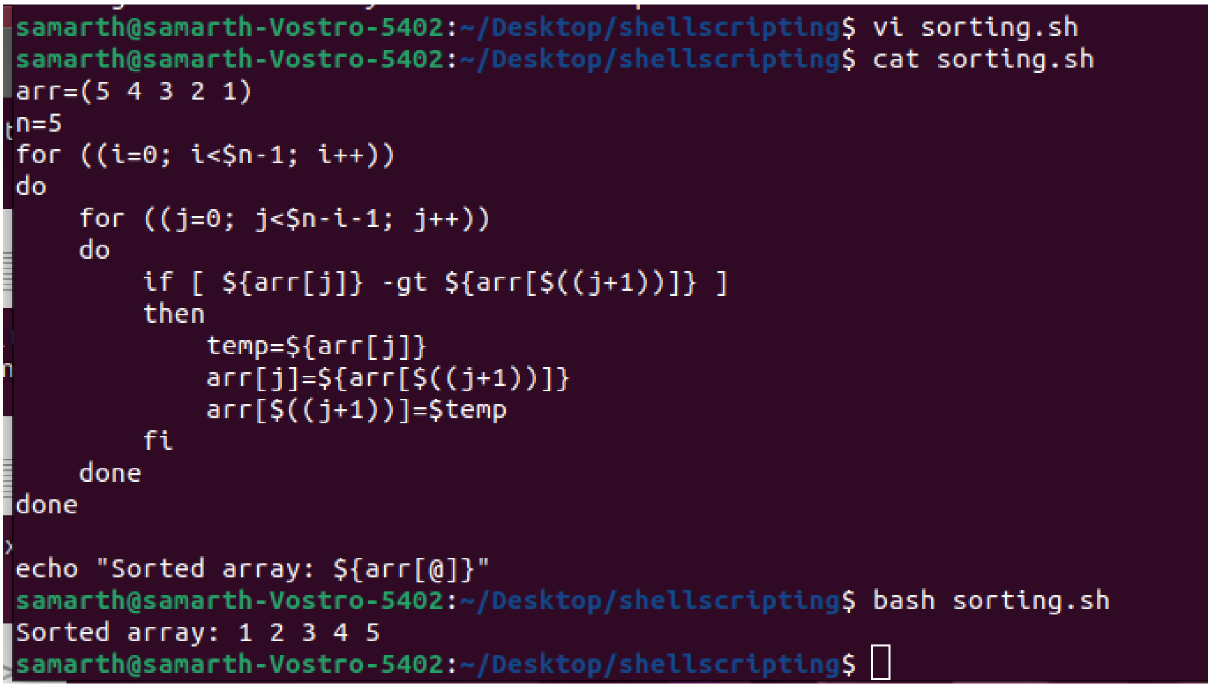
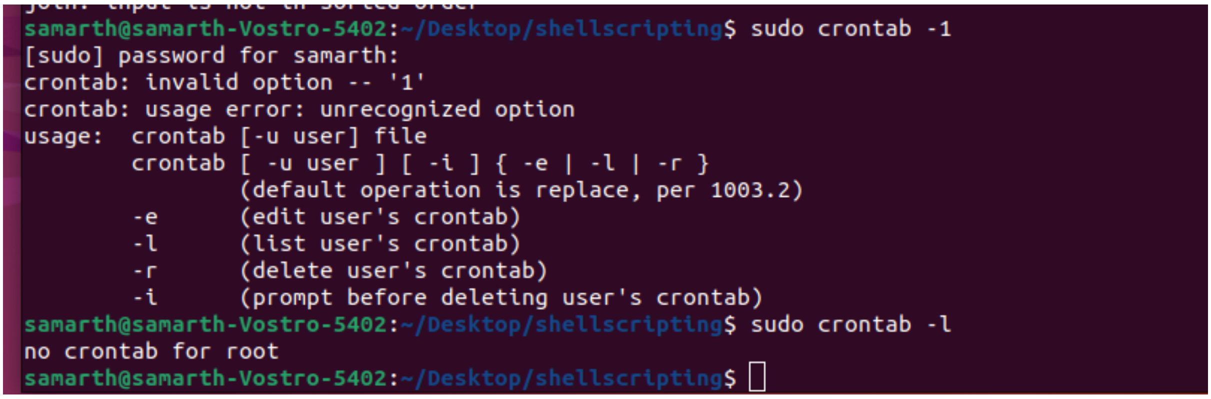
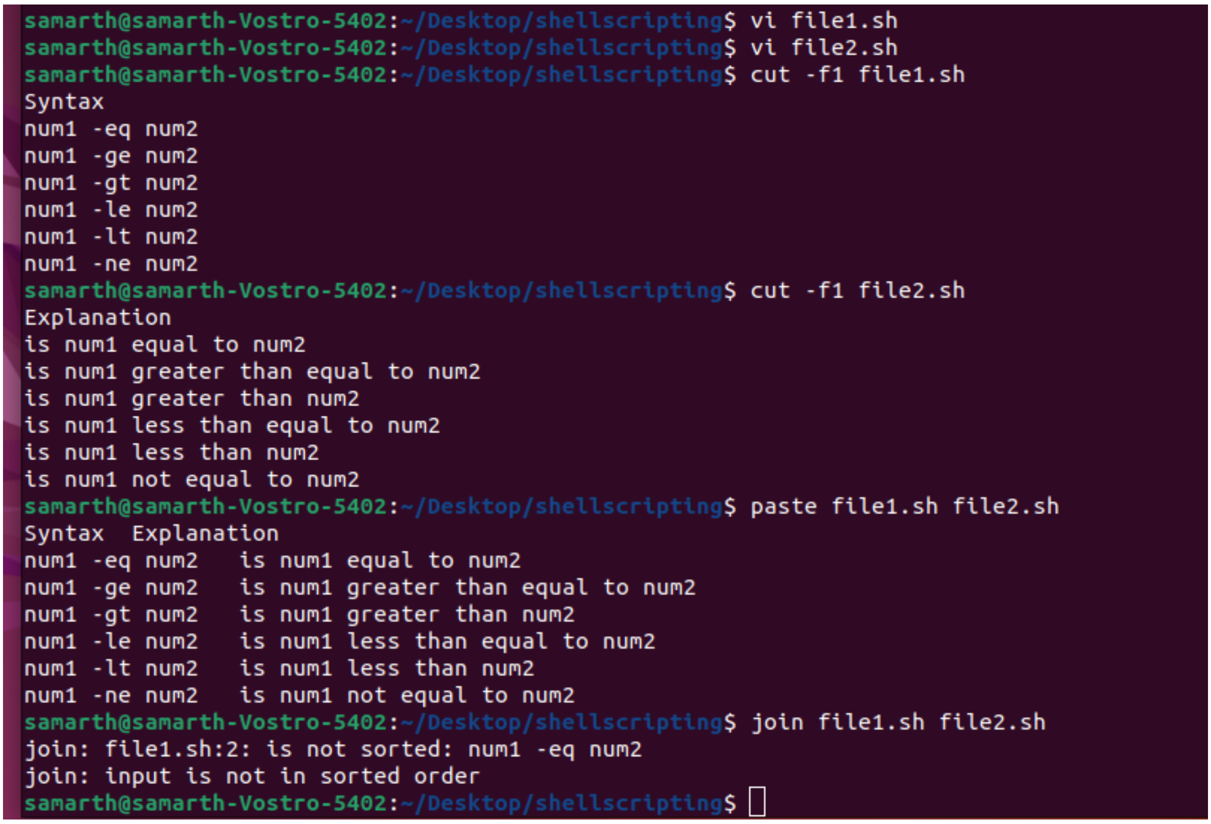


