Loops

1)Write a program to print the below pattern:

\* \* \* \*

\* \*

\* \*

\* \* \* \*

2) Write a program to print the below pattern:

1

2 1 2

3 2 1 2 3

4 3 2 1 2 3 4

3 2 1 2 3

2 1 2

1

3) Write a program to print the below pattern:

1

1 2 3

1 2 3 4 5

1 2 3 4 5 6 7

4) Write a program to print the below pattern:

\*

\* \*

\* \* \*

\* \* \* \*

5) Write a program to print the below pattern:

2

3 3

4 4 4

3 3

2

6) Write a program to print the below pattern:

\*

\* \*

\* \*

\* \* \* \* \* \* \*

\* \*

\* \*

\*

7) Write a program to print the below pattern:

1 2 3 4 5

1 2 3 4

1 2 3

1 2

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

8) Write a program to print the below pattern:

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

9**) Write a program to print the below pattern:**

**\* \* \* \* \***

**\*** \*

\*

\* \*

\* \* \* \* \*

String

1)Write a program to print the all hash tag to front

Input: Move#Hash#To#Front

Output:###MoveHashToFront

2)Write a program to change the given character to uppercase

Input: helloWorld

Character: l (get any char from user and change to uppercase)

Output:heLLoWorLd

3) Write a program to print the following pattern

Input:pooja

Output: p a

o j

o

o j

p a

4) Write a program to remove the vowels in a string

Input: compuuter

Output: cmpuutr

Input: cat

Output: ct

5)Write a program to piglatin series

Input: food Input:strove

Output:oodfay Output:ovestay

6)Write a program for reverse a string without changing their order

Input:I am sri

Output: I ma irs

7)Write a program for removing the palindrome:

Input:My dad is a super hero

Output:My is a super hero

Array

1)Write a program to check the given elements in an array is present in Fibonacci series:

(hint:Fibonacci series: like 0,1,1,2,3,5,8,13 Eg :element 2 in the array is present in the fibonaci series then print that element)

Input:2,10,6,7.8

Output:2,8

2) Write a program for finding the second frequently occurring element in a given array (hint :print the second frequently occurring element )

Input:1,1,2,3,1,2,4

Output:2

3) Write a program to remove the duplicate (hint: eg 10 occur more than one time so remove that element and print the remaining elements)

Input:1,2,3,5,9,1

Output:2,3,5,9

4) Write a program to print the pairs of an array:

(hint:some of two elements is equal to the target value)

Input: 1,2,4,5,3

Target value:8

Outpt:{5,3}

5) Write a program to print the frequency of duplicate elements:

(hint:print how many times the duplicate element is occurred)

Input:1,2,4,6,2,7,2,1

Output:1-1

2-3

6) Write a program to print the elements that present in odd position

Input:11,5,7,8

Output:5,8

7) Write a program to print odd position elements in ascending order and even position elements in descending order in an array .(hint :separate odd position elements and sort into ascending and even position element sort into descending)

Input:5(no of elements)

7 6 4 8 5 1

Output: 4 8 5 6 7 1

Matrix

1)Write a program to rotate the given matrix

Input: [[1, 2, 3, 4],

[5, 6, 7, 8],

[9, 0, 1, 2],

[3, 4, 5, 6]]

Output:

[[3, 9, 5, 1],

[4, 0, 6, 2],

[5, 1, 7, 3],

[6, 2, 8, 4]]

2)Write a program to matrix max sum path

[[1, 2, 3],

[4, 5, 6], -> 29 (1 + 4 + 7 + 8 + 9)

[7, 8, 9]]

3)Write a program to spiral matrix

Input: matrix = [[1,2,3],[4,5,6],[7,8,9]]

Output: [1,2,3,6,9,8,7,4,5]

### 4) Write a program to  Horizontal Flip Matrix Problem

Examples

[[1, 0],

[0, 1]]

->

[[0, 1],

[1, 0]]

# 5)Write a program to Count negative elements present in the sorted matrix in linear time

**Input:**  
   
[ -7 -3 -1  3  5  ]  
[ -3 -2  2  4  6  ]  
[ -1  1  3  5  8  ]  
[  3  4  7  8  9  ]  
   
**Output:**  
   
The total number of negative elements present is 6.

# 6)Write a program to Print a spiral square matrix without using any extra space

**Input:** N = 5  
   
**Output:**  
   
25  24  23  22  21  
10   9   8   7  20  
11   2   1   6  19  
12   3   4   5  18  
13  14  15  16  17

# 7)Write a program to Inplace rotate square matrix by 90 degrees

***Input:*** *Matrix:    1  2  3  
               4  5  6  
               7  8  9*

***Output:****3  6  9   
               2  5  8   
               1  4  7*