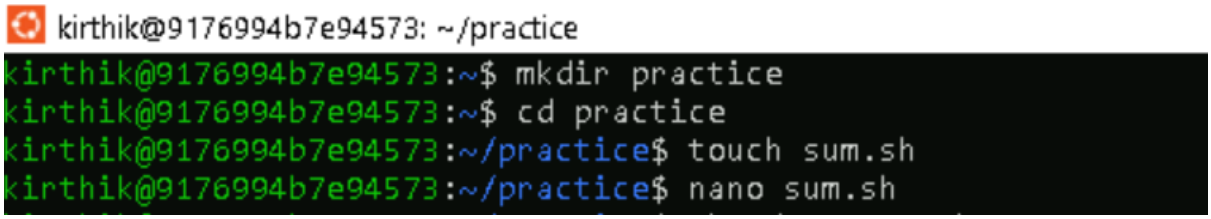
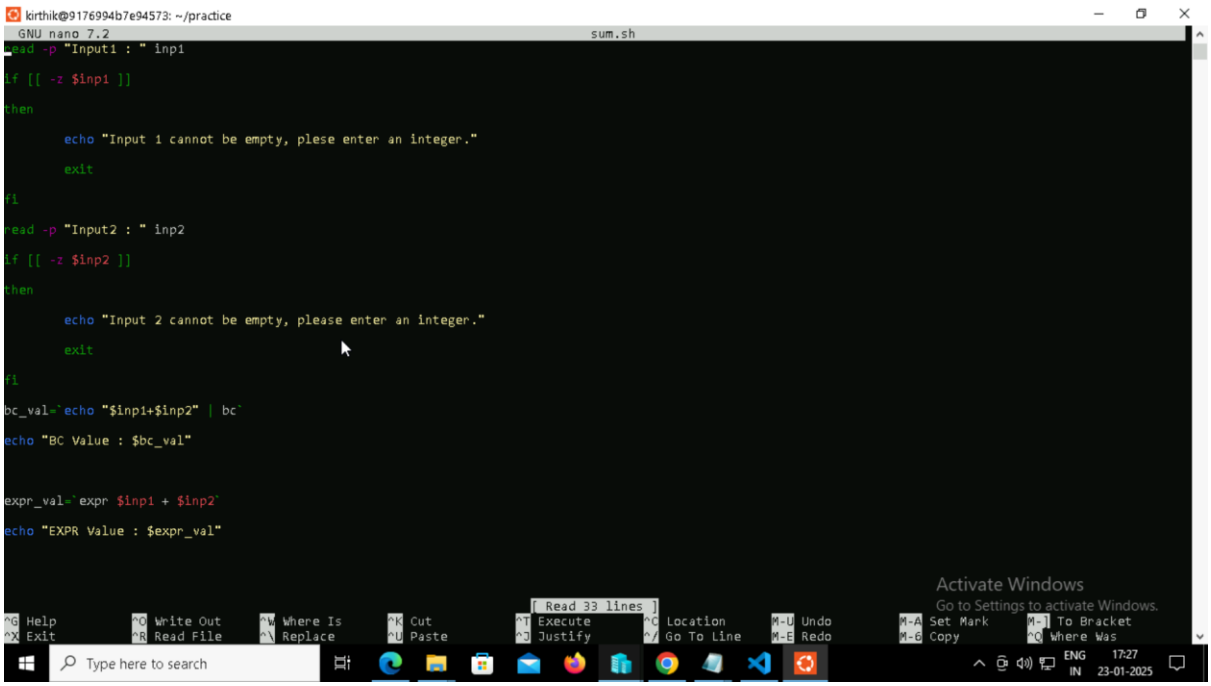
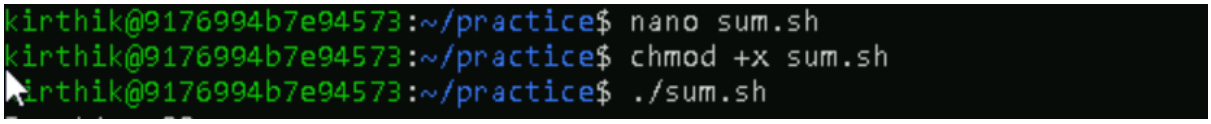
ARITHMETIC SUM

Created a directory(practice) and file named “sum.sh”

