

Program 1:

Given a 2D array, print it in spiral form. Take input from STDIN.

Examples:

Input:

```
1  2  3  4
5  6  7  8
9 10 11 12
13 14 15 16
```

Output:

```
1 2 3 4 8 12 16 15 14 13 9 5 6 7 11 10
```

Program 2:

Given three arrays sorted in non-decreasing order, print all common elements in these arrays. Take input from STDIN.

Examples:

Input:

ar1[] = {1, 5, 10, 20, 40, 80}

ar2[] = {6, 7, 20, 80, 100}

ar3[] = {3, 4, 15, 20, 30, 70, 80, 120}

Output: 20, 80

Program 3:

Write a C program that, given an array A[] of n numbers and another number K, find the pair of all elements in A whose sum is exactly K. Take input from STDIN.

Example:

Input:

A[]={1, 4, 15, 6, 10, 2}, K=16

Output:

(1, 15)

(6, 10)

Program 4:

Given a string, find the second most frequent character in it. Take input from STDIN.

Examples:

Input: str = "aabababa";

Output: Second most frequent character is 'b'

Program 5:

Find the GCD and LCM of Two number. Take input from command line argument.

Example:

Input:

30

40

Output:

10

120

Test Cases:

1. VALID INPUT:

a) Only two arguments will be given as input.

2. INVALID inputs:

a) No argument

b) One argument

c) More than two arguments.

d) String

3. You should generate output as follows:

a) Print to the STDOUT without any additional text.

b) If error print 'ERROR' to the STDOUT without any additional text.