

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:

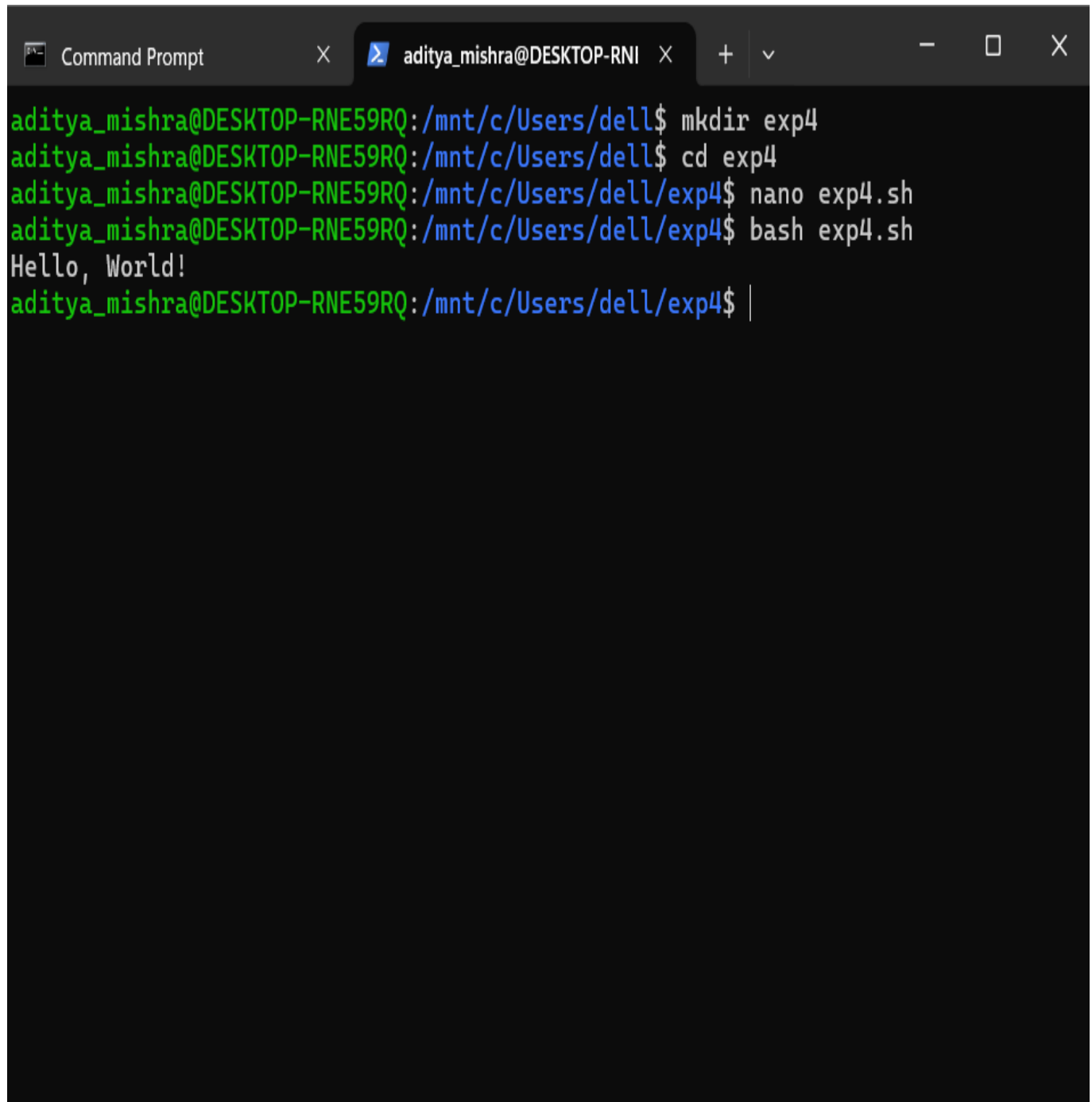
- [Writing Beginner level Shell Scripts]

Command(s):

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

Output:

#



The screenshot shows a Windows Command Prompt window with the title bar 'Command Prompt' and a tab labeled 'aditya_mishra@DESKTOP-RNI'. The terminal output is as follows:

```
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell$ mkdir exp4
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell$ cd exp4
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ nano exp4.sh
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ bash exp4.sh
Hello, World!
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ |
```

Exercise 2: [Personalized Greeting Script]

Task Statement:

- [Basic Shell Script to callout user defined function.]

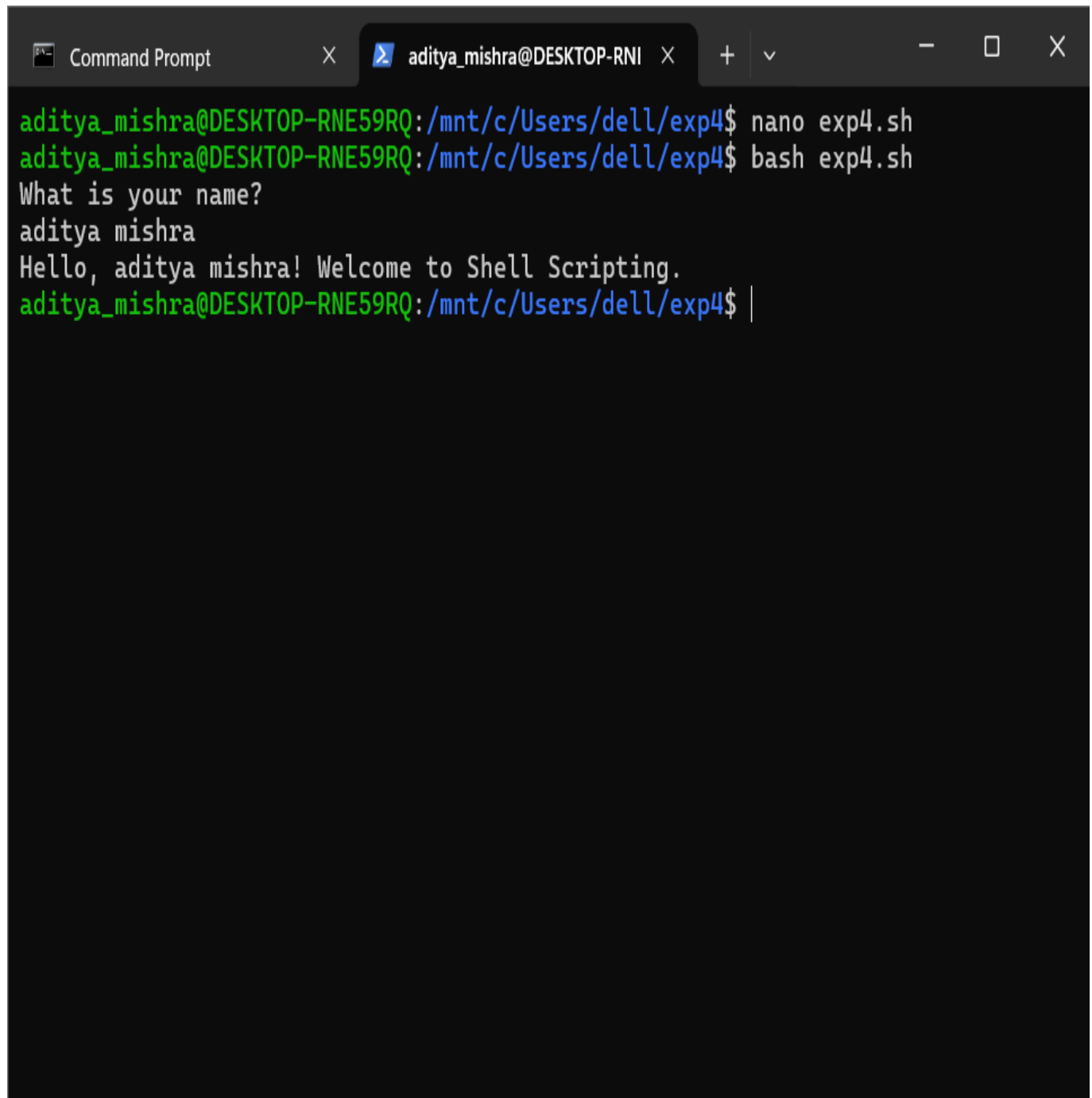
Explanation:

- [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:



The screenshot shows a Windows Command Prompt window with the title bar 'Command Prompt'. The active tab is 'aditya_mishra@DESKTOP-RNI'. The prompt is 'aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4\$'. The user has entered 'nano exp4.sh' and 'bash exp4.sh'. The script prompts 'What is your name?' and the user has entered 'aditya mishra'. The script then outputs 'Hello, aditya mishra! Welcome to Shell Scripting.' and the prompt returns to 'aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4\$'.

```
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ nano exp4.sh
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ bash exp4.sh
What is your name?
aditya mishra
Hello, aditya mishra! Welcome to Shell Scripting.
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ |
```

Exercise 3: [Arithmetic Operations in Shell Scripting]

Task Statement:

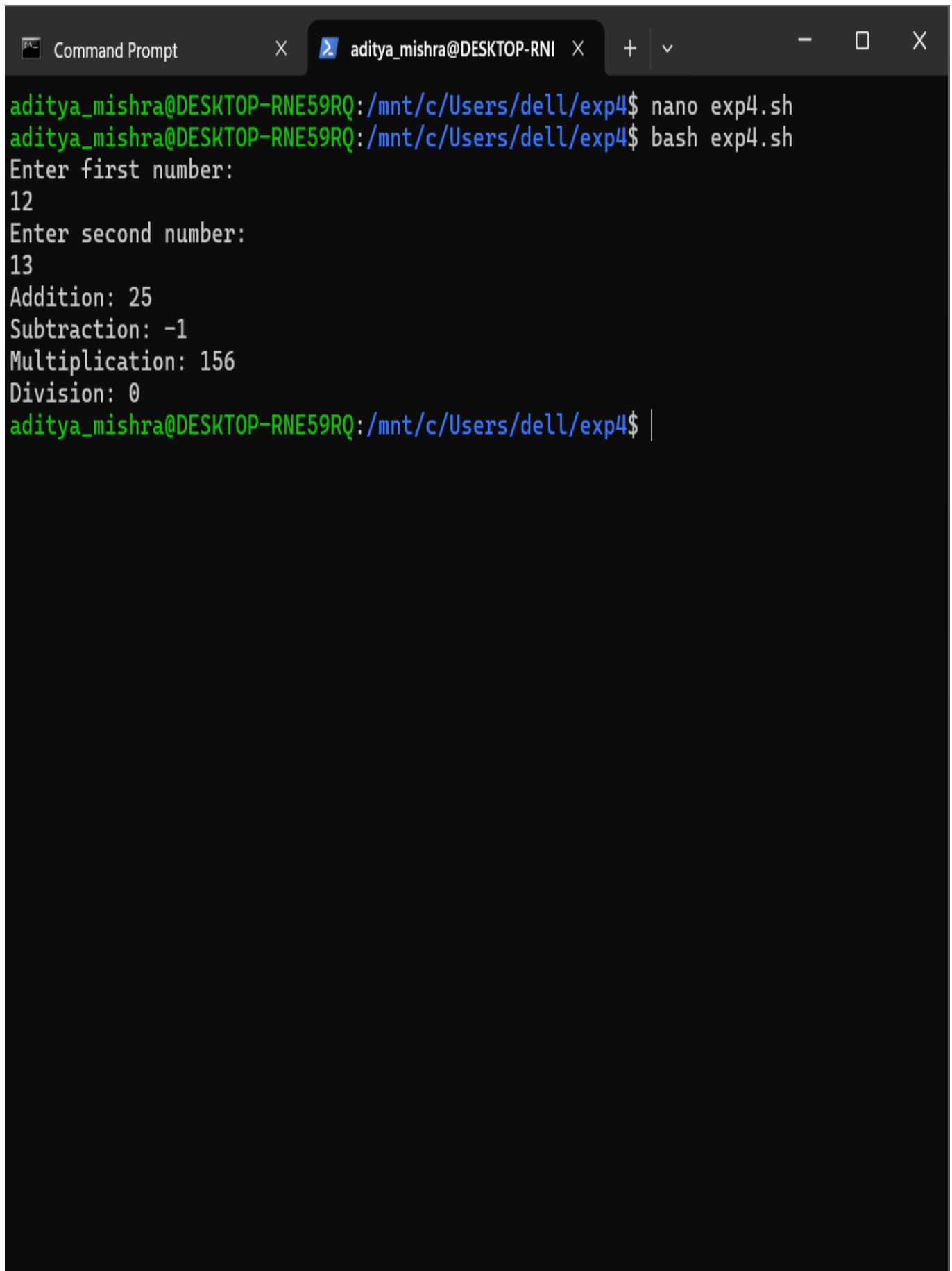
- [Using Basic Arithmetic Operations in Shell Scripts]

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:



```
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ nano exp4.sh
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ bash exp4.sh
Enter first number:
12
Enter second number:
13
Addition: 25
Subtraction: -1
Multiplication: 156
Division: 0
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ |
```

Exercise 4:

- [Voting Eligibility]

Task Statement:

- [Using Conditionals in Shell script]