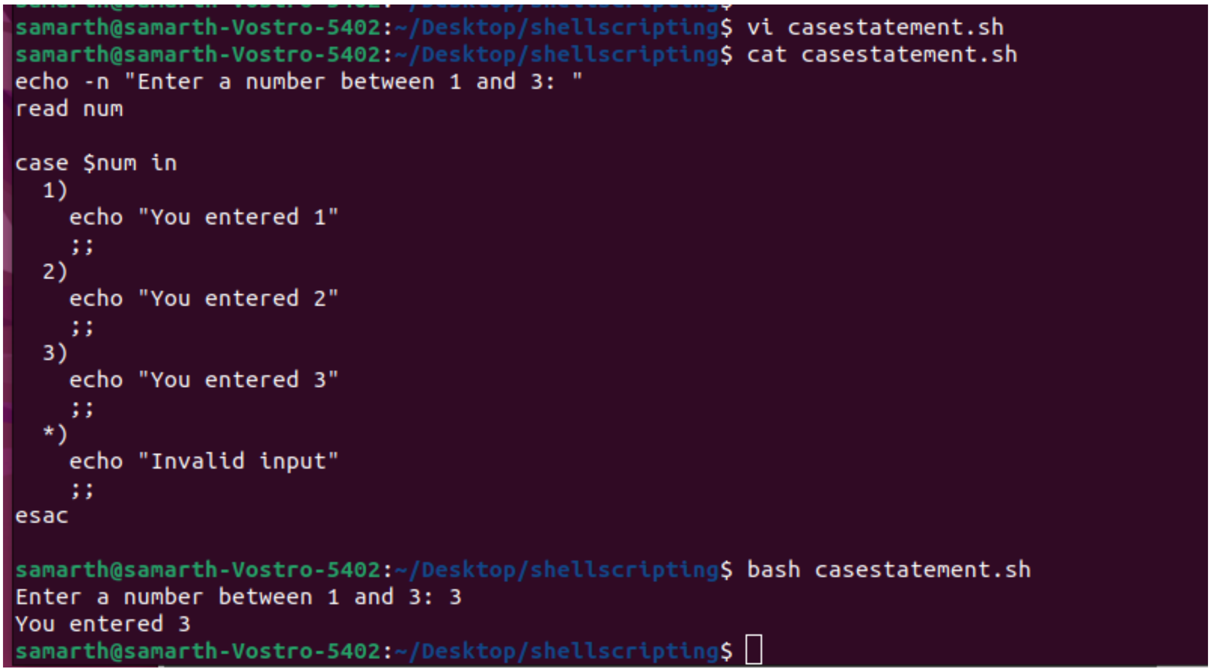
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi sorting.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat sorting.sh
arr=(5 4 3 2 1)
n=5
for ((i=0; i<$n-1; i++))
do
    for ((j=0; j<$n-i-1; j++))
    do
        if [ ${arr[j]} -gt ${arr[$((j+1))]} ]
        then
            temp=${arr[j]}
            arr[j]=${arr[$((j+1))]}
            arr[$((j+1))]=$temp
        fi
    done
done

echo "Sorted array: ${arr[@]}"
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash sorting.sh
Sorted array: 1 2 3 4 5
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



