

Greetings

```
bhargava@23372bc849b55ff:~$ nano hello
bhargava@23372bc849b55ff:~$ chmod +x hello
bhargava@23372bc849b55ff:~$ cat hello
echo "Hello! What's your name?"
read name

echo "Hello, $name! Welcome to the World of Shell Scripting!"
bhargava@23372bc849b55ff:~$ ./hello
Hello! What's your name?
Bhargava Ram Kulla
Hello, Bhargava Ram Kulla! Welcome to the World of Shell Scripting!
bhargava@23372bc849b55ff:~$
```

Addition of two numbers

```
bhargava@23372bc849b55ff:~$ nano add_two_integers
bhargava@23372bc849b55ff:~$ chmod +x add_two_integers
bhargava@23372bc849b55ff:~$ ./add_two_integers
Input1 : 10
Input2 : 20
BC Value : 30
EXPR Value : 30
bhargava@23372bc849b55ff:~$ █
```

Sum of Array

```
bhargava@23372bc849b55ff:~$ nano array_sum.sh
bhargava@23372bc849b55ff:~$ chmod +x array_sum.sh
bhargava@23372bc849b55ff:~$ cat array_sum.sh
arr=(2 4 -5 -8 9 12)
for (( i = 0; i <= ${#arr[@]}; i++ )); do
    if (( arr[i] > 0 )); then
        sum=$(( sum+arr[i] ))
    elif (( arr[i] < 0 )); then
        sum=$(( sum+arr[i] ))
    fi
done
echo "$sum"
bhargava@23372bc849b55ff:~$ ./array_sum.sh
14
bhargava@23372bc849b55ff:~$ _
```

Bubble sort

```
bhargava@23372bc849b55ff:~$ nano bubble_sort
bhargava@23372bc849b55ff:~$ chmod +x bubble_sort
bhargava@23372bc849b55ff:~$ cat bubble_sort
declare -a arr
arr=(10 8 20 100 12)
echo "Entered array:"
echo ${arr[@]}
for ((i = 0; i < ${#arr[@]}; i++))
do
    for ((j = 0; j < ${#arr[@]} -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 ${arr[@]}
bhargava@23372bc849b55ff:~$ ./bubble_sort
Entered array:
10 8 20 100 12
Sorted array:
8 10 12 20 100
bhargava@23372bc849b55ff:~$ _
```

Palindrome or not

```
bhargava@23372bc849b55ff:~$ nano palindrome
bhargava@23372bc849b55ff:~$ chmod +x palindrome
bhargava@23372bc849b55ff:~$ cat palindrome
echo "Enter a 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 $rev ]
then
echo "The number is Palindrome!"
else
echo "The number is not Palindrome!"
fi
bhargava@23372bc849b55ff:~$ ./palindrome
Enter a number
131
131
The number is Palindrome!
bhargava@23372bc849b55ff:~$
```

Reverse of number

```
bhargava@23372bc849b55ff:~$ nano reverse_of_number
bhargava@23372bc849b55ff:~$ chmod +x reverse_of_number
bhargava@23372bc849b55ff:~$ cat reverse_of_number
echo "Enter a number"
read n
rev=0
sd=0
while [ $n -gt 0 ]
do
sd=$((n % 10))
rev=$((rev * 10 + sd))
n=$((n / 10))
done
echo "Reverse number is $rev"
bhargava@23372bc849b55ff:~$ ./reverse_of_number
Enter a number
143
Reverse number is 341
bhargava@23372bc849b55ff:~$ _
```

Pascal Triangle

```
bhargava@23372bc849b55ff:~$ nano pascal_triangle
bhargava@23372bc849b55ff:~$ chmod +x pascal_triangle
bhargava@23372bc849b55ff:~$ cat pascal_triangle
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

bhargava@23372bc849b55ff:~$ ./pascal_triangle
enter the number of rows:
5
    1
   1 1
  1 2 1
 1 3 3 1
1 4 6 4 1
bhargava@23372bc849b55ff:~$
```