Experiment 5: BASH or SHELL scripting

Experiment 5: BASH or SHELL scripting
continued

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.]

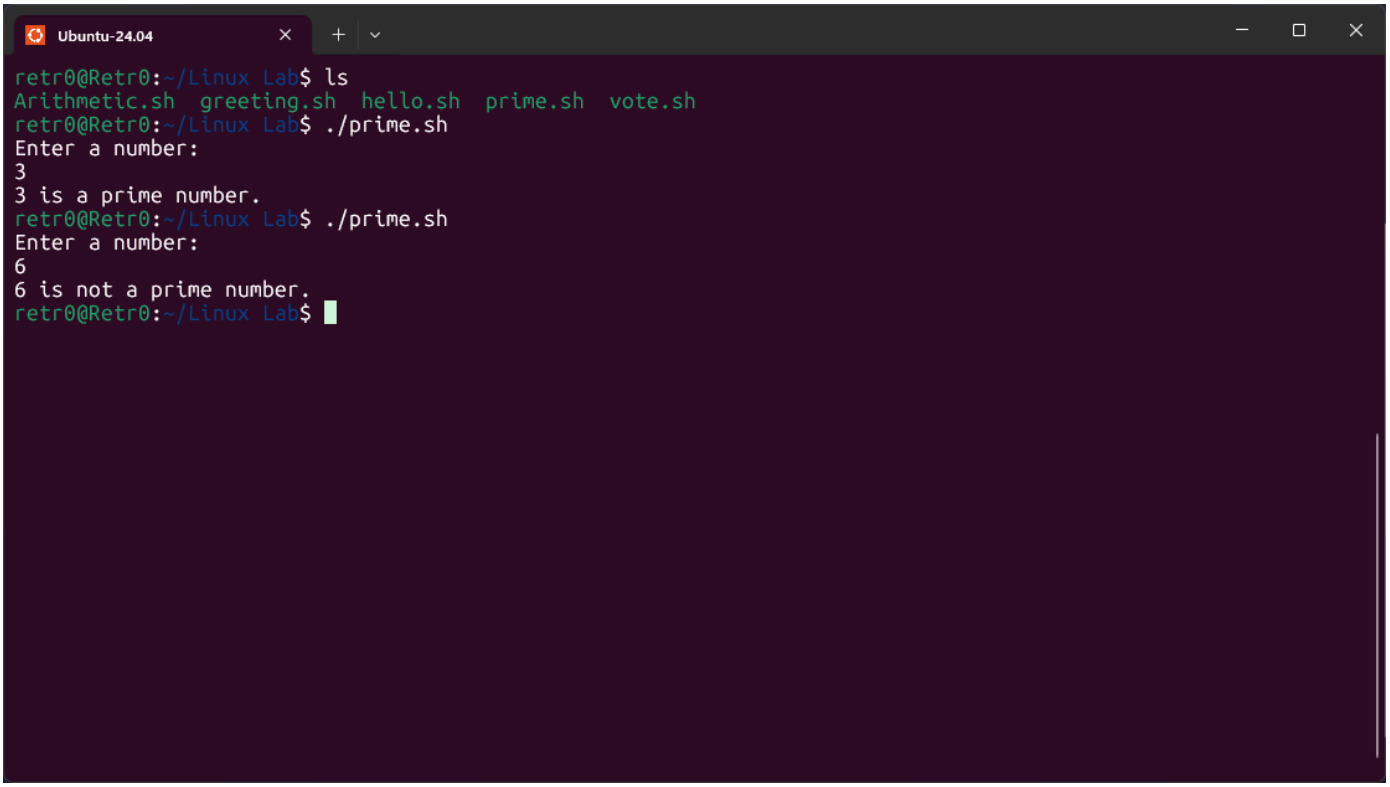
Explanation:

