

Experiment [4]: [Bash Scripting]

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Aim:

- [To Learn Basics of Bash Scripting.]

Requirements

- [Any Linux Distro, any kind of text editor (vs code, vim,nano, etc)]

Theory

- Bash (Bourne Again SHell) is a command-line shell and scripting language for Unix-based operating systems.
- A shell script is a file containing commands.
- KEYWORDS Reserved words like- if, then, fi, while,etc.
- OPERATORS 1- Arithmetic operators +, -, *, % 2- Comparision operators-eq -ne -lt -le -gt -ge
- POSITINAL PARAMETERS It is used to send inputs as arguments while executing a script. command syntax- ./script.sh arg1 arg2 \$0- script name \$1- first argument \$2- second argument

Procedure & Observations

Exercise 1: [Hello World Script]

Task Statement: [Basic Usage of Shell Scripts]

Explanation: [Writing Begginer level Shell Scripts]

Command(s):

```
#!/bin/bash echo "Hello, World!"
```

Output:

```
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ vim exp4.2.sh
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ ./exp4.2.sh
Hello, World!
```

Exercise 2: [Personalized Greeting Script]

Task Statement: [Basic Shell Script to callout user defined function.]

Explanation: [This Shell script will take input from user and store it in a variable and then call the variable which will output the stored value.]

Command(s):

```
#!/bin/bash echo "What is your name?" read name echo "Hello, $name! Welcome to Shell Scripting."
```

Output:

```
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ vim exp4.2.sh
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ ./exp4.2.sh
Hello, World!
Enter your name:
Vaishnavi
Hello, Vaishnavi! Welcome to Shell Scripting.
```

Exercise 3: [Arithmetic Operations in Shell Scripting]

Task Statement:

[Using Basic Arithmetic Operations in Shell Scripts]

Command(s):

```
#!/bin/bash echo "Enter first number: " read num1 echo "Enter second number: " read num2 echo "Addition: $((num1 + num2))" echo
"Subtraction: $((num1 - num2))" echo "Multiplication: $((num1 * num2))" echo "Division: $((num1 / num2))"
```

Output:

```
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ vim exp4.3.sh
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ ./exp4.3.sh
Enter first number:
3
Enter second number:
5
Addition: 8
Subtraction: -2
Multiplication: 15
Division: 0
```

Exercise 4: [Voting Eligibility]

Task Statement:

[Using Conditionals in Shell script]

Command(s):

```
#!/bin/bash echo "What is your age?" read age if [ $age -ge 18 ]; then echo "You are eligible to vote!" else fi echo "You are not eligible
to vote!"
```

Output:

```
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ vim exp4.4.sh
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ ./exp4.4.sh
Enter your age:
17
Sorry, you are not eligible to vote.
vaishnavii29@DESKTOP-BSKS7E4:/mnt/c/Users/DELL/Desktop/New folder/linux/exp4$ |
```

Result

- The Exercises were successfully completed for Basic Shell Scripting