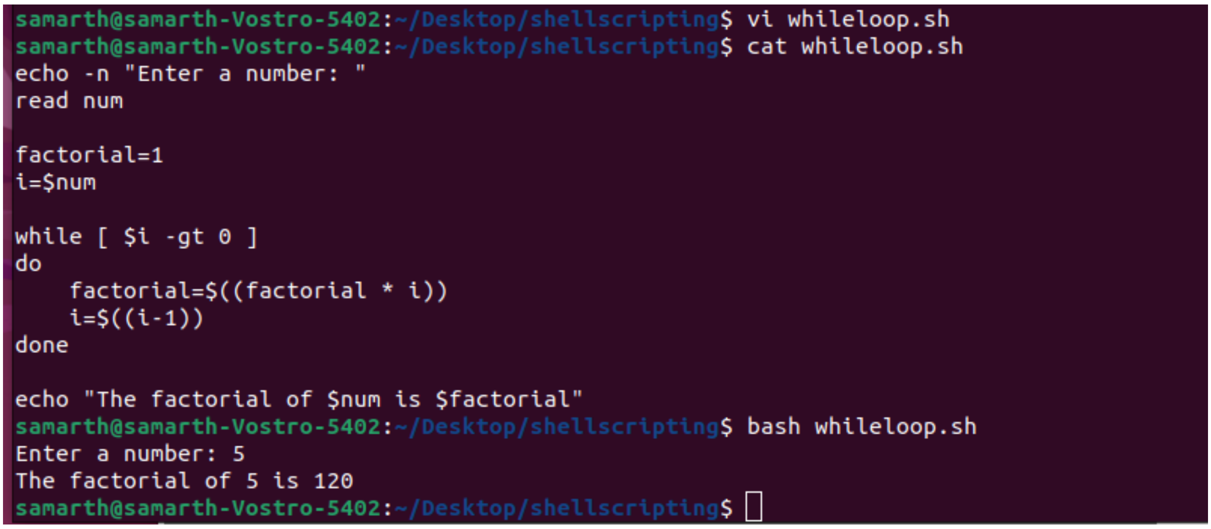
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ sudo crontab -1
[sudo] password for samarth:
crontab: invalid option -- '1'
crontab: usage error: unrecognized option
usage:  crontab [-u user] file
        crontab [ -u user ] [ -i ] { -e | -l | -r }
                (default operation is replace, per 1003.2)
        -e      (edit user's crontab)
        -l      (list user's crontab)
        -r      (delete user's crontab)
        -i      (prompt before deleting user's crontab)
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ sudo crontab -l
no crontab for root
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



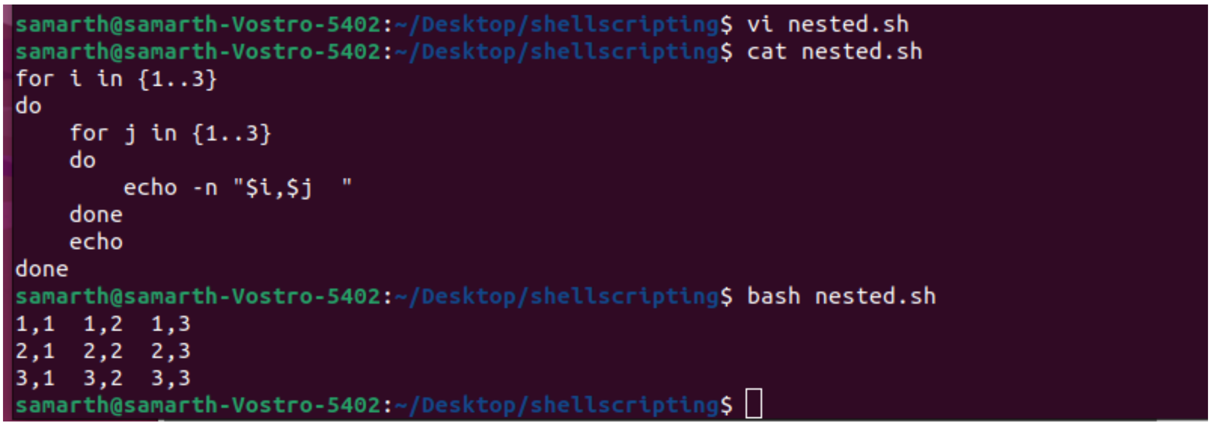
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi file1.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi file2.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cut -f1 file1.sh
Syntax
num1 -eq num2
num1 -ge num2
num1 -gt num2
num1 -le num2
num1 -lt num2
num1 -ne num2
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cut -f1 file2.sh
Explanation
is num1 equal to num2
is num1 greater than equal to num2
is num1 greater than num2
is num1 less than equal to num2
is num1 less than num2
is num1 not equal to num2
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ paste file1.sh file2.sh
Syntax  Explanation
num1 -eq num2   is num1 equal to num2
num1 -ge num2   is num1 greater than equal to num2
num1 -gt num2   is num1 greater than num2
num1 -le num2   is num1 less than equal to num2
num1 -lt num2   is num1 less than num2
num1 -ne num2   is num1 not equal to num2
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ join file1.sh file2.sh
join: file1.sh:2: is not sorted: num1 -eq num2
join: input is not in sorted order
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
```



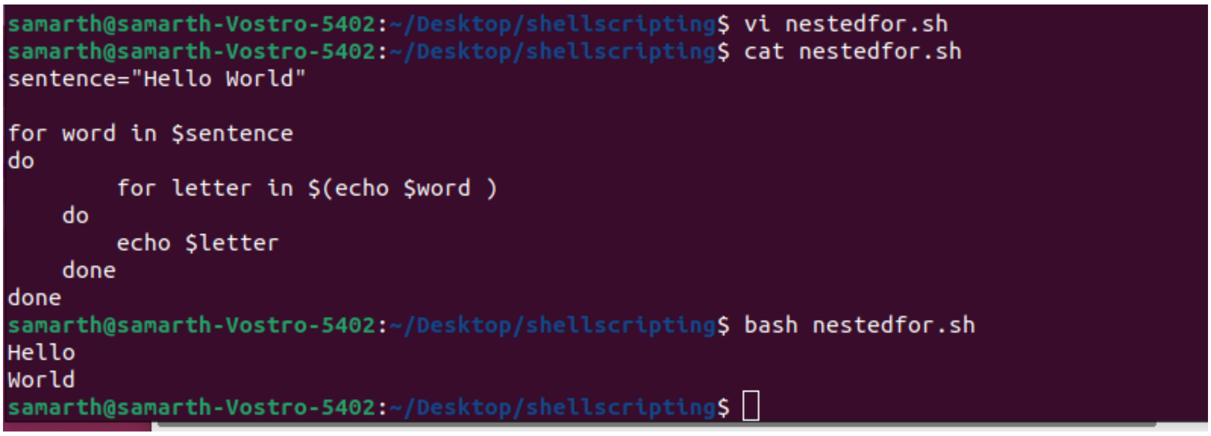
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi casestatement.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat casestatement.sh
echo -n "Enter a number between 1 and 3: "
read num

case $num in
  1)
    echo "You entered 1"
    ;;
  2)
    echo "You entered 2"
    ;;
  3)
    echo "You entered 3"
    ;;
  *)
    echo "Invalid input"
    ;;
esac

samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash casestatement.sh
Enter a number between 1 and 3: 3
You entered 3
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
```



