

SHELL SCRIPTS

1. SHELL SCRIPT FOR READING AN INPUT

```
sahil@18cfbe74344a5b9:~$ sudo nano Hello.sh
sahil@18cfbe74344a5b9:~$ cat Hello.sh
#!/bin/bash

echo "Hello , what's your name?"
read name

echo "Hello $name , nice to meet you !"
sahil@18cfbe74344a5b9:~$ sudo chmod +x Hello.sh
sahil@18cfbe74344a5b9:~$ ./Hello.sh
Hello , what's your name?
sahil
Hello sahil , nice to meet you !
sahil@18cfbe74344a5b9:~$
```

2. SHELL SCRIPT FOR ADDITION OF NUMBERS

```
sahil@18cfbe74344a5b9:~$ sudo nano addscript.sh
[sudo] password for sahil:
```

```
sahil@18cfbe74344a5b9:~$ cat addscript.sh
#!/usr/bin/bash
read -p "Input1 : " inp1
if [[ -z $inp1 ]]
then
    echo "Input 1 cannot be empty, please enter an integer."
    exit
fi

read -p "Input2 : " inp2
if [[ -z $inp2 ]]
then
    echo "Input 2 cannot be empty, please enter an integer."
    exit
fi

bc_val=`echo "$inp1+$inp2" | bc`
echo "BC Value : $bc_val"

expr_val=`expr $inp1 + $inp2`
echo "EXPR Value : $expr_val"
```

```
sahil@18cfbe74344a5b9:~$ sudo chmod +x addscript.sh
```

```
sahil@18cfbe74344a5b9:~$ ./addscript.sh
Input1 : 5
Input2 : 10
BC Value : 15
EXPR Value : 15
```

3. SHELL SCRIPT FOR CHECKING IF A NUMBER IS PALINDROME OR NOT

```
sahil@18cfbe74344a5b9:~$ sudo nano palindrome.sh
[sudo] password for sahil:
sahil@18cfbe74344a5b9:~$ cat palindrome.sh
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 $rev ]
then
    echo "The number is a palindrome!"
else
    echo "The number is not a palindrome number!"
fi
sahil@18cfbe74344a5b9:~$ sudo chmod +x palindrome.sh
sahil@18cfbe74344a5b9:~$ ./palindrome.sh
Enter the number:
525
525
The number is a palindrome!
```

4. SHELL SCRIPT FOR ARRAY SUM

```
sahil@18cfbe74344a5b9:~$ sudo nano array_sum
sahil@18cfbe74344a5b9:~$ cat array_sum
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"
sahil@18cfbe74344a5b9:~$ sudo chmod +x array_sum
sahil@18cfbe74344a5b9:~$ ./array_sum
27
sahil@18cfbe74344a5b9:~$ _
```

5. SHELL SCRIPT FOR REVERSING NUMBERS

```
sahil@18cfbe74344a5b9:~$ sudo nano ReverseNums
sahil@18cfbe74344a5b9:~$ cat ReverseNums
#!/bin/bash

n=125

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 $rev"
sahil@18cfbe74344a5b9:~$ sudo chmod +x ReverseNums
sahil@18cfbe74344a5b9:~$ ./ReverseNums
Reverse Number is 521
sahil@18cfbe74344a5b9:~$
```

6. SHELL SCRIPT FOR BUBBLE SORT ALGORITHM

```
sahil@18cfbe74344a5b9:~$ sudo nano bubble_sort
sahil@18cfbe74344a5b9:~$ cat bubble_sort
#bubble sort in shell with static array

declare -a arr
arr=(23 6 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 ${arr[@]}
sahil@18cfbe74344a5b9:~$ sudo chmod +x bubble_sort
sahil@18cfbe74344a5b9:~$ ./bubble_sort
Entered array:
23 6 20 100 12
Sorted array:
6 12 20 23 100
```

7. SHELL SCRIPT FOR PRINTING PASCALS TRIANGLE

```
sahil@18cfbe74344a5b9:~$ sudo nano pascal_tri.sh
sahil@18cfbe74344a5b9:~$ cat pascal_tri.sh
#Shell program to print Pascal triangle

patri()
{
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
patri $r
sahil@18cfbe74344a5b9:~$ sudo chmod +x pascal_tri.sh
sahil@18cfbe74344a5b9:~$ ./pascal_tri.sh
enter the number of rows:
3
      1
     1 1
    1 2 1
```