# Experiment [5]: [Shell Programming]

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## AIM:

- [To Learn Basic Conditional Statements in Bash Scripting]

## Requirements:

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

## Theory:

- [Basic usage of conditions and arrays in bash scripting.]

# Procedure & Observations

# Exercise 1: [Prime Number Check]

# Task Statement:

- [To check if the number given by the user is a prime number or not.]

# Explanation:

- [using if else loop wap to check if the number is a prime number or not.]

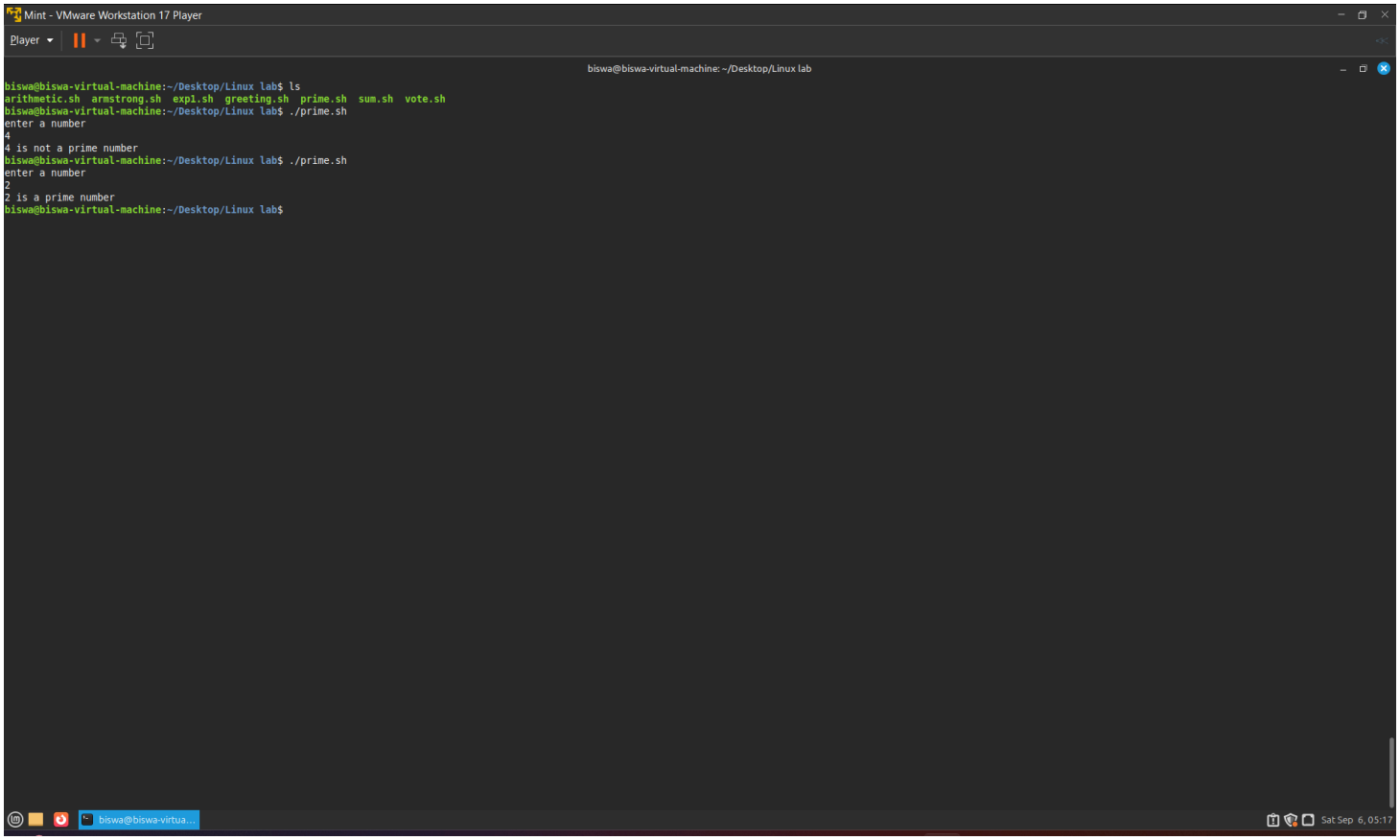
# Command(s):

```
#!/bin/bash
echo "Enter a number: "
read num
flag=0

for ((i=2; i<=num/2; i++))
do
    if [ $((num % i)) -eq 0 ]
    then
        flag=1
        break
    fi
done

if [ $flag -eq 0 ]
then
    echo "$num is a prime number."
else
    echo "$num is not a prime number."
fi
```

# Output:




# Exercise 2: [Sum of Digits]

# Task Statement:

- [Take input from user and give the sum of two digits.]