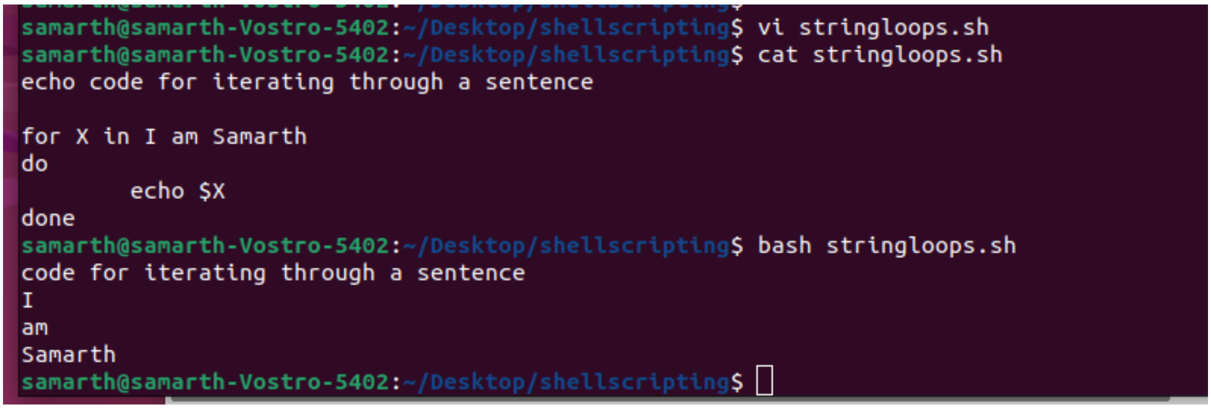
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi whileloop.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat whileloop.sh
echo -n "Enter a number: "
read num

factorial=1
i=$num

while [ $i -gt 0 ]
do
    factorial=$((factorial * i))
    i=$((i-1))
done

echo "The factorial of $num is $factorial"
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash whileloop.sh
Enter a number: 5
The factorial of 5 is 120
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



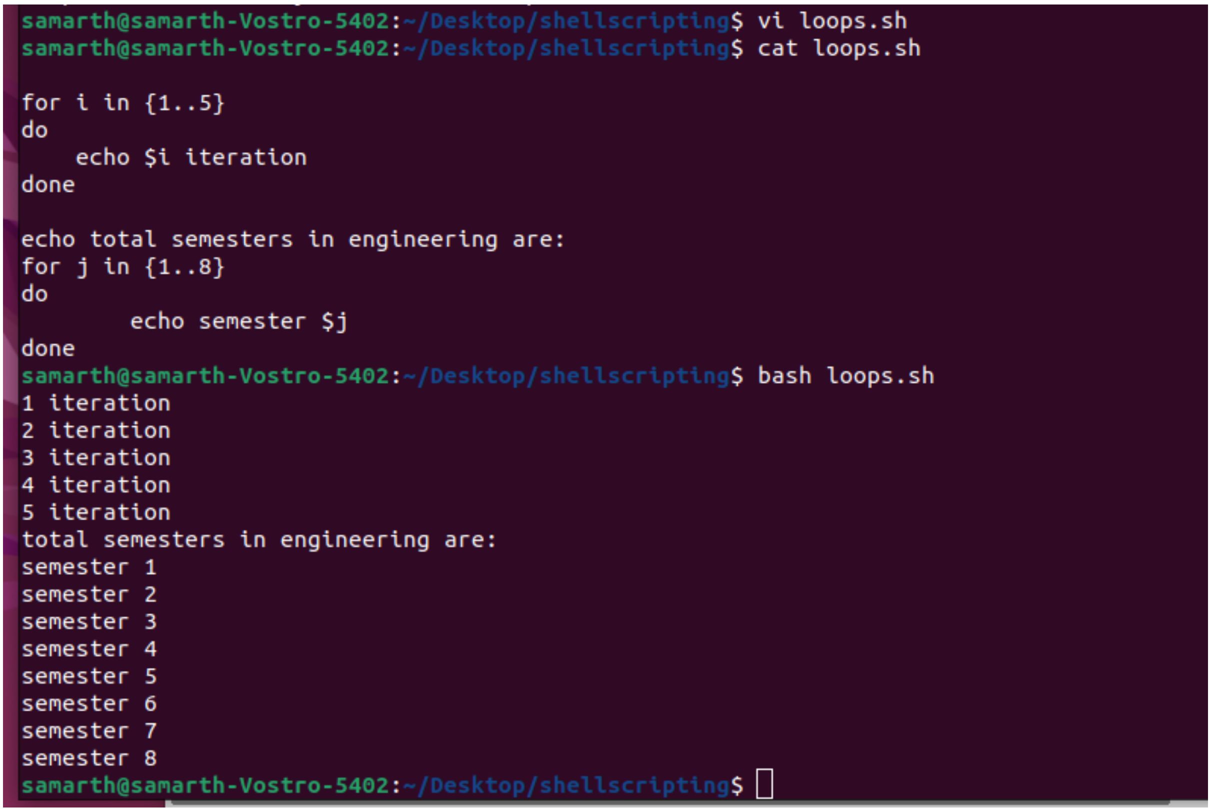
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi nested.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat nested.sh
for i in {1..3}
do
    for j in {1..3}
    do
        echo -n "$i,$j  "
    done
    echo
done
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash nested.sh
1,1  1,2  1,3
2,1  2,2  2,3
3,1  3,2  3,3
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



