OS Lab Assignment - 3

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CLASS : AI-C BATCH : B2

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1) Prime

```
  GNU nano 7.2                                  prime.sh
_

echo "Enter a number:"
read number
i=2

if [ $number -lt 2 ]
then
    echo "$number is not a prime number."
    exit
fi

while [ $i -lt $number ]
do
    if [ `expr $number % $i` -eq 0 ]
    then
        echo "$number is not a prime number."
        exit
    fi
    i=`expr $i + 1`
done

echo "$number is a prime number."
```

```
rushi@rushi-81MV:~$ nano prime.sh
rushi@rushi-81MV:~$ bash prime.sh
Enter a number:
7
7 is a prime number.
rushi@rushi-81MV:~$ bash prime.sh
Enter a number:
8
8 is not a prime number.
rushi@rushi-81MV:~$ _
```

2) Palindrome

```
  GNU nano 7.2                                  palindrome.sh
_
echo "Enter a String : "
read input
reverse=""
len=${#input}
for((i=$len-1; i>=0; i--))
do
        reverse="$reverse${input:$i:1}"
done
if [ $input == $reverse ]
then
        echo "$input is palindrome"
else
        echo "$input is not a palindrome"
fi
```

```
rushi@rushi-81MV:~$ nano palindrome.sh
rushi@rushi-81MV:~$ bash palindrome.sh
Enter a String :
racecar
racecar is palindrome
rushi@rushi-81MV:~$ _
```

3) Factorial

```
 GNU nano 7.2                                  factorial.sh
echo "Enter a number"
read num

fact=1

while [ $num -gt 1 ]
do
        fact=$((fact * num))
        num=$((num -1))
done
echo "Factorial of a given number is : "
echo $fact
```

```
rushi@rushi-81MV:~$ nano factorial.sh
rushi@rushi-81MV:~$ bash factorial.sh
Enter a number
6
Factorial of a given number is :
720
rushi@rushi-81MV:~$
```