Question 1 :

Description - To read n and generate a below pattern

```
1
1 2
1 2 3
1 2 3 4
```

```
┌──(saurabh㉿ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ cat 01_pattern.sh
#! /bin/bash

echo "Enter the value of n : "
read n

for(( i=1; i<=$n; i++ ))
do
        k=1;
        for (( j=1; j<=i; j++ ))
        do
                echo -n "$k "
                (( k++ ))
        done
        echo ""
done

┌──(saurabh㉿ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ ./01_pattern.sh
Enter the value of n :
6
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6

┌──(saurabh㉿ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$
```

Question 2 :

Description-To read n and generate a below pattern

```
1
2 3
4 5 6
7 8 9 10
```

```
┌──(saurabh㉿ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ vi 02_pattern.sh

┌──(saurabh㉿ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ chmod u+x 02_pattern.sh

┌──(saurabh㉿ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ cat 02_pattern.sh
#! /bin/bash

echo -n "Enter the value of n : "
read n
k=1;
for(( i=1; i<=n; i++ ))
do
        for(( j=1; j<=i; j++ ))
        do
                echo -n "$k "
                ((k++))
        done
        echo ""
done

┌──(saurabh㉿ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
```

Question3 :
    Description-Script for addition of two real numbers
    Input-   bash 03_real_add.sh
        Enter the numbers to addition: 4.28 1.21
    Output-   The sum of 4.28 and 1.21 is 5.49

Question4:
    Description- Script for arithmetic calculator using command line arguments
    Input-   bash 04_calculator.sh 1.2 + 2.6
    Output- The sum of 1.2 and 2.6 is 3.8

```
(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ vi 04_calculator.sh

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ chmod u+x 04_calculator.sh

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ cat 04_calculator.sh
#! /bin/bash

num1=$1
num2=$2

sum=$(echo "$num1 + $num2" | bc)

echo "The addition of number $1 and $2 is $sum"

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ ./04_calculator.sh 1.22 1.24
The addition of number 1.22 and 1.24 is 2.46

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ 
```

Question5:
    Description- Script to compare larger integer values from a 'n' number of arguments
    using command line arguments
    Input-   bash 05_largest.sh 1 3 8 6 5 7 9 2
    Output- The largest value is 9


```
(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ vi 05_largest.sh

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ chmod u+x 05_largest.sh

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ cat 05_largest.sh
#! /bin/bash

#Setting first num as max
max=$1

#By using $@ we can iterate through all the elements added from command line
for i in "$@"
do
        #Compared each num with max
        if [ $i -gt $max ]
        then
                max=$i
        fi
done

echo "The largest number from given input is $max"

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ ./05_largest.sh 1 3 8 7 6 5 9 2
The largest number from given input is 9

(saurabh@ LenovoLegion5)-[~/ShellScripting/ShellQuestions]
└─$ 
```

Question6:
    Description- Script to print a given number in reverse order.
    Input-   bash 06_reverse.sh 639872
    Output- The reversed number of entered number is 278936

Question7:

Description- Script to delete empty lines from a file

Input- bash 07_delete_empty_lines.sh file.txt

Output- All empty lines of the file file.txt will be deleted

    Before script running, content of the file file.txt :

        Hello, I am Siddaling.

        I am from Belgaum.

        I studied B-Tech in ECE.

    After script running, content of the file file.txt :

        Hello, I am Siddaling.

        I am from Belgaum.

        I studied B-Tech in ECE.

```
  ┌──(saurabh㉿LenovoLegion5)-[~/ShellScripting/ShellQuestions]
  └─$ 
```