

### Program 1

Given two arrays of n numbers each, form a pair of numbers taking one number from array1 and the other from array2 such that the sum of the pair of this numbers is the maximum possible for the given arrays. Take input from STDIN. Don't use any sorting technique.

Input:

2 1 5 7 10

3 6 8 1 2

Output:

18

### Program 2

Display Pascal Triangle pattern. Pascal's triangle is a triangular array of the binomial coefficients. Write a function that takes an integer value n as input from command line argument and prints first n lines of the Pascal's triangle. Optimize the time and space complexity.

Test Cases:

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1. VALID INPUT:

a) Only one argument will be given as input.

2. INVALID inputs:

a) Two or more than two arguments.

b) Characters other than digits.

3. You should generate output as follows:

a) Display pattern to the STDOUT without any additional text.

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

### Program 3

Given an array of elements of length N, ranging from 1 to N. All elements may not be present in the array. If element is not present then there will be -1 present in the array. Rearrange the array such that  $A[i] = i$  and if i is not present, display -1 at that place. Take input from STDIN.

Examples:

Input : arr = {-1, -1, 6, 1, 9, 3, 2, -1, 4, -1}

Output : [-1, 1, 2, 3, 4, -1, 6, -1, -1, 9]

Input : arr = {19, 7, 0, 3, 18, 15, 12, 6, 1, 8, 11, 10, 9, 5, 13, 16, 2, 14, 17, 4}

Output : [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19]

### Program 4

Write a program count the number of vowels from the string. Convert it from lower case to upper case and then reverse the string.

Examples:

Input:

Information

Output:

5

INFORMATION

NOITAMROFNI

Test Cases:

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1. VALID INPUT:

a) Only one argument will be given as input.

2. INVALID inputs:

a) No argument

b) Two or more than two arguments.

c) Characters other than alphabet.

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

### **Program 5**

C Program to Copy a File into another File. Take file name from command line argument.

Test Cases:

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1. VALID INPUT:

a) Only two argument will be given as input.

2. INVALID inputs:

a) No argument

b) More than two arguments.