EXPERIMENT NO. 4

Student Name and Roll Number: Chirag Sardana and 19CSU071
Semester /Section: 5th/ FS A1
Link to Code: https://github.com/chiragsardana/Skill-Developement/tree/master/OperatingSystem/Experiment-4th
Date: 24th August 2021
Faculty Signature:
Marks:

Objective:
To write the shell programming code for the following.

Outcome:
Student is able to write code in shell programming

Problem Statement:
a) Write a shell program to check whether a number is even or odd

b) Write a shell program to find whether a number is prime or not.

c) Write a shell program to find whether a number is palindrome or not.

d) Write a shell program to type number 1 to 7 and then print its corresponding day of week

Background Study:

A shell script is a file with a set of commands in it. The shell reads this file and executes the instructions as if they were input directly on the command line.

A shell is a command-line interpreter and operations such as file manipulation, program execution and text printing is performed by shell script. So, we will use vi editor to edit our files.

Question Bank:

1. What is a shell?
2. What is the significance of $#?
3. What are the different types of commonly used shells on a typical Linux system?
4. How will you pass and access arguments to a script in Linux?
5. Use sed command to replace the content of the file (emulate tac command)

Already Done in Last Experiment i.e., Experiment 2

THE NORTHCAP UNIVERSITY
POWERED BY Arizona State University

Student Work Area

Algorithm/Flowchart/Code/Sample Outputs

→Odd or Even Number Program

```
(base) chiragsardana@MacBook new % vim OddEven.sh
```

```
#!bin/bash

echo "Enter a Number"
read number
if [ $((number%2)) -eq 0 ]
then
  echo "Number is even."
else
  echo "Number is odd."
fi
~
~
~
~
~
~
~
~
~
~
~
~
~
"OddEven.sh" 10L, 135B
```

```
(base) chiragsardana@MacBook new % zsh OddEven.sh
Enter a Number
12
Number is even.
(base) chiragsardana@MacBook new % zsh OddEven.sh
Enter a Number
23
Number is odd.
```

THE NORTHCAP UNIVERSITY
POWERED BY Arizona State University

→Number is Prime or Not Program

```
(base) chiragsardana@MacBook new % vim Prime.sh
```

```
#!/bin/bash


echo "Enter the Number "
read num

for (( i=2; i<=num/2 ;i++ ))
do
  if [ $((num%i)) -eq 0 ]
  then
    echo "$num is not a prime number."
    exit
  fi
done
echo "$num is a prime number."
~
~
~
~
~
~
~
~
"Prime.sh" 15L, 203B
```

```
(base) chiragsardana@MacBook new % zsh Prime.sh
Enter the Number
12
12 is not a prime number.
```

THE NORTHCAP UNIVERSITY
POWERED BY Arizona State University

→Number is Palindrome or Not Program

```
(base) chiragsardana@MacBook new % vim Palindrome.sh
```

```
#!/bin/bash

echo "Enter the Number"
read num

remainder=0
rev=""

temp=$num

while [ $num -gt 0 ]
do
        s=$(( $num % 10 ))

        num=$(( $num / 10 ))

        rev=$( echo ${rev}${s} )
done

if [ $temp -eq $rev ];
then
        echo "Number is palindrome"
else
        echo "Number is NOT palindrome"
fi

~
~
```

```
(base) chiragsardana@MacBook new % zsh Palindrome.sh
Enter the Number
121
Number is palindrome
(base) chiragsardana@MacBook new % zsh Palindrome.sh
Enter the Number
231
Number is NOT palindrome
```

THE NORTHCAP UNIVERSITY
POWERED BY Arizona State University

→WeekDays Program

```
(base) chiragsardana@MacBook new % vim WeekDays.sh
```

```
#!/bin/bash

echo "Select a week day (1-7): "
read i

case $i in
     1) echo "Monday";;
     2) echo "Tuesday";;
     3) echo "Wednesday";;
     4) echo "Thursday";;
     5) echo "Friday";;
     6) echo "Saturday";;
     7) echo "Sunday";;
     exit) exit;;
esac
~
~
~
~
~
~
~
~
~
~
~
~
~
"WeekDays.sh" 15L, 264B
```

```
(base) chiragsardana@MacBook new % zsh WeekDays.sh
Select a week day (1-7):
1
Monday
(base) chiragsardana@MacBook new % zsh WeekDays.sh
Select a week day (1-7):
7
Sunday
(base) chiragsardana@MacBook new % zsh WeekDays.sh
Select a week day (1-7):
9
```