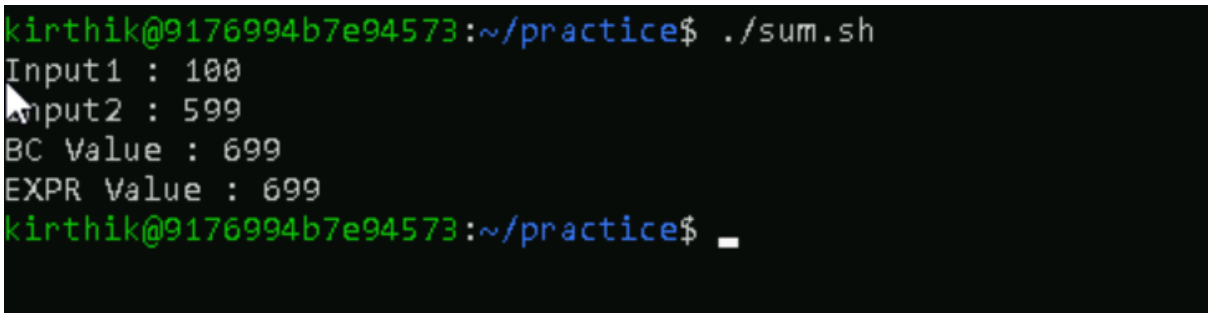


Typed my script:





OUTPUT:



PALINDROME

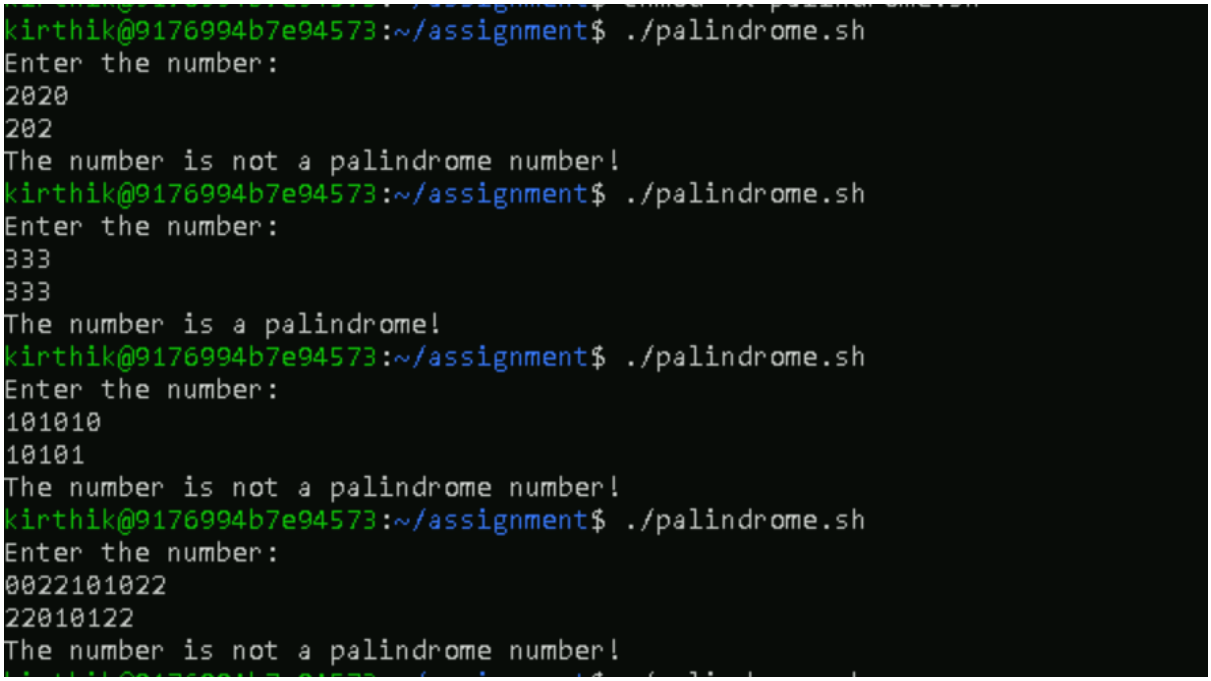
CREATING FILE:

```
kirthik@9176994b7e94573:~/assignment$ nano palindrome.sh
kirthik@9176994b7e94573:~/assignment$ chmod +x palindrome.sh
```

SCRIPT:

```
echo "Enter the number:"
read n
num=$n
rev=0
while [ $n -gt 0 ]
do
a=`expr $n % 10`
n=`expr $n / 10`
rev=`expr $rev \* 10 + $a`
done
echo $rev
if [ $num -eq $rev ]
then
        echo "The number is a palindrome!"
else
        echo "The number is not a palindrome number!"
fi
```

OUTPUT:


kirthik@9176994b7e94573:~/assignment$ ./palindrome.sh
Enter the number:
2020
202
The number is not a palindrome number!
kirthik@9176994b7e94573:~/assignment$ ./palindrome.sh
Enter the number:
333
333
The number is a palindrome!
kirthik@9176994b7e94573:~/assignment$ ./palindrome.sh
Enter the number:
101010
10101
The number is not a palindrome number!
kirthik@9176994b7e94573:~/assignment$ ./palindrome.sh
Enter the number:
0022101022
22010122
The number is not a palindrome number!

