

# 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

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### Requirements:

Any Linux Distro, any kind of text editor (vs code, vim, notepad, nano, etc).

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### Theory:

Learning the basics of bash scripting.

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### Procedure & Observations

Exercise 1: [Hello World Script]

Task Statement:

[Basic Usage of Shell Scripts]

Explanation:

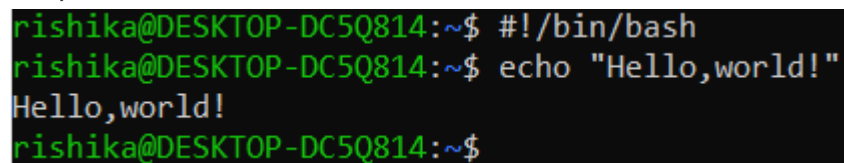
[Writing Begginer level Shell Scripts]

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.]

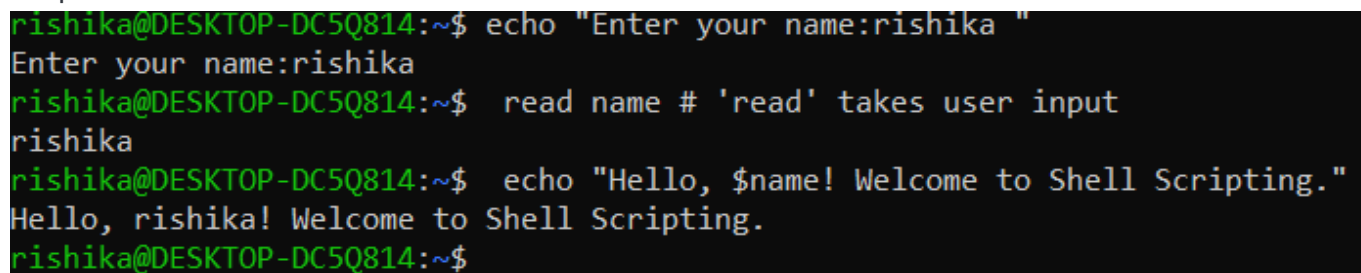
Explanation:

[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:



```
rishika@DESKTOP-DC5Q814:~$ echo "Enter your name:rishika "
Enter your name:rishika
rishika@DESKTOP-DC5Q814:~$ read name # 'read' takes user input
rishika
rishika@DESKTOP-DC5Q814:~$ echo "Hello, $name! Welcome to Shell Scripting."
Hello, rishika! Welcome to Shell Scripting.
rishika@DESKTOP-DC5Q814:~$
```

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]

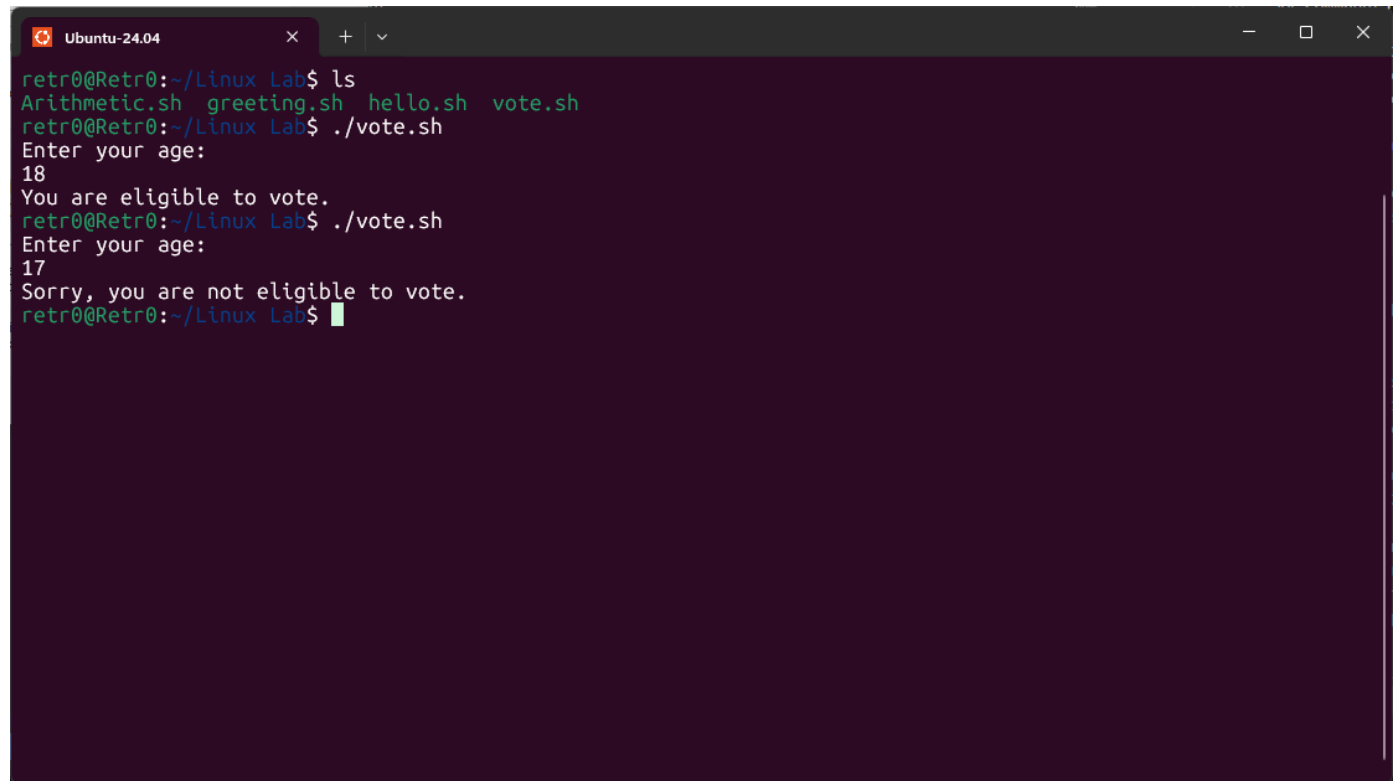
Task Statement:

[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:

A terminal window titled 'Ubuntu-24.04' with standard window controls. The prompt is 'retr0@Retr0:~/Linux Lab\$'. The user runs 'ls', showing files 'Arithmetic.sh', 'greeting.sh', 'hello.sh', and 'vote.sh'. Then they run './vote.sh' twice. The first time, they enter '18' and receive 'You are eligible to vote.'. The second time, they enter '17' and receive 'Sorry, you are not eligible to vote.'. The prompt returns to 'retr0@Retr0:~/Linux Lab\$' with a cursor.

```
retr0@Retr0:~/Linux Lab$ ls
Arithmetic.sh  greeting.sh  hello.sh  vote.sh
retr0@Retr0:~/Linux Lab$ ./vote.sh
Enter your age:
18
You are eligible to vote.
retr0@Retr0:~/Linux Lab$ ./vote.sh
Enter your age:
17
Sorry, you are not eligible to vote.
retr0@Retr0:~/Linux Lab$
```

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## Result

The Exercises were successfully completed for Basic Shell Scripting.

## Challenges Faced & Learning Outcomes

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

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

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## Conclusion

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