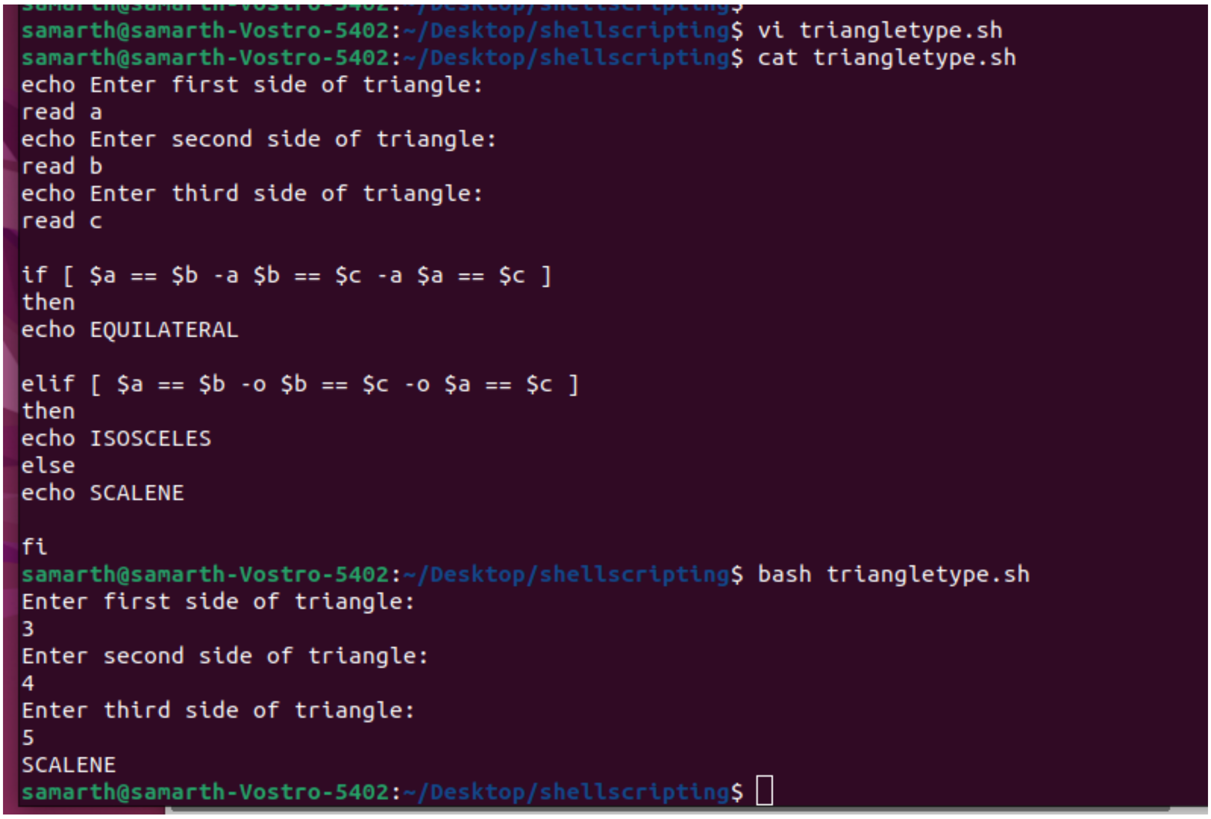
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi nestedfor.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat nestedfor.sh
sentence="Hello World"

for word in $sentence
do
        for letter in $(echo $word )
    do
        echo $letter
    done
done
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash nestedfor.sh
Hello
World
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



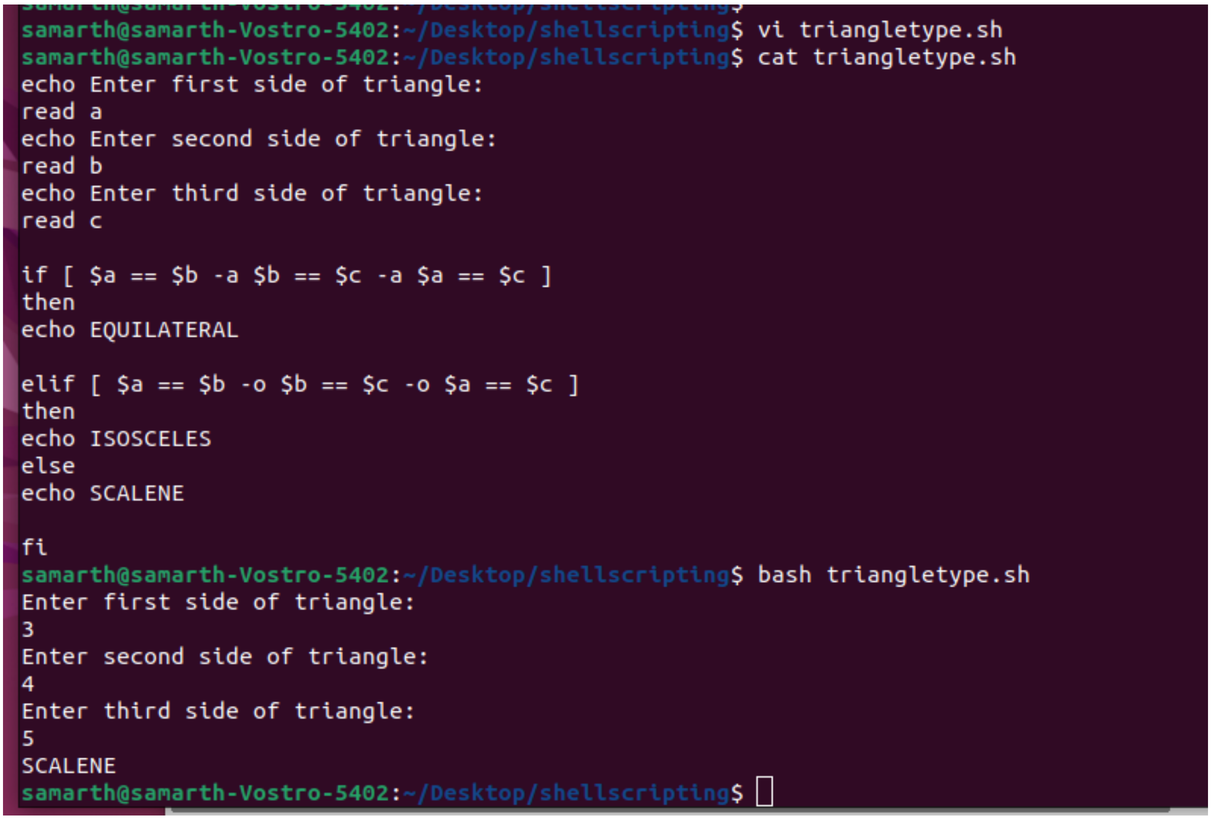
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi stringloops.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat stringloops.sh
echo code for iterating through a sentence

for X in I am Samarth
do
        echo $X
done
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash stringloops.sh
code for iterating through a sentence
I
am
Samarth
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



