## **Practice Problem Set 4**

1. Write a C program that adds 2 to the even indexed elements and 3 to the odd indexed elements. Examples

Input	
Array Size: 9	
Input Array: 1 2 0 4 5 7 1 3 5	
Output	
Output Array: 3 5 2 7 7 10 3 6 7	

2. Write a C program that 2 to the even elements and 3 to the odd elements.

Examples

```
Input
Array Size: 9
Input Array: 1 2 0 4 5 7 1 3 5
Output
Output Array: 4 4 2 6 8 10 4 6 8
```

3. Write a C program that counts the negative numbers of a given array.

Examples

```
Input
Array Size: 9
Input Array: 1 -2 0 4 -5 7 1 -3 5
Output
3
```

4. An array is called Major Negative if most of the elements are negative and called Major Positive if most of the elements are positive. If there are equal number of positive and negative elements, then it is called Neutral. Write a C program that finds whether a given array is Major Negative, Major Positive or Neutral. NB: 0 is a non-negative number: neither positive nor negative (neutral).

Examples

Input	Input
Array Size: 9	Array Size: 9
Input Array: 1 -2 0 4 -5 7 1 -3 5	Input Array: 1 -2 0 -4 -5 7 -1 3 5
Output	Output
Major Positive	Neutral

5. Write a C program that finds the sum and average of a given array.

Examples

```
Input
Array Size: 9
Input Array: 1 -2 0 4 -5 7 1 -3 5
Output
Sum = 8, Ave = 0.89
```

6. Write a C program that finds the last occurrence of an element in a given array.

Examples

```
Input
Array Size: 9
Input Array: 1 2 0 4 5 7 1 3 5
Output
6
```

7. Write a C program that finds the minimum and  $2^{nd}$  minimum element of a given array. Examples

```
Input
Array Size: 9
Input Array: 1 2 0 4 5 7 1 3 5
Output
Min = 0, 2<sup>nd</sup> Min = 1
```

8. Write a C program that finds the indexes of two consecutive elements of a given array such that the difference between them is largest.

Examples

```
Input
Array Size: 9
Input Array: 1 2 0 4 5 7 1 3 5
Output
5, 6
```

9. Write a C program that checks if a given array is palindrome or not.

Examples

```
Input
Array Size: 8
Input Array: 0 2 0 2 2 0 2 0
Output
Yes
```

10. Write a C program that checks if the two arrays are equal or not.

Examples

Input	Input
Input Array1 Size: 4	Input Array1 Size: 4
Input Array1: 0 2 0 2	Input Array1: 0 2 0 2
Input Array2 Size: 3	Input Array2 Size: 4
Input Array2: 0 2 0	Input Array2: 0 2 1 3
Output	Output
Not Equal	Not Equal

Examples

```
Input
Input Array1 Size: 4
Input Array1: 0 2 0 2
Input Array2 Size: 4
Input Array2: 0 2 0 2
Output
Equal
```

11. Write a C program that copies only the even elements to a new array.

Examples

```
Input
Array Size: 8
Input Array: 0 2 3 4 1 2 -9 0
Output
New Array Size: 5
New Array: 0 2 4 2 0
```

12. Write a program that takes an array as input and copies the non-zero elements to a new array followed by the zeros at the end of the new array.

Examples

```
Input
Array Size: 8
Input Array: 0 2 3 4 1 2 -9 0
Output
```