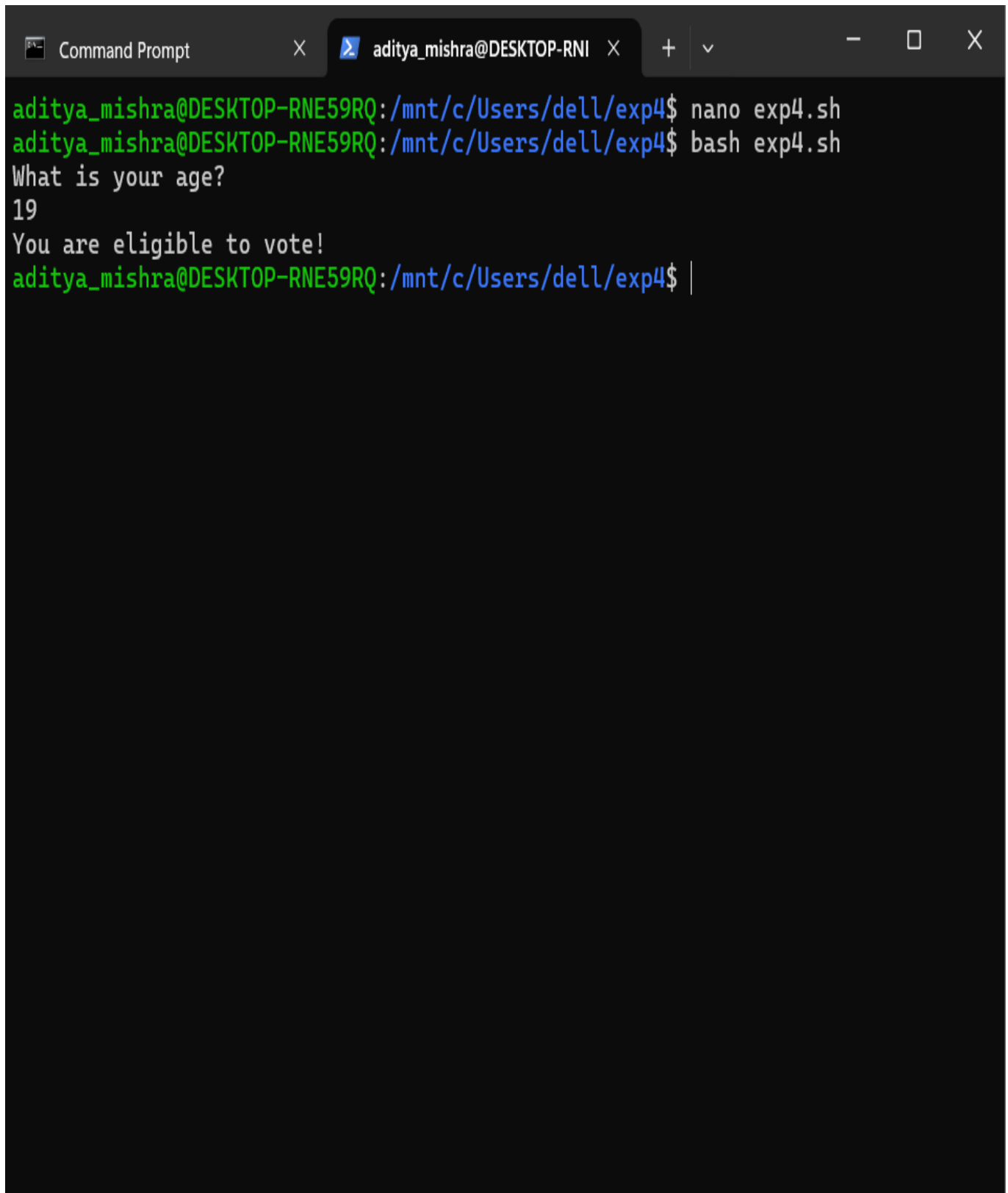
Command(s):

```
#!/bin/bash
echo "What is your age?"
read age
if [ $age -ge 18 ]; then

    echo "You are eligible to vote!"

else
    echo "You are not eligible to vote!"
fi
```

Output:



The screenshot shows a terminal window with two tabs. The active tab is titled 'aditya_mishra@DESKTOP-RNI'. The terminal output is as follows:

```
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ nano exp4.sh
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ bash exp4.sh
What is your age?
19
You are eligible to vote!
aditya_mishra@DESKTOP-RNE59RQ:/mnt/c/Users/dell/exp4$ |
```

Result

- The Exercises were successfully completed for Basic Shell Scripting