**Bubble Sort**

Given an Integer **N** and a list **arr**. Sort the array using bubble sort algorithm.  
**Example 1:**

**Input**:

N = 5

arr[] = {4, 1, 3, 9, 7}

**Output**:

1 3 4 7 9

**Example 2:**

**Input**:

N = 10

arr[] = {10, 9, 8, 7, 6, 5, 4, 3, 2, 1}

**Output**:

1 2 3 4 5 6 7 8 9 10

**Expected Time Complexity:** O(N^2).  
**Expected Auxiliary Space:** O(1).

**Constraints:**  
1 <= N <= 103  
1 <= arr[i] <= 103

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JAVA CODE

//{ Driver Code Starts

//Initial Template for Java

import java.util.\*;

import java.io.\*;

// } Driver Code Ends

//User function Template for Java

class Solution

{

//Function to sort the array using bubble sort algorithm.

public static void bubbleSort(int arr[], int n)

{

for(int i=0;i<n;i++){

for(int j=i+1;j<n;j++){

if(arr[i]>arr[j]){

int temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

}

}

//{ Driver Code Starts.

class Sorting

{

//method to print the Elements of the array

static void printArray(int arr[])

{

int n = arr.length;

for (int i=0; i<n; ++i)

System.out.print(arr[i] + " ");

System.out.println();

}

public static void main(String args[])

{

//taking input using Scanner class

Scanner sc = new Scanner(System.in);

//taking total testcases

int t = sc.nextInt();

while(t>0)

{

//taking total elements

int n = sc.nextInt();

//creating a new array of length n

int arr[] = new int[n];

//inserting elements to the array

for(int i=0;i<n;i++)

{

arr[i] = sc.nextInt();

}

//calling bubbleSort() method

new Solution().bubbleSort(arr,n);

//calling printArray() method

printArray(arr);

t--;

}

}

}