BUBBLE SORT

CREATING FILE:

```
kirthik@9176994b7e94573:~/assignment$ nano bubble_sort.sh
kirthik@9176994b7e94573:~/assignment$ chmod +x bubble_sort.sh
```

SCRIPT:

```
declare -a arr
arr=(10 8 20 100 12)

echo "Entered array:"
echo ${arr[@]}

for ((i = 0; i < 5; i++))
  do
    for((j = 0; j < 5-i-1; j++))
      do
        if [ ${arr[j]} -gt ${arr[$((j+1))]} ];
          then
            temp=${arr[j]}
            arr[$j]=${arr[$((j+1))]}
            arr[$((j+1))]=$temp
fi
done
done
echo "Sorted array:"
echo ${arr[@]}
```

OUTPUT:

```
kirthik@9176994b7e94573:~/assignment$ ./bubble_sort.sh
Entered array:
10 8 20 100 12
Sorted array:
8 10 12 20 100
```

REVERSE NUMBER

CREATING FILE:

```
kirthik@9176994b7e94573:~/assignment$ nano reverse_nums.sh
kirthik@9176994b7e94573:~/assignment$ chmod +x reverse_nums.sh
```

SCRIPT:

```
#!/bin/bash

n=$1

rev=0
sd=0

while [ $n -gt 0 ]

do

sd=`expr $n % 10`

rev=`expr $rev \* 10 + $sd`

n=`expr $n / 10`

done

echo "Reverse Number is $rev"
```

OUTPUT:

```
kirthik@9176994b7e94573:~/assignment$ ./reverse_nums.sh 0987654321
Reverse Number is 123456789
kirthik@9176994b7e94573:~/assignment$
```

PASCAL TRIANGLE

CREATING FILE:

```
kirthik@9176994b7e94573:~/assignment$ nano pascal_triangle.sh
kirthik@9176994b7e94573:~/assignment$ chmod +x pascal_triangle.sh
```

SCRIPT:

```
pastri()
{
r=$1
c=1
for((i=0;i<r;i++))
{
for((s=1;s<r-i;s++))
{
echo -n "  "
}
for((j=0;j<=i;j++))
{
if [ $j -eq 0 -o $i -eq 0 ]
then
c=1;
else
c=$((c*(i-j+1)/j))
fi
echo -n $c "  "
}
echo
}
}

echo "enter the number of rows:"
read r
pastri $r
```

OUTPUT:

kirthik@9176994b7e94573:~/assignment$ ./pascal_triangle.sh
enter the number of rows:
7
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1
1 6 15 20 15 6 1
kirthik@9176994b7e94573:~/assignment$ ./pascal_triangle.sh
enter the number of rows:
8
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1
1 6 15 20 15 6 1
1 7 21 35 35 21 7 1
kirthik@9176994b7e94573:~/assignment$

ARRAY SUM

CREATING FILE:

```
kirthik@9176994b7e94573:~/assignment$ nano array_sum.sh
kirthik@9176994b7e94573:~/assignment$ chmod +x array_sum.sh
```

SCRIPT:

```
arr=(2 4 -5 -8 9 12)

for (( i = 0; i <= ${#arr[*]}; i++ )); do
  if (( arr[i] > 0 )); then
    sum=`expr $sum + ${arr[i]}`
  fi
done
echo "$sum"
```

OUTPUT:

```
kirthik@9176994b7e94573:~/assignment$ ./array_sum.sh
27
```

GREETING USER:

CREATING FILE:

```
kirthik@9176994b7e94573:~/assignment$ nano greetuser.sh
kirthik@9176994b7e94573:~/assignment$ chmod +x greetuser.sh
```

SCRIPT:

```
echo "hello! what's your name?"
read name

echo "HELLO, $name! welcomet to the world of shell scripting!"
```

OUTPUT:

```
kirthik@9176994b7e94573:~/assignment$ ./greetuser.sh
hello! what's your name?
kirthik subbiah
HELLO, kirthik subbiah! welcome to the world of shell scripting!
```