

LAB ASSIGNMENT-2

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Course Code: CSLR42

Subject: Operating Systems Lab

Submitted by:

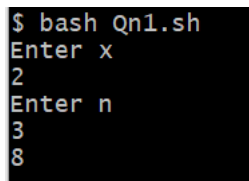
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1. Write a shell script to calculate the value of X^n

```
#!/bin/sh
echo "Enter x"
read x
echo "Enter n"
read n
#let result = $(( $x**$n ))
#echo $result
echo $(( $x**$n ))
```



```
$ bash Qn1.sh
Enter x
2
Enter n
3
8
```

2. Write a shell script to read 10 numbers from the user and to find the sum and average of the numbers.

```
#!/bin/bash
N=10
i=1
sum=0
avg=0
echo "Enter the numbers:"
while [ $i -le $N ]
do
    read num
    sum=$((sum + num))
    i=$((i + 1))
done

echo "The sum is $sum"
```

```
avg=$((sum/N))
```

```
echo "The average is $avg"
```

```
$ bash Qn2.sh
Enter the numbers:
1
2
3
4
5
6
7
8
9
10
The sum is 55
The average is 5
```

3. Write a shell script to find whether the given number is Armstrong or not

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

```
read num
```

```
temp=$num
```

```
sum=0
```

```
r=0
```

```
n=0
```

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

```
do
```

```
    r=`expr $temp % 10`
```

```
    n=`expr $r \* $r \* $r`
```

```
    sum=`expr $sum + $n`
```

```
    temp=`expr $temp / 10`
```

```
done
```

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

```
then
```

```
    echo "$num is an Armstrong Number."
```

```
else
```

```
    echo "$num is not an Armstrong Number."
```

```
fi
```

```

$ bash Qn3.sh
Enter a number :
153
153 is an Armstrong Number.

Admin@DESKTOP-4GFEIDQ MINGW64 /c
$ bash Qn3.sh
Enter a number :
34
34 is not an Armstrong Number.

```

4. Write a shell script to print all the divisors of a given integer.

```

echo -n "Enter number: "

read num

for i in $(seq 1 $num)
do

[ $(expr $num % $i) == 0 ] && echo $i

Done

```

```

$ bash Qn4.sh
Enter number: 30
1
2
3
5
6
10
15
30

```

5. Write a shell script to count the number of vowels in the string.

```

echo -n "Enter string: "

read str

len=${#str}

len=$((len-1))

count=0

#echo "$len"

for i in $(seq 0 $len)
do

    ch=${str:$i:1}

    case $ch in [aeiouAEIOU] )

        count=$((count+1))

    ;;

done

```

```
        ;;
    esac
done
echo "$str has $count vowels"
```

```
$ bash QnFive.sh
Enter string: adfeiU
adfeiU has 4 vowels
```

6. Write a shell script to reverse the string without using in-built functions.

```
read -p "Enter string: " str
length=${#str}
length=$((length-1))
i=$length
while [ $i -ge 0 ]
do
    reversedStr=$reversedStr${str:$i:1}
    i=$((i-1))
done
echo "Reverse of string $str: $reversedStr"
```

```
$ bash Qn6.sh
Enter string: jam
Reverse: maj
```