# Explanation:

-

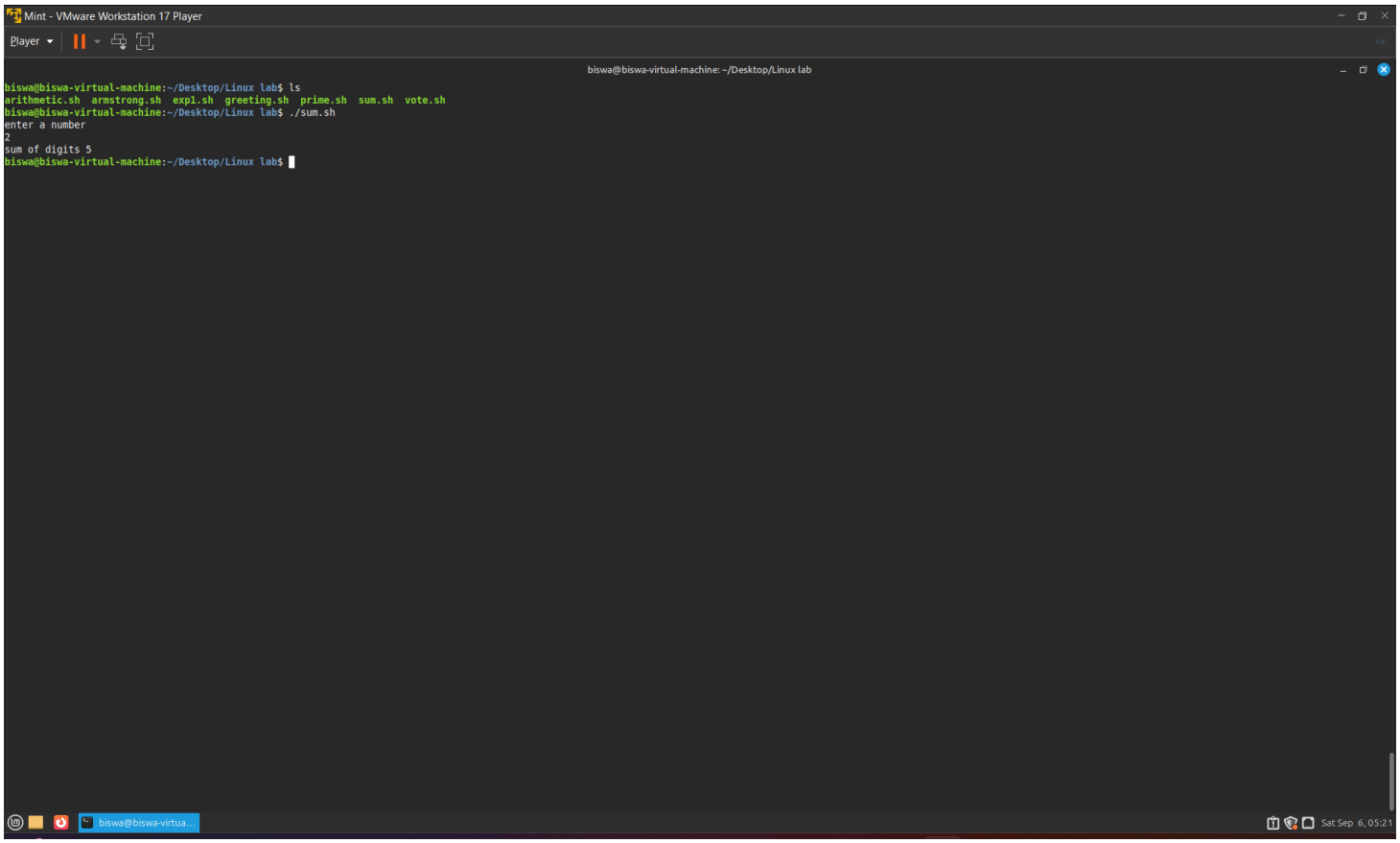
# Command(s):

#!/bin/bash
echo "Enter a number: "
read num
sum=0

while [ $num -gt 0 ]
do
digit =((num % 10))
sum=$((sum + digit))
num =((num / 10))
done

echo "Sum of digits: $sum"

## Output:




# Exercise 3: [Armstrong Numbers]

# Task Statement:

- Take input user and give the sum of Armstrong number of n digits is a number equal to the sum of its digits raised to the power n.

