Name of Student			
Lab Experiment No.	4	**Roll No.**	
Date Of Perf.:		**Date Of Sub.:**	
Expt. Title	Shell Scripts 1		
CO Mapping	LO1,LO4		

Aim: To implement Shell scripts

Objectives of the Experiment:

Implement shell scripts

Theory:

What is Shell?

Computer understands the language of 0's and 1's called binary language. In early days of computing, instruction are provided using binary language, which is difficult for all of us, to read and write. So in Os there is special program called Shell. Shell accepts your instruction or commands in English (mostly) and if its a valid command, it is pass to kernel. Shell is a user program or it's environment provided for user interaction. Shell is an command language interpreter that executes commands read from the standard input device (keyboard) or from a file. Shell is not part of system kernel, but uses the system kernel to execute programs, create files etc.

What is Shell Script?

Normally shells are interactive. It means shell accept command from you (via keyboard) and execute them. But if you use command one by one (sequence of 'n'number of commands), the you can store this sequence of command to text file and tell the shell to execute this text file instead of entering the commands. This is known as shell script.

Shell script defined as:

"Shell Script is series of command written in plain text file. Shell script is just like batch file is MS-DOS but have more power than the MS-DOS batch file."

Why to Write Shell Script?

1. Shell script can take input from user, file and output them on screen.

2. Useful to create our own commands.

3. Save lots of time.

4. To automate some task of day today life.

5. System Administration part can be also automated.

How to write shell script

Following steps are required to write shell script:

(1) Use any editor like vi or mcedit to write shell script.

(2) After writing shell script set execute permission for your script as follows syntax:

 chmod permission your-script-name

Variables in Shell

To process our data/information, data must be kept in computers RAM memory. RAM memory is divided into small locations, and each location had unique number called memory location/address, which is used to hold our data. Programmer can give a unique name to this memory location/address called memory variable or variable (Its a named storage location that may take different values, but only one at a time).

In Linux (Shell), there are two types of variable:

(1) System variables -

Created and maintained by Linux itself. This type of variable defined in CAPITAL

LETTERS.

(2) User defined variables (UDV) –

Created and maintained by user. This type of variable defined in lower letters.

Procedure /Approach:
Algorithm for Finding out sum of digits in given number

1. Start
2. Input number n
3. Set sum=0, sd=0
4. Find single digit in sd as n % 10 it will give (left most digit)
5. Construct sum no as sum=sum+sd
6. Decrement n by 1
7. Is n is greater than zero, if yes goto step 3, otherwise next step
8. Print sum
9. Stop

1. Write a script to print digits of given number and find their sum S/w required: Vi editor
2. Write a shell script to display "hello world"
3. Write a shell script to develop a basic calculator
4. Write a shell script to find number is even or odd
5. Write a shell script to find whether element is present in list or not.

Post Lab Assignment:

1. Write Shell Script to print reverse of number.
2. Write a shell script to get current date, time, user name and current working directory.
3. Write a Shell Script that adds two numbers if provided as the command Line Argument and if the two numbers are not entered it outputs an Error Message along with a one-Line of how-to use description.

The outputs were checked for different sets of inputs.
Program is working is   SATISFACTORY   NOT SATISFACTORY (Tick appropriate outcome)

Evaluation:

Timeline (2)	Understanding(2)	Performance (4)	Postlab (2)	Total(10)

Date & Signature of teacher: **Students Signature:**