Rajalakshmi Engineering College

Name: Gurucharan Chandramohan
Email: 240801092@rajalakshmi.edu.in
Roll no: 2116240801092
Phone: 6379544451
Branch: REC
Department: I ECE FA
Batch: 2028
Degree: B.E - ECE

Scan to verify results

NeoColab_REC_CS23231_DATA STRUCTURES

REC_DS using C_Week 6_COD_Question 2

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Nandhini asked her students to arrange a set of numbers in ascending order. She asked the students to arrange the elements using insertion sort, which involves taking each element and placing it in its appropriate position within the sorted portion of the array.

Assist them in the task.

Input Format

The first line of input consists of the value of n, representing the number of array elements.

The second line consists of n elements, separated by a space.

Output Format

The output prints the sorted array, separated by a space.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 5
67 28 92 37 59

Output: 28 37 59 67 92

Answer

```
#include <stdio.h>

// You are using GCC

void insertionSort(int arr[], int n) {
    //Type your code here
    for(int i=1;i<n;i++){
        int key=arr[i];
        int j=i-1;
        while(j>=0&&arr[j]>key){
            arr[j+1]=arr[j];
            j=j-1;
        }
        arr[j+1]=key;
    }
}

void printArray(int arr[], int n) {
    //Type your code here
    for(int i=0;i<n;i++) printf("%d ",arr[i]);
    printf("\n");
}

int main() {
    int n;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }
```

```
    insertionSort(arr, n);
    printArray(arr, n);
    return 0;
}
```

Status : Correct ***Marks : 10/10***