[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

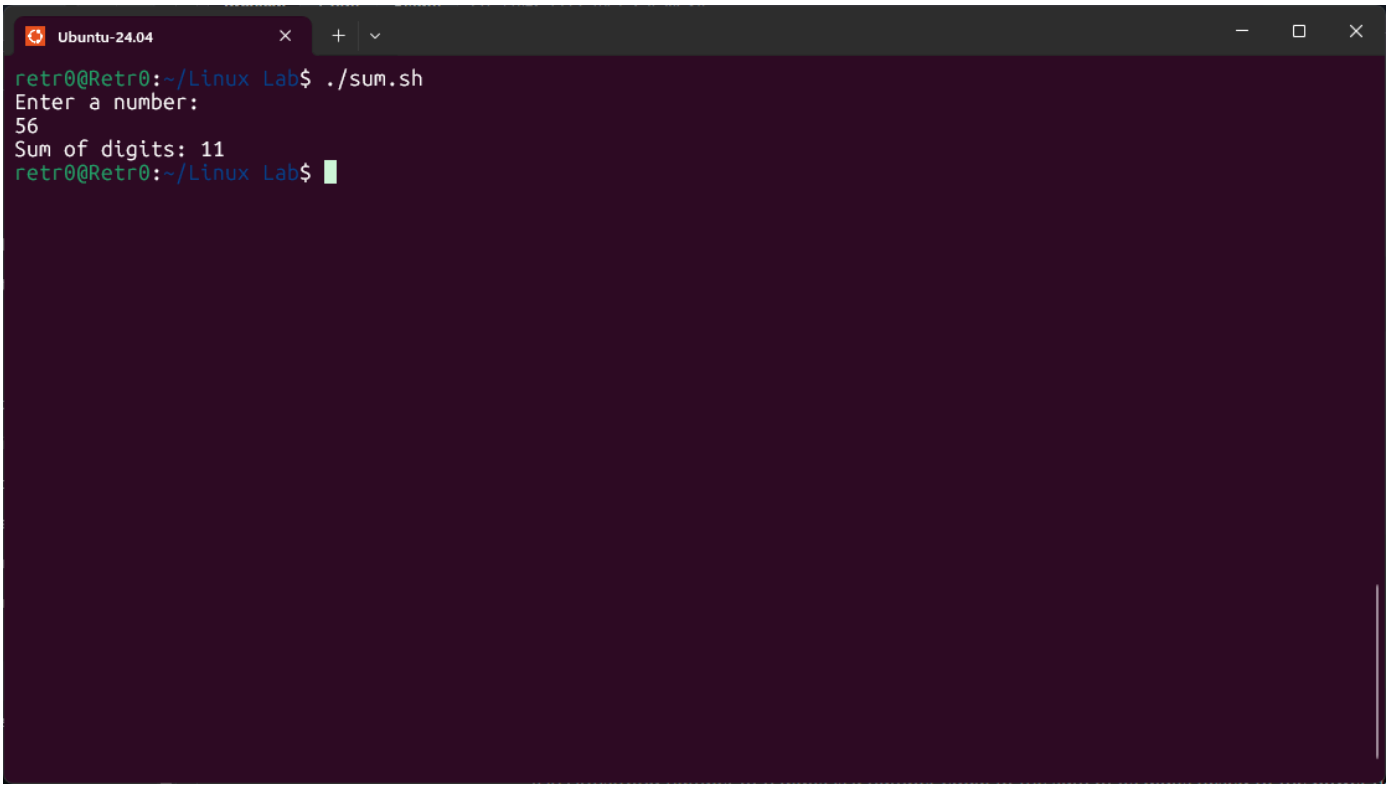
echo "$num is a prime number."
else
echo " $num is not a prime number."
fi
Output:



- Exercise 2: [Sum of Digits]
  Task Statement:
  [Take input from user and give the sum of two digits.]

Explanation:
[This script will take input from user and will give the following output.]

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:



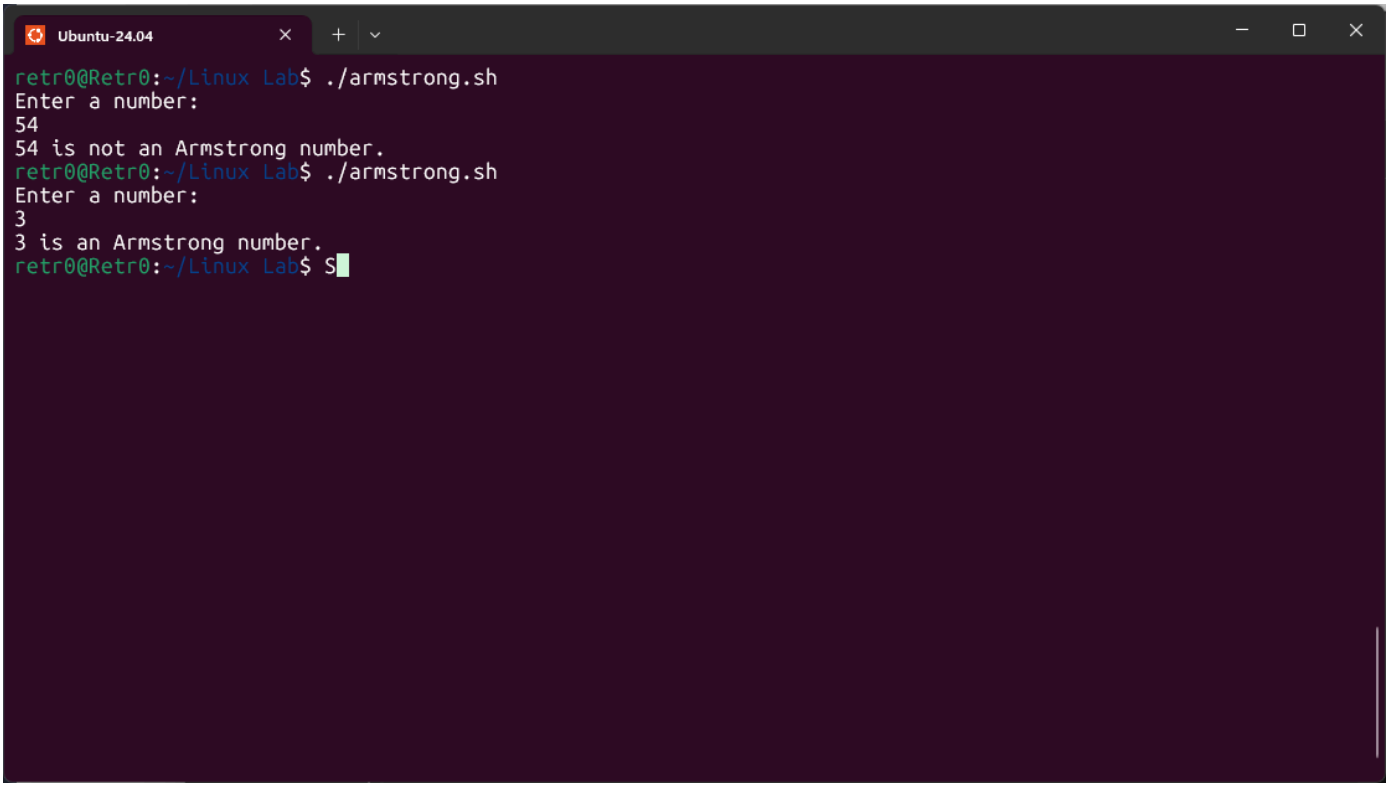
Exercise 3: [Armstrong Numbers]

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. Example: 153 = 13 + 53 + 33]

Explanation:
[This script will tell if the number entered by the user is an armstrong number or not.]

Command(s):
#!/bin/bash
echo "Enter a number: "
read num
temp=$numn =${#num} # number of digits
sum=0
while [$temp -gt 0]
do
digit= $((tempsum = ((sum + digit**n))
temp=$((temp / 10))
done
if [$sum -eq $num]
then
echo " $numisanArmstrongnumber."elseecho"num is not an Armstrong number."
fi

Output:



Result:

The Exercises were successfully completed for Basic Shell Scripting.