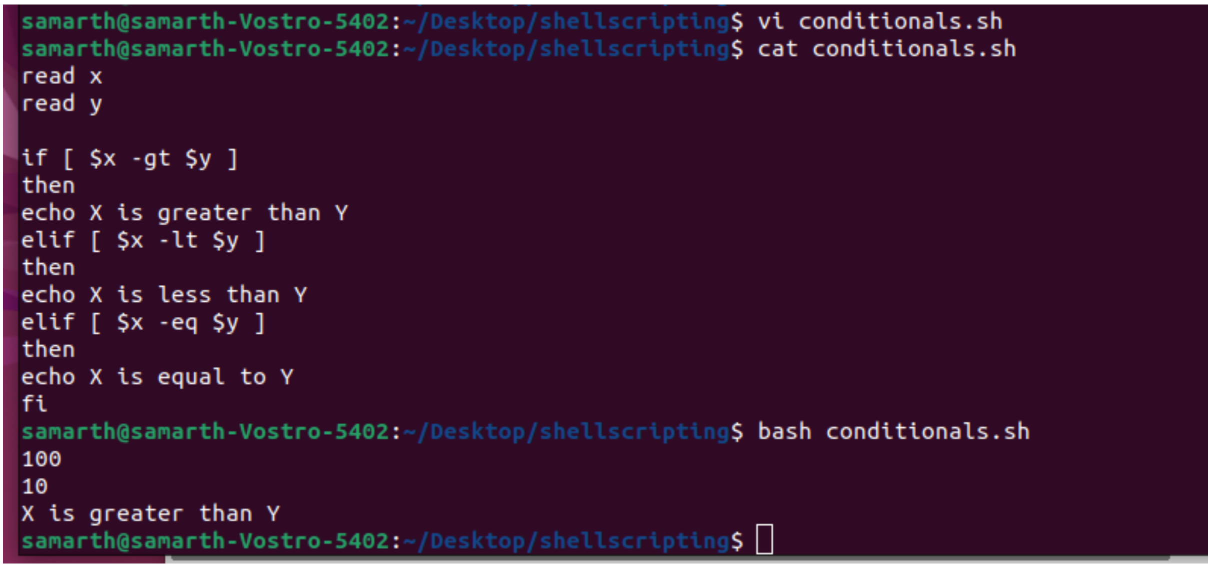
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi loops.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat loops.sh

for i in {1..5}
do
    echo $i iteration
done

echo total semesters in engineering are:
for j in {1..8}
do
        echo semester $j
done
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash loops.sh
1 iteration
2 iteration
3 iteration
4 iteration
5 iteration
total semesters in engineering are:
semester 1
semester 2
semester 3
semester 4
semester 5
semester 6
semester 7
semester 8
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



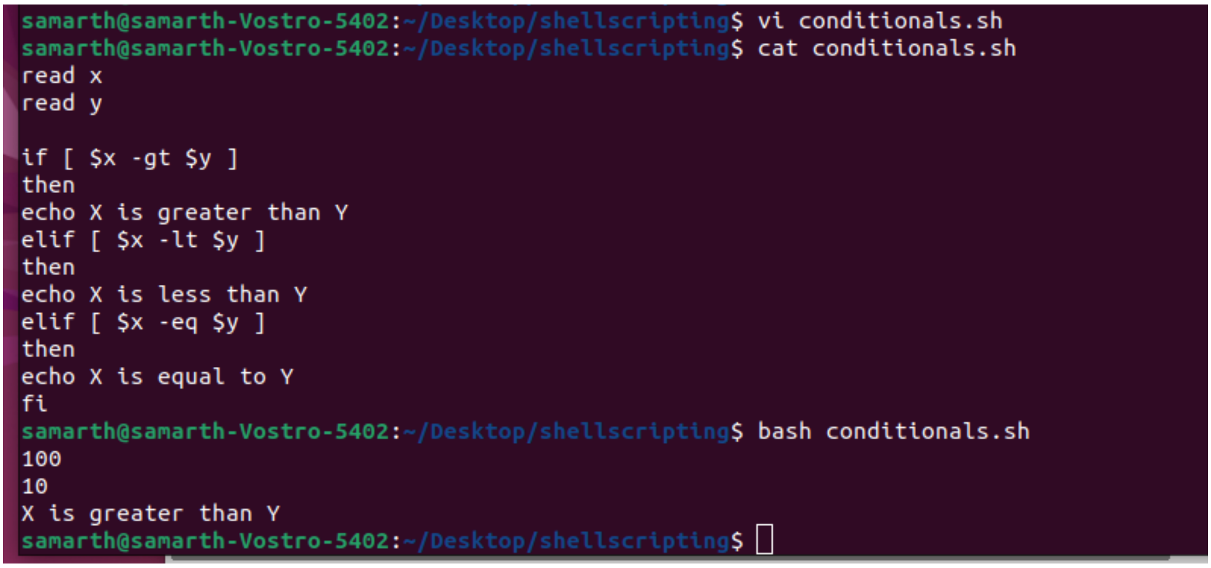
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi triangletype.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat triangletype.sh
echo Enter first side of triangle:
read a
echo Enter second side of triangle:
read b
echo Enter third side of triangle:
read c

if [ $a == $b -a $b == $c -a $a == $c ]
then
echo EQUILATERAL

elif [ $a == $b -o $b == $c -o $a == $c ]
then
echo ISOSCELES
else
echo SCALENE

fi
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash triangletype.sh
Enter first side of triangle:
3
Enter second side of triangle:
4
Enter third side of triangle:
5
SCALENE
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



