1.Write a program in C# Sharp to separate odd and even integers into separate arrays.

Test Data :

Input the number of elements to be stored in the array :5

Input 5 elements in the array :

element - 0 : 25

element - 1 : 47

element - 2 : 42

element - 3 : 56

element - 4 : 32

Expected Output:

The Even elements are: 42 56 32

The Odd elements are : 25 47

Solution:

```
using System;


public class HelloWorld
{
   public static void Main(string[] args)
   {
      Console.WriteLine("Enter the size of Array: ");
      int n= Convert.ToInt32(Console.ReadLine());


      int [] arr = new int [n];


      int [] evenArr = new int [n];


      int [] oddArr = new int [n];
```

```
int evenCount=0;
int oddCount=0;



Console.WriteLine("Enter the elements of Array: ");

for(int i=0; i< arr.Length;i++)
{
   arr[i] = Convert.ToInt32(Console.ReadLine());
}

// jagged Array

//int [][] jaggedArray = new int[2][];

for(int i=0; i<arr.Length;i++)
{
   if(arr[i]%2==0)
   {
      evenArr[evenCount++]=arr[i];
   }
   else
   {
      oddArr[oddCount++]=arr[i];
   }
}
Console.Write("The Even elements are: ");
```

```
      for(int i=0;i<evenCount;i++)
      {
         Console.Write(evenArr[i]+" ");

      }
      Console.WriteLine();
      Console.Write("The odd elements are: ");
       for(int i=0;i<oddCount;i++)
      {
         Console.Write(oddArr[i]+" ");
      }
   }
}
```

2. Given an array of integers arr[], the task is to move all the zeros to the end of the array while maintaining the relative order of all non-zero elements.

Examples:

Input: arr[] = [1, 2, 0, 4, 3, 0, 5, 0]

Output: arr[] = [1, 2, 4, 3, 5, 0, 0, 0]

Explanation: There are three 0s that are moved to the end.

Input: arr[] = [10, 20, 30]

Output: arr[] = [10, 20, 30]

Explanation: No change in array as there are no 0s.

Input: arr[] = [0, 0]

Output: arr[] = [0, 0]

Explanation: No change in array as there are all 0s.

Solution:

```
using System;


public class HelloWorld
{
   public static void Main(string[] args)
   {
      Console.WriteLine("Enter the size of Array: ");
      int n= Convert.ToInt32(Console.ReadLine());


      int [] arr = new int [n];


      Console.WriteLine("Enter the elements of Array: ");


      for(int i=0; i< arr.Length;i++)
      {
         arr[i] = Convert.ToInt32(Console.ReