**System programming & Operating System Laboratory**

**Course Code - 18BTCS511**

**Name: Bryce Ferreira Roll No.: 2203129**

**En No.: MITU20BTCS0076 Class: TY CSE CORE**

**Batch: A**

Implement the following using shell scripting

Menu driven program for:

a) Find the factorial of a no.

b) Find greatest of three numbers

c) Find a prime no

d) Find whether a number is palindrome

e) Find whether a string is palindrome

Code:

# creating a menu with the following options

echo "SELECT YOUR CHOICE";

echo "1. Factorial of a number"

echo "2. Greater of 3"

echo "3. Prime Number"

echo "4. Pallindrome Number"

echo "5. Pallindrome String"

echo "6. Exit from menu "

echo -n "Enter your menu choice [1-6]: "

# Running a forever loop using while statement

# This loop will run until select the exit option.

# User will be asked to select option again and again

while :

do

# reading choice

read choice

# case statement is used to compare one value with the multiple cases.

case $choice in

# Pattern 1

1) echo "You have selected the option 1"

echo "Enter the Number"

read num

fact=1

while [ $num -gt 1 ]

do

fact=$((fact \* num))

num=$((num - 1))

done

echo $fact;;

# Pattern 2

2) echo "You have selected the option 2"

echo "Enter Num1"

read num1

echo "Enter Num2"

read num2

echo "Enter Num3"

read num3

if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]

then

echo "Greatest is"

echo $num1

elif [ $num2 -gt $num1 ] && [ $num2 -gt $num3 ]

then

echo "Greatest is"

echo $num2

else

echo "Greatest is"

echo $num3

fi;;

# Pattern 3

3) echo "You have selected the option 3"

echo -e "Enter Number : \c"

read n

for((i=2; i<=$n/2; i++))

do

ans=$(( n%i ))

if [ $ans -eq 0 ]

then

echo "$n is not a prime number."

exit 0

fi

done

echo "$n is a prime number.";;

#Pattern 4

4) echo "You have selected option 4"

echo "Enter the Number"

read num

s=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;;

#Pattern 5

5) echo "input your string without space"

read vstr

for i in $(seq 0 ${#vstr})

do

rvstr=${vstr:$i:1}${rvstr}

done

if [ "$vstr" = "$rvstr" ]

then

echo "String is palindrome."

else

echo "String is not plaindrome."

fi;;

# Pattern 6

6) echo "QUITTING...."

exit;;

# Default Pattern

\*) echo "invalid option";;

esac

echo -n "Enter your menu choice [1-6]: "

done

Output:

