

SHELL PROGRAMS

1.shell script to read name and display

```
#!/bin/bash
echo "Enter your nick name "
read name
echo "Your nick name is $name"
```

output:

```
cbkpc@ubuntru22:~$ ./script1.sh
Enter your nick name
Rama
Your nick name is Rama
```

2.shell script to perform basic arithmetic operations

```
#!/bin/bash
echo "Enter 2 numbers"
read n1 n2
sum=$((n1+n2))
diff=$((n1-n2))
prod=$((n1*n2))
div=$((n1/n2))
echo "The sum of 2 numbers =$sum"
echo "The diff of 2 numbers =$diff"
echo "The product of 2 numbers =$prod"
echo "The division of 2 numbers =$div"
```

output:

```
cbkpc@ubuntru22:~$ ./script3.sh
Enter 2 numbers
45 5
The sum of 2 numbers =50
The diff of 2 numbers =40
The product of 2 numbers =225
The division of 2 numbers =9
```

3.shell script to find greatest of 2 numbers

```
#!/bin/bash
echo "Enter any two numbers"
read a b
if [ $a -gt $b ]; then
echo "$a is largest"
else
echo " $b is largest"
fi
```

output:

```
cbkpc@ubuntru22:~$ ./script4.sh
Enter any two numbers
457 658
658 is largest
```

4.shell script to find greatest of 3 numbers

```
echo "enter 3 numbers"
read a b c
if(($a>$b && $a>=$c))

then
big=$a
elif(($b>$a && $b>=$c))
then
big=$b
else
big=$c
fi
echo " the largest of $a $b and $c numbers is $big"
```

output:

```
cbkpc@ubuntru22:~$ ./script5.sh
enter 3 numbers
234 456 124
the largest of 234 456 and 124 numbers is 456
```

5.shell script to display first n numbers using while loop

```
echo "Enter the value of n"
read n
i=1
echo "The numbers up to $n are"
while [ $i -le $n ]
do
echo "$i"
i=$((i+1))
done
output:
cbkpc@ubuntru22:~$ ./script12.sh
Enter the value of n
5
The numbers up to 5 are
1
2
3
4
5
```

6.shell script to display first n numbers using until loop

```
echo "Enter the value of n"
read n
i=1
echo "The numbers are "
```

```
until [ $i -gt $n ]
do
echo "$i"
i=$((i+1))
done
```

output:

```
cbkpc@ubuntru22:~$ ./script13.sh
Enter the value of n
5
The numbers up to 5 are
1
2
3
4
5
```

7.shell script to display first n numbers using for loop

```
echo "Enter any number"
read n
echo "The numbers are"
for((i=1;i<=n;i++))
do
echo "$i"
done
```

output:

```
cbkpc@ubuntru22:~$ ./script14.sh
Enter the value of n
5
The numbers up to 5 are
1
2
3
4
5
```

8.shell script to find sum of first n numbers

```
echo "Enter the value for N"
read n
i=0
sum=0
while [ $i -le $n ]
do
sum=$((sum+i))
i=$((i+1))
done
```

```
echo "The sum of first $n values=$sum"
```

output:

```
cbkpc@ubuntru22:~$ ./script8.sh
```

```
ENter the value for N
```

```
20
```

```
The sum of first 20 values=210
```

9.shell script to find factorial of number

```
echo " Enter the value of n"
```

```
read n
```

```
i=1
```

```
fact=1
```

```
while [ $i -le $n ]
```

```
do
```

```
fact=$((fact*i))
```

```
i=$((i+1))
```

```
done
```

```
echo "The factorial of number $n = $fact"
```

output:

```
cbkpc@ubuntru22:~$ ./script8.sh
```

```
bkpc@ubuntru22:~$ ./sh7.sh
```

```
Enter the value of n
```

```
5
```

```
The factorial of number 5 = 120
```

10.shell script to find sum of digits of given number

```
echo "Enter any number"
```

```
read n
```

```
sum=0
```

```
while [ $n -gt 0 ]
```

```
do
```

```
mod=$((n%10))
```

```
sum=$((sum+mod))
```

```
n=$((n/10))
```

```
done
```

```
echo "The sum of digits of given number =$sum"
```

output:

```
cbkpc@ubuntru22:~$ ./pgm13.sh
```

```
Enter any number
```

```
568
```

```
The sum of digits of given number =19
```

11.shell script to display first n even numbers using for loop

```
echo "The numbers are"  
for i in {0..20..2}  
do  
echo "$i"  
done
```

output:

```
cbkpc@ubuntru22:~$ ./script15.sh  
The numbers are  
0  
2  
4  
6  
8  
10  
12  
14  
16  
18  
20
```