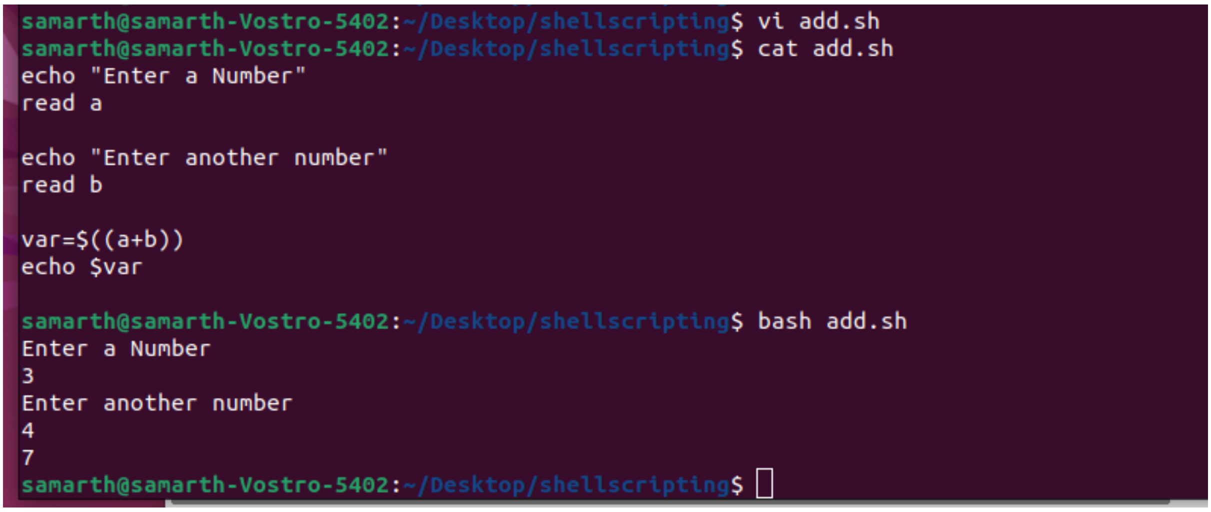
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi triangletype.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat triangletype.sh
echo Enter first side of triangle:
read a
echo Enter second side of triangle:
read b
echo Enter third side of triangle:
read c

if [ $a == $b -a $b == $c -a $a == $c ]
then
echo EQUILATERAL

elif [ $a == $b -o $b == $c -o $a == $c ]
then
echo ISOSCELES
else
echo SCALENE

fi
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash triangletype.sh
Enter first side of triangle:
3
Enter second side of triangle:
4
Enter third side of triangle:
5
SCALENE
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



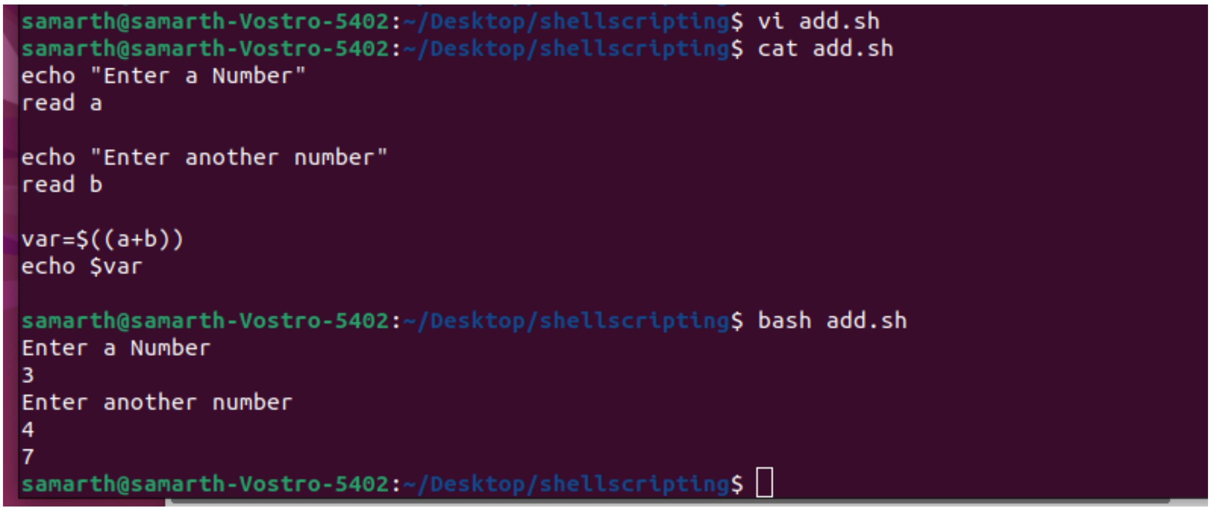
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi conditionals.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat conditionals.sh
read x
read y

if [ $x -gt $y ]
then
echo X is greater than Y
elif [ $x -lt $y ]
then
echo X is less than Y
elif [ $x -eq $y ]
then
echo X is equal to Y
fi
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash conditionals.sh
100
10
X is greater than Y
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



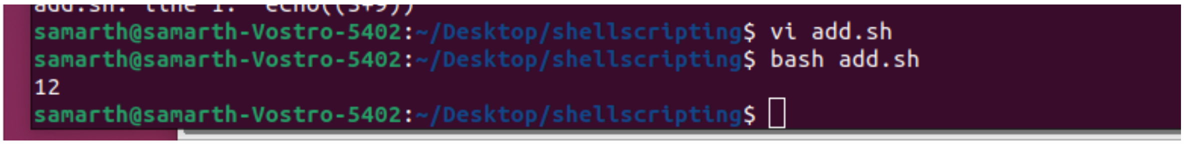
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi conditionals.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat conditionals.sh
read x
read y

if [ $x -gt $y ]
then
echo X is greater than Y
elif [ $x -lt $y ]
then
echo X is less than Y
elif [ $x -eq $y ]
then
echo X is equal to Y
fi
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash conditionals.sh
100
10
X is greater than Y
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



