# 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 |

1. 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 |

1. 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 |

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

1. 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 |

1. 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 |

1. Write a C program that finds the minimum and 2nd 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, 2nd Min = 1 |

1. 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 |

1. 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 |

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

|  |  |
| --- | --- |
| Input | Input |
| Input Array1 Size: 4 Input Array1: 0 2 0 2  Input Array2 Size: 3 Input Array2: 0 2 0 | Input Array1 Size: 4 Input Array1: 0 2 0 2  Input Array2 Size: 4 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 |

1. 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 |

1. 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 |
| New Array: 2 3 4 1 2 -9 0 0 |