input from the user using read statement and store it in a variable. 4. Use case statement to check if the input matches with the pattern. 5. Create custom pattern. 6. Exit the case statement using esac keyword. And Output Show Like that :	1	3,2

	<pre> SELECT YOUR FAVORITE FRUIT 1. Apple 2. Grapes 3. Mango 4. Exit from menu Enter your menu choice [1-4]: 1 You have selected the option 1 Selected Fruit is Apple. Enter your menu choice [1-4]: 2 You have selected the option 2 Selected Fruit is Grapes. Enter your menu choice [1-4]: 3 You have selected the option 3 Selected Fruit is Mango. Enter your menu choice [1-4]: 4 Quiting ... </pre>		
10.	Write a Shell Script Programs to take input a Char from User and check the Char is Lower case ,Upper Case and Vowels & Consonants.	1	3,2
11.	Write a shell script to find out the greatest among three inputs.	1	3,2
12.	Write a shell script to calculate the net salary of an employee in a particular month considering various allowances (TA, DA, HRA) and deductions (INCOME TAX, PROVIDEND FUND) as: a. TA=15 percent of basic salary b. DA=2 percent of basic salary c. HRA=10 percent of basic salary d. INCOME TAX=5 percent of salary e. PROVIDEND FUND=10 percent of salary	1	3,2
13.	A departmental store announces its festival scheme to customers on cash payment. The scheme is as follows- a.If purchase amount is less than 1000 then Tax=2% and discount=10%. b.If purchase amount is greater than 1000 then Tax=5 % and discount=20%.	1	3,2
14.	Write a C/JAVA/C++ program using fork() system call to create two children of the same process i.e., Parent P having child process P1 and P2.	1	3,2
15.	Write a C/JAVA/C++ Program using fork() system call where Parent and Child Processes Printing with PIDs.	1	3,2
16.	Write a C/JAVA/C++ program to read a maximum of 15 characters from the user and print them on the screen.	1	3,2
17.	Write a C/JAVA/C++ program to read some content (20 characters) of file F1.txt into file F2.txt. The contents of file F2 should not get deleted or overwritten.	1	3,2
18.	Write a C/JAVA/C++ program to print the last 5 characters of a file on the screen.	1	3,2
19.	Write a C/JAVA/C++ Program to implement the system call execv () .	1	3,2
20	Write a C Program for system calls of Unix operating systems (opendir, readdir, closedir)	1	2,3
21	Write a Program to implement the system calls wait ( ) and exit ( )	1	2,3