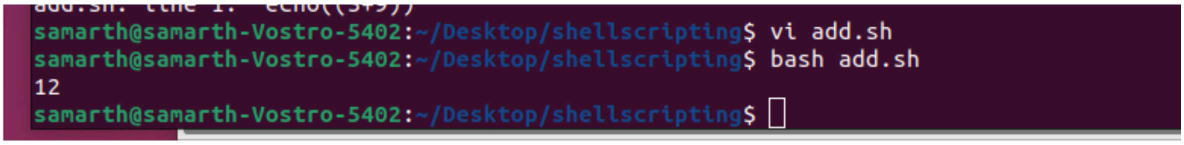
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi add.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat add.sh
echo "Enter a Number"
read a

echo "Enter another number"
read b

var=$((a+b))
echo $var

samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash add.sh
Enter a Number
3
Enter another number
4
7
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



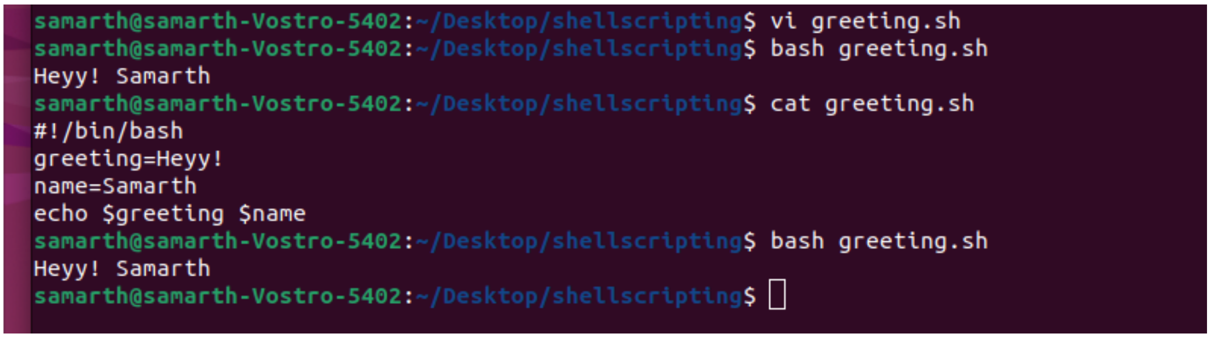
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi add.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat add.sh
echo "Enter a Number"
read a

echo "Enter another number"
read b

var=$((a+b))
echo $var

samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash add.sh
Enter a Number
3
Enter another number
4
7
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



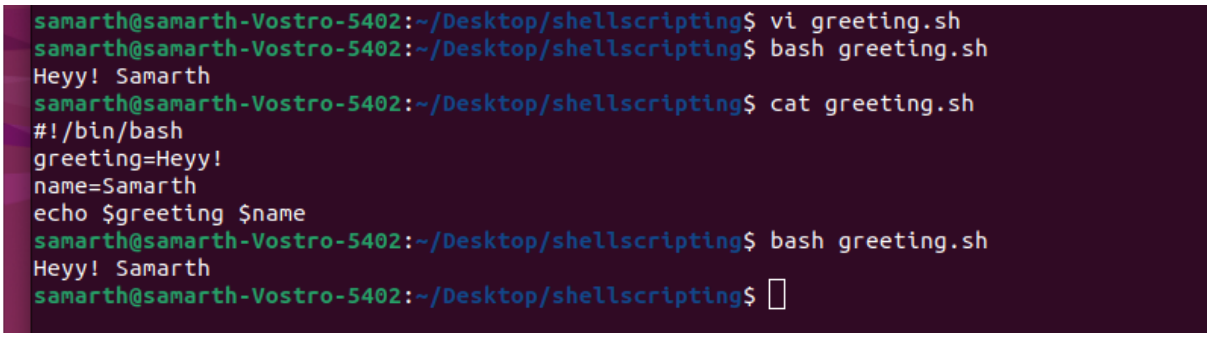
```
add.sh: line 1: echo((3+9))
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi add.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash add.sh
12
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ 
```



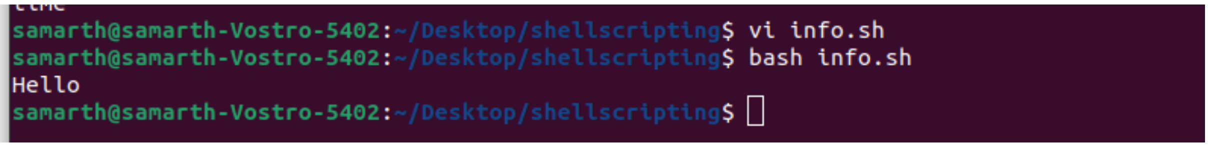
```
add.sh: line 1: echo((3+9))
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi add.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash add.sh
12
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
```



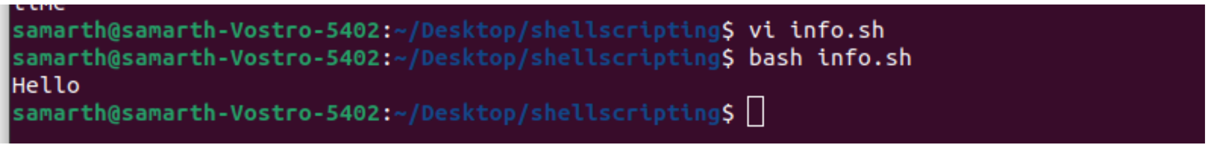
```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi greeting.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash greeting.sh
Heyy! Samarth
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat greeting.sh
#!/bin/bash
greeting=Heyy!
name=Samarth
echo $greeting $name
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash greeting.sh
Heyy! Samarth
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
```



```
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi greeting.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash greeting.sh
Heyy! Samarth
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ cat greeting.sh
#!/bin/bash
greeting=Heyy!
name=Samarth
echo $greeting $name
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash greeting.sh
Heyy! Samarth
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
```



```
time
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi info.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash info.sh
Hello
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
```



```
time
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ vi info.sh
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$ bash info.sh
Hello
samarth@samarth-Vostro-5402:~/Desktop/shellscripting$
```