

Experiment No 7

1.Swap:

Program:

```
echo "Enter two numbers"
read a b
echo "Enter numbers are a=$a and b=$b"
a=$((a+b))
b=$((a-b))
a=$((a-b))
echo "After swaping values a=$a and b=$b"
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh swap.sh
Enter two numbers
10 20
Enter numbers are a=10 and b=20
After swaping values a=20 and b=10
```

2.Biggest among two number

program :-

```
echo "enter two number : "
read a b
if [ $a -gt $b ]
then
    echo "$a is greater"
elif [ $b -gt $a ]
then
    echo "$b is greater"
else
    echo "$a and $b are equal"
fi
```

output

```
[student@localhost ~]$ sh bigg.sh
enter two number :
23 55
55 is greater
```

3.Biggest among three number

Program:-

```
echo "Enter three numbers:"
read a b c
if [ $a -gt $b -a $a -gt $c ]
then
echo "$a is biggest."
elif [ $b -gt $c -a $b -gt $a ]
then
    echo "$b is biggest"
else
    echo "$c is biggest"
fi
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh threeno.sh
Enter three numbers:
8 4 6
8 is biggest.
```

4.Arithmetic Operations

Program:-

```
echo "Enter two number"
read a b
ad=$((a+b))
echo "$a + $b = $ad"
s=$((a-b))
echo "$a - $b = $s"
m=$((a*b))
echo "$a * $b = $m"
d=$((a/b))
echo "$a / $b = $d"
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh arithmetic.sh
Enter two number
25 15
25 + 15 = 40
```

25 - 15 = 10
25 * 15 = 375
25 / 15 = 1

5.Simple Calculator:-

Program :

```
echo "Enter two number with operator in between"
read a opr b
case $opr in
"+")echo $(( $a + $b ));;
"-")echo $(( $a - $b ));;
"*)echo $(( $a * $b ));;
"/")echo $(( $a / $b ));;
"%")echo $(( $a % $b ));;
esac
```

OUTPUT :-

```
[liveuser@localhost-live Downloads]$ sh cal.sh
Enter two number with operator in between
20 + 5
25
[liveuser@localhost-live Downloads]$ sh cal.sh
Enter two number with operator in between
20 - 5
15
[liveuser@localhost-live Downloads]$ sh cal.sh
Enter two number with operator in between
20 * 5
100
[liveuser@localhost-live Downloads]$ sh cal.sh
Enter two number with operator in between
20 / 5
4
```

6.Sum of first n numbers

Program:

```
echo "Enter n"
read n
sum=0
```

```
for((i=1;i<=n;i++))
do
sum=$((sum+i))
done
echo "sum=$sum"
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh sumofn.sh
Enter n
5
sum=15
```

7.Even or odd

Program:-

```
echo "enter a number : "
read n
if [ $((n % 2)) -eq 0 ]
then
echo "$n is even "
else
echo "$n is odd"
fi
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh evenodd.sh
enter a number :
5
5 is odd
```

8.Fibonacci

Program:-

```
echo "enter n"
read n
echo "$a"
a=0 b=1 i=1
while [ $i -lt $n ]
do
b=$(( a + b ))
echo "$b"
```

```
c=$a
a=$b
b=$c
i=$((i + 1))
```

Done

OUTPUT:-

```
[liveuser@localhost-live Documents]$ sh fibonacci.sh
```

```
enter n
```

```
10
```

```
1
```

```
1
```

```
2
```

```
3
```

```
5
```

```
8
```

```
13
```

```
21
```

```
34
```

9.Armstrong

Program:-

```
echo "Enter a number"
```

```
read n
```

```
d=0
```

```
sum=0
```

```
m=$n
```

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

```
do
```

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

```
c=$((d*d*d))
```

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

```
sum=$((sum + c))
```

```
done
```

```
if [ $m -eq $sum ]
```

```
then
```

```
echo "Armstrong number"
```

```
else
```

```
echo "Not an Armstrong number"
```

```
fi
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh armstrong.sh
```

```
Enter a number
```

```
153
```

```
10.Armstrong number
```

Reverse number:

Program:

```
echo "Enter number"
```

```
read n
```

```
r=0 d=0
```

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

```
do
```

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

```
r=$((r*10+d))
```

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

```
done
```

```
echo "Reverse number is $r"
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh reverse.sh
```

```
Enter number
```

```
145
```

```
Reverse number is 541
```

11.Palindrome:

program

```
echo "Enter any String"
```

```
read s
```

```
r=$(echo $s|rev)
```

```
if [ $r = $s ]
```

```
then
```

```
echo "$s is palidrome"
```

```
else
```

```
echo "$s is not palidrome"
```

```
fi
```

OUTPUT:-

```
[liveuser@localhost-live Downloads]$ sh palidrome.sh
```

```
Enter any String
```

```
aba
```

```
aba is palidrome
```