14.shell script to display numbers in matrix using for loop

```
echo "Enter rows and columns"  
read r c  
for((i=1;i<=r;i++))  
do  
for((j=1;j<=c;j++))  
do  
echo -n "$i"  
done  
echo  
done
```

output:

```
cbkpc@ubuntru22:~$ ./script16.sh  
ENter rows and columns  
5 5  
11111  
22222  
33333  
44444  
55555
```

15.shell script to read a file and display characters, words and lines in file

```
echo "Enter your file name"
read filename

characters=`cat $filename | wc -c`
words=`cat $filename | wc -w`
lines=`cat $filename | wc -l`

echo "The number of characters in the file $filename is =$characters"
echo "The number of characters in the file $filename is =$words"
echo "The number of characters in the file $filename is =$lines"
```

output:

```
cbkpc@ubuntru22:~$ ./script6.sh
Enter your file name
xyz.txt
The number of characters in the file xyz.txt is =22
The number of characters in the file xyz.txt is =5
The number of characters in the file xyz.txt is =3
```

16.shell script to read a file and display its permissions in file

```
echo "Enter your filename"
read filename
echo "The file permissions are"
`ls -l $filename`

if [ -r $filename ]
then
echo "The given file $filename has read permission"
else
echo "The given file $filename has no read permission"
fi
if [ -w $filename ]
then
echo "The given file $filename has write permission"
else
echo "The given file $filename has no write permission"
fi
if [ -x $filename ]
then
echo "The given file $filename has execute permission"
else
echo "The given file $filename has no execute permission"
fi
```

output:

```
cbkpc@ubuntru22:~$ ./script7.sh
Enter your filename
xyz.txt
The file permissions are
./script7.sh: line 5: -rw-rw-r--
The given file xyz.txt has read permission
The given file xyz.txt has write permission
The given file xyz.txt has no execute permission
```

17.shell script to read any 2 strings and find whether they are same or not

```
echo "Enter string1"
read str1
echo "enter string2"
read str2
if [ $str1 = $str2 ]
then
echo "Both string are same";
else
echo "Both string are not same";
fi
```

output:

```
cbkpc@Ububtu22:~$ ./str1.sh
Enter string1
GOOD
enter string2
GOOD
Both string are same
```

18.shell script to convert given string to uppercase

```
echo "Enter any string"
read str
uppercase=$(echo "$str" | tr '[:lower:]' '[:upper:]')
echo "the Uppercase of given string $str is : $uppercase"
```

OUTPUT:

```
cbkpc@Ububtu22:~$ ./str4.sh
Enter any string
very good morning
the Uppercase of given string very good morning is : VERY GOOD MORNING
```

19.shell script to reverse given string and also check is it palindrome or not

```
echo "Enter any string"
read str
reverse=$(echo "$str" | rev)
echo "the reverse of given string $str is : $reverse"
if [ $str = $reverse ]
then
echo "string is palindrome"
else
echo "string is not palindrome"
fi
```

OUTPUT:

```
cbkpc@Ububtu22:~$ ./str3.sh
Enter any string
gadag
the reverse of given string gadag is : gadag
string is palindrome
cbkpc@Ububtu22:~$ ./str3.sh
Enter any string
welcome
the reverse of given string welcome is : emoclew
string is not palidrome
```

20.shell script to read any string and find number of digits,characters and special symbols

```
echo "Enter any string"
read str
let i=0
let digit=0
let character=0
let other=0
let length=${#str}
while [ $i -lt $length ]
do
x="${str:$i:1}"
if [[ $x =~ ['0-9'] ]]
then
let digit++
elif [[ $x =~ ['a-zA-Z'] ]]
then
let character++
else
let other++
fi
let i++
done
```



```
echo "the number of digits= $digit"
echo "the number of characters= $character"
echo "the number of other special characters= $other"
```

output:

```
cbkpc@Ububtu22:~$ ./str2.sh
Enter any string
hi123wlecome%#@*&
the number of digits= 3
the number of characters= 9
the number of other special characters= 5
```

21.shell script to read any sentence and find word is present in that sentence or not

```
echo "Enter any sentence"
read sentence
echo "enter search word or string"
read key
for word in $sentence
do
if [ $word = $key ]
then
echo "word is present in sentence"
exit
fi
done
echo "word is not present in the sentence"
```

output:

```
cbkpc@Ububtu22:~$ ./s3.sh
Enter any sentence
good morning have a nice day
enter search word or string
nice
word is present in sentence
cbkpc@Ububtu22:~$ ./s3.sh
Enter any sentence
good morning have a nice day
enter search word or string
evening
word is not present in the sentence
```