



SHRI G.S INSTITUTE OF TECHNOLOGY AND SCIENCE, INDORE
DEPARTMENT OF INFORMATION TECHNOLOGY
MCA I YEAR II SEM SECTION A / B
SUBJECT CODE: CT10709/SUBJECT NAME: OPERATING SYSTEM
SESSION 2024-25
LAB ASSIGNMENT 4

Experiments Date :23/04/25 /24/04/25/25/4/25

Submission-Date : 30/4/25/01/5/25/2/2/5/25

Objective:

To understand and manipulate Shell Script Programs in a Linux environment using the command line.

Prerequisites:

Basic knowledge of Shell Script of For Loops ,while loop,function & array.

S.NO	Assignment-4	CO	BL
1.	Write a shell script that does the following: 1. Use a for loop to print the numbers from 1 to 5. 2. After the loop ends, print a message saying "Loop completed."	2,3	4,5
2.	Write a shell script that does the following: 1. Use a for loop to iterate over the numbers from 1 to 10. 2. For each number: o Print whether the number is even or odd.	2,3	4,5
3.	Write a shell script that does the following: 1. Use a for loop to loop through a list of three colors: "red", "green", and "blue". 2. For each color, print a message saying "I like [color]".	2,3	4,5
4.	Write a shell script that does the following: 1. Use a for loop to iterate over the numbers from 1 to 10. 2. Inside the loop, calculate the square of each number and print the result.	2,3	4,5
5.	Write a shell script that does the following: 1. Use a for loop to iterate over the numbers from 5 to 15. 2. For each number: o Check if the number is divisible by 3. o If it is divisible by 3, print "Number [x] is divisible by 3". o If it is not divisible by 3, print "Number [x] is not divisible by 3".	2,3	4,5
6.	Write a shell script that does the following: 1. Use a for loop to iterate through the numbers from 1 to 20. 2. For each number: o Check if the number is prime . o If the number is prime, print "Number [x] is prime." o If the number is not prime, print "Number [x] is not prime."	2,3	4,5
7.	Write a Shell Script to Reverse a Number	2,3	4,5

	Create a shell script that takes a number as input from the user and reverses it using a while loop.		
8.	Write a Shell Script to Find the Length of a String Create a shell script that prompts the user to enter a string of your name and then calculates and displays its length using a while loop.	2,3	4,5
9.	Write a Shell Script to Print Even Numbers Create a shell script that does the following: 1. Print your name and roll no. 2. Initializes a counter variable to 0. 3. Uses a while loop to print all even numbers from 0 to 20. Increment the counter by 2 in each iteration of the loop	2,3	4,5
10.	Case Study1: Create a Digital Clock using Shell Script.	2,3	4,5
11.	Case Study2: Create Sign Up Form in Shell Scripting.	2,3	4,5
12.	Case Study 3 :Create a Password Generator using Shell Script.	2,3	4,5
13.	Case-Study 4: Create a Student Database perform following operations: 1. Create a Database. 2. View a Database. 3. Insert a Student Record. 4. Update a Record. 5. Delete a Record. 6. Show Record Particular Student.	2,3	4,5
14.	Write a shell script that receives any number of file names as arguments checks if every argument supplied is a file or a directory and reports accordingly. whenever the argument is a file or directory	2,3	4,5
15.	Write Shell Script Make directory by checking existence:	2,3	4,5
16.	Write Shell Script for Add array elements - Shell Script	2,3	4,5
17.	Write Shell Script reverse elements in array	2,3	4,5
18.	Write shell script program to addition, subtraction,multiplication of two matrix.	2,3	4,5
19.	Case Study : User Management Script Create a script to manage users — add, delete, and list users using Function	2,3	4,5
20.	Case Study : System Health Check Script Create a Shell Script to Monitor system health — CPU load, memory usage, disk space using Function.	2,3	4,5