

**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:

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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) Characters other than digit
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.