VITE&TC PDTY23 ITPRODUCT

Problem Statement #55	Write a program to print the input array A of size N in reverse order where you have to take integer N and further N elements as input from user
Problem Constraint	1 <= N <= 1000 1 <= A <= 1000
Example Input	4 10 50 40 80
Example Output	80 40 50 10

Problem Statement #56	Take input an array A of size N and write a program to print maximum and minimum elements of the input. The only line of the input would contain a single integer N that represents the length of the array followed by the N elements of the input array A
Problem Constraint	1 <= N <= 1000 1 <= A <= 1000
Example Input	4 10 50 40 80
Example Output	80 10

Problem Statement #57	You are given a constant array A and an integer B. You are required to return another array where out Arr[i] = A[i] + B
Problem Constraint	1 <= A.size() <= 10000 1 <= A[i] <= 10000 1 <= B <= 10000
Example Input	A = [1,2,3,2,1] B = 3
Example Output	[4,5,6,5,4]

Problem Statement #58	Write a program to find the difference between the sum of all even elements and the sum of all odd elements from the given list
Problem Constraint	The difference of the even and odd elements sum in integer format
Example Input	56 63 87 24 32 13 15 19 44 52
Example Output	11

Problem Statement #59	You are given an integer T (number of test cases). You are given array A and an integer B for each test case. You have to tell whether B is present in array A or not
Problem Constraint	1 <= T <= 10 1 <= A <= 10^5 1 <= A[i], B <= 10^9
Example Input	1 3 7 7 2 1
Example Output	0

Problem Statement #60	Given a sorted integer array A, and an integer B. Find the first and last index of B in A. It is guaranteed that B exists in A. Return an array C of size 2, where C[0] is the first index of B in A and C[1] is the last index of B in A.
Problem Constraint	1 <= |A| <= 10^5 -109 <= A[i] <= 10^9 -109 <= B <= 10^9
Example Input	A = [-2, -2, 4, 4, 8, 9] B = 4
Example Output	C = [2, 3]

Problem Statement #61	Write a function to check if the input list has consecutive duplicate elements or not. Return True if there are consecutive duplicate elements in the list else return False. Here by consecutive duplicates, we mean duplicates that are present at consecutive indices in the array
Problem Constraint	Return True or False
Example Input	1 4 1 2 3 3
Example Output	True

Problem Statement #62	You are given an integer array A, you have to return an integer array of same size whose ith element is the frequency count of A[i] in array A
Problem Constraint	1 <= len(A) <= 1000 1 <= A[i] <= 100
Example Input	A = [1, 2, 5, 1, 5, 1]
Example Output	[3, 1, 2, 3, 2, 3]

Problem Statement #63	Given an array A, check if it is sorted in non-decreasing order or not
Problem Constraint	$1 <= Ai <= 10^9$ $1 <= \|A\| <= 10^5$
Example Input	A = [1, 2, 2]
Example Output	1

Problem Statement #64	Write a program that reads an integer array A from input and modifies the array by shifting each element to the right by one position and by shifting the last element to the first position. Return the modified array
Problem Constraint	$1 <= N <= 10^5$ $1 <= A[i] <= 10^9$
Example Input	5 1 2 3 4 5
Example Output	5 1 2 3 4

Problem Statement #65	You are given an integer array A. Now your task is to find the inverse of A. Now, the inverse of the array is A will be an array in which we change the positions of the values as their indices and indices as values. So, array A = [2, 0, 1] - Now 2 is at index 0. So, place 0 at index 2. - 0 is at index 1. So, place 1 at index 0. - 1 is at index 2. So, place 2 at index 1. So, the inverse of A will be [1, 2, 0]
Problem Constraint	1 <= |A| <= 10^5 0 <= A[i] < |A| (All elements are distinct)
Example Input	A = [2, 0, 1]
Example Output	[1, 2, 0]

Problem Statement #66	Given an integer array A of size N and an integer B, you have to return the same array after rotating it B times towards the right.
Problem Constraint	1 <= N <= 10^5 1 <= A[i] <=10^9 1 <= B <= 10^9
Example Input	A = [1, 2, 3, 4] B = 2
Example Output	[3, 4, 1, 2]

Problem Statement #67	You are given an integer array A. You have to find the second largest element/value in the array or report that no such element exists
Problem Constraint	$1 <= \|A\| <= 10^5$ $0 <= A[i] <= 10^9$
Example Input	A = [2, 1, 2]
Example Output	1 Return the second largest element. If no such element exist then return -1

Problem Statement #68	You are given an integer array A of length N. You are also given a 2D integer array B with dimensions M x 2, where each row denotes a [L, R] query. For each query, you have to find the sum of all elements from L to R indices in A (0 - indexed) More formally, find A[L] + A[L + 1] + A[L + 2] +... + A[R - 1] + A[R] for each query
Problem Constraint	$1 <= N, M <= 10^3$ $1 <= A[i] <= 10^5$ $0 <= L <= R < N$
Example Input	A = [1, 2, 3, 4, 5] B = [[0, 3], [1, 2]]
Example Output	[10, 5] Return an integer array of length M where ith element is the answer for ith query in B

Problem Statement #69	Given an integer array A of size N. In one second, you can increase the value of one element by 1 Find the minimum time in seconds to make all elements of the array equal
Problem Constraint	1 <= N <= 1000000 1 <= A[i] <= 1000
Example Input	A = [2, 4, 1, 3, 2]
Example Output	8 Return an integer denoting the minimum time to make all elements equal

Problem Statement #70	You are given an array of N integers, A1, A2, ... AN. Return the maximum value of f(i, j) for all 1 ≤ i, j ≤ N. f(i, j) is defined as |A[i] - A[j]| + |i - j|, where |x| denotes absolute value of x.
Problem Constraint	1 <= N <= 100000 -10^9 <= A[i] <= 10^9
Example Input	A = [1, 3, -1]
Example Output	5 Return an integer denoting the maximum value of f(i, j)

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