Experiment 4: BASH or SHELL scripting**

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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, notepad, nano, etc).

Theory:

Learning the basics of bash scripting.

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:

```
rishika@DESKTOP-DC5Q814:~$ #!/bin/bash
rishika@DESKTOP-DC5Q814:~$ echo "Hello,world!"
Hello,world!
rishika@DESKTOP-DC5Q814:~$
```

- Exercise 2: [Personalized Greeting Script]
  Task Statement:

[Basic Shell Script to callout user defined function.]

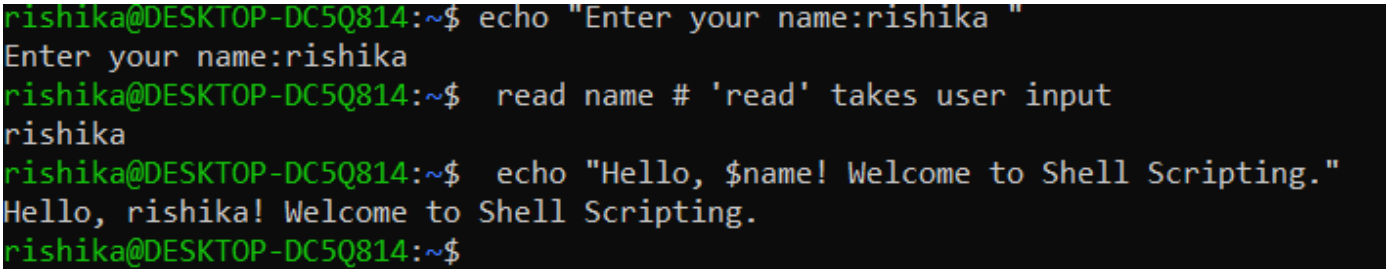
Explanation:

[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 "Enter your name: "
read name # 'read' takes user input
echo "Hello, $name! Welcome to Shell Scripting."
```

Output:



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:

```
rishika@DESKTOP-DC5Q814:~$ #!/bin/bash
rishika@DESKTOP-DC5Q814:~$ echo "Enter first number: "
Enter first number:
rishika@DESKTOP-DC5Q814:~$ read num1
1
rishika@DESKTOP-DC5Q814:~$ echo "Enter second number: "
Enter second number:
rishika@DESKTOP-DC5Q814:~$ read num2
3
rishika@DESKTOP-DC5Q814:~$ echo "Addition: $((num1 + num2))"
Addition: 4
rishika@DESKTOP-DC5Q814:~$ echo "Subtraction: $((num1 - num2))"
Subtraction: -2
rishika@DESKTOP-DC5Q814:~$ echo "Multiplication: $((num1 * num2))"
Multiplication: 3
rishika@DESKTOP-DC5Q814:~$ echo "Division: $((num1 / num2))"
Division: 0
rishika@DESKTOP-DC5Q814:~$
```

Exercise 4:

[Voting Eligibility]

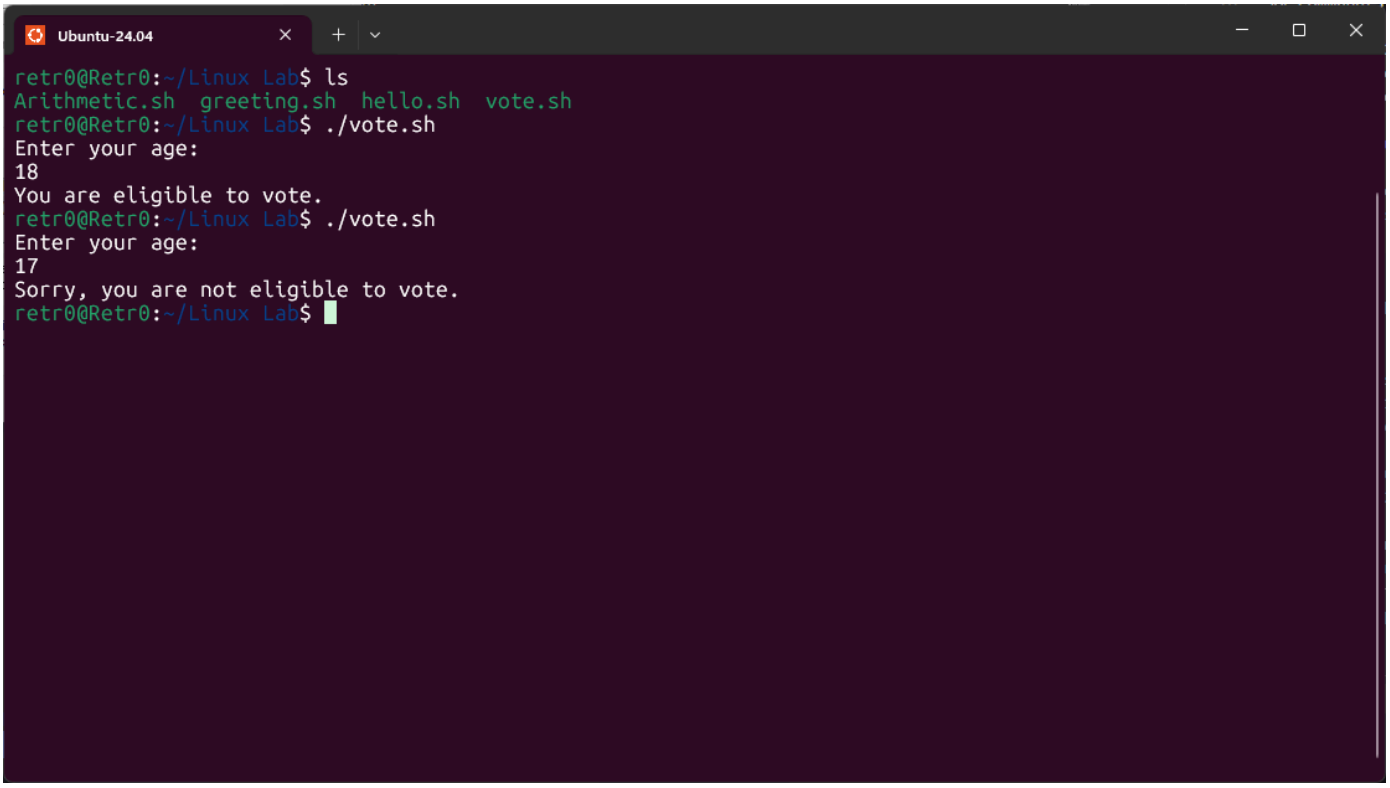
Task Statement:

[Using if else loop check if the user is eligible to vote or not.]

Command(s):

```
#!/bin/bash
echo "Enter your age: "
read age
if [ $age -ge 18 ]
then
echo "You are eligible to vote."
else
echo "Sorry, you are not eligible to vote."
fi
```

Output:



Result

The Exercises were successfully completed for Basic Shell Scripting.

Challenges Faced & Learning Outcomes

- Challenge 1: [it wasn't that hard.]

Learning: [What new concept or command did you learn?]

Conclusion

[This was somewhat of a practice on how to use bash scripts.]