# Explanation:

- This script will tell if the number entered by the user is an armstrong number or not.

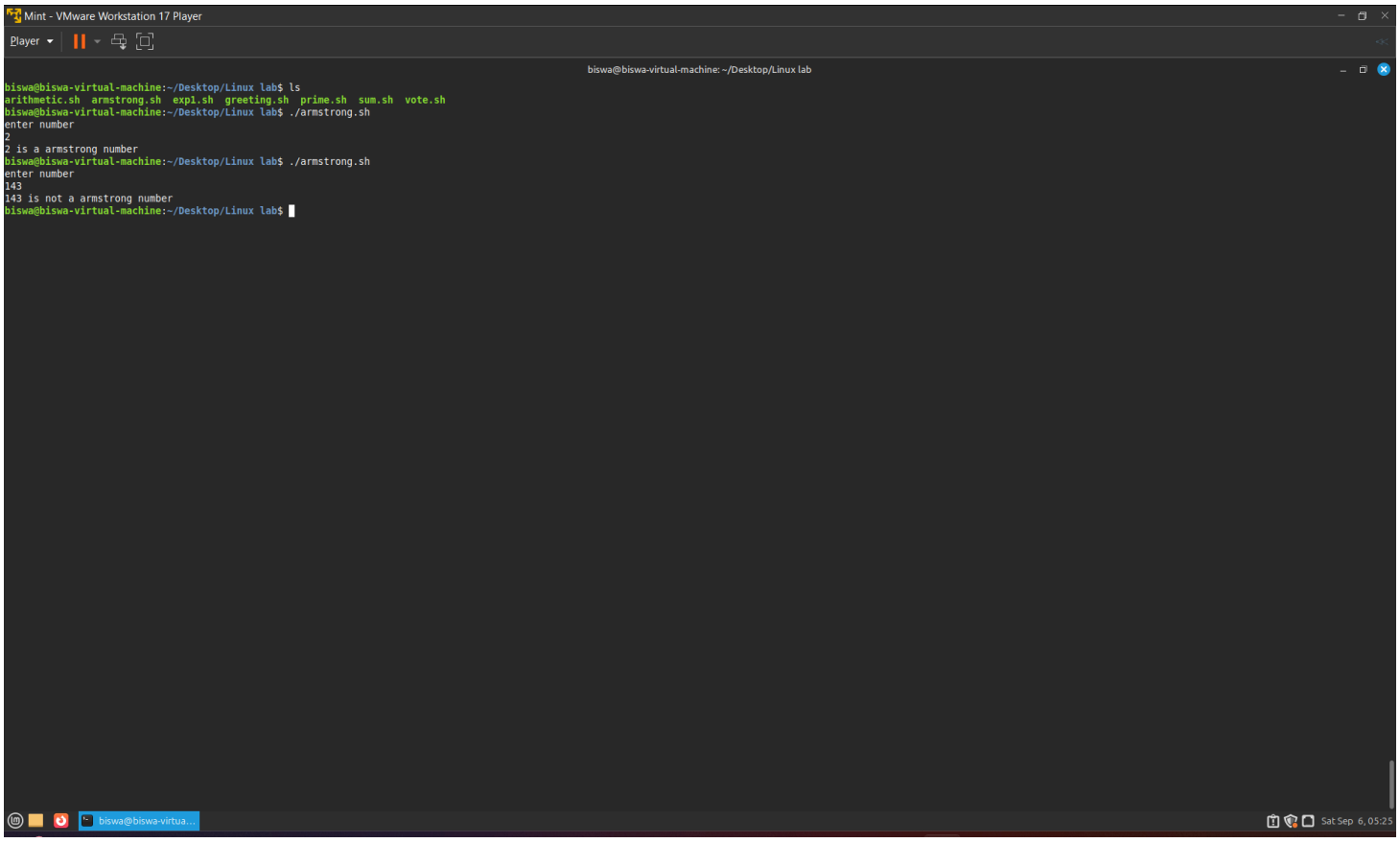
# Command(s):

#!/bin/bash
echo "Enter number: "
read num
temp=$numn =${#num}
sum=0

while [ $temp -gt 0 ]$dodigit =((temp % 10))
sum=$((sum + digit * *n))$temp =((temp / 10))
done

if [ $sum -eq$num ]
then
echo "$numisaArmstrongnumber."$elseecho"num is not a Armstrong number."
fi

# Output:



# Result:

- The Exercises were successfully completed for Basic Shell Scripting.