

Q1. Write a program to find out second smallest and second largest in an array.

C

```
#include <stdio.h>
int main()
{
    int n;
    printf("Enter the number of elements: ");
    scanf("%d", &n);
    printf("Enter the elements of an array : ");

    int a[n];
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &a[i]);
    }
    for (int i = 0; i < n; i++)
    {
        int temp;
        for (int j = i + 1; j < n; j++)
        {
            if (a[i] < a[j])
            {
                temp = a[i];
                a[i] = a[j];
                a[j] = temp;
            }
        }
    }

    printf("The second smallest element is %d \n", a[n - 2]);
    printf("The second largest element is %d \n", a[1]);
    return 0;
}
```

Q2. WAP to arrange the elements of an array so that all even numbers are followed by all odd numbers

C

```
#include <stdio.h>
int main()
{
    int a[20], b[20], i, n, j, k, temp, c = 0;
    printf("Enter size of the array : ");
    scanf("%d", &n);
    printf("Enter elements in array : ");
    for (i = 0; i < n; i++)
    {
        scanf("%d", &a[i]);
        if (a[i] % 2 == 1)
            c++;
    }
    for (i = 0; i < n - 1; i++)
    {
        for (j = 0; j < n - i - 1; j++)
        {
            if (a[j] > a[j + 1])
            {
                temp = a[j];
                a[j] = a[j + 1];
                a[j + 1] = temp;
            }
        }
    }
    k = 0;
    j = n - c;
    for (i = 0; i < n; i++)
    {
        if (a[i] % 2 == 0)
        {
            if (k < n - c)
                b[k++] = a[i];
        }
        else
        {
            if (j < n)
                b[j++] = a[i];
        }
    }
    printf("\narray after sorting even and odd elements separately:\n ");
    for (i = 0; i < n; i++)
```

```

{
    a[i] = b[i];
    printf("%d ", a[i]);
}
}

```

Q3. 1, 0 in random order segregate 0 on left 1 on right any only once traverse The array once.

C++

```

#include<iostream>
using namespace std;
int main()
{
    cout<<"Enter size of array : ";
    int n;
    cin>>n;
    int arr[n];
    cout<<"Enter the elements of the array : \n";
    for(int i=0;i<n;i++)
        cin>>arr[i];
    int zerocount=0;
    for(int i=0;i<n;i++)
    {
        if(arr[i]==0)
        {
            int temp=arr[i];
            arr[i]=arr[zerocount];
            arr[zerocount]=temp;
            zerocount+=1;
        }
    }
    cout<<"Required array is : \n";
    for(int i=0;i<n;i++)
        cout<<arr[i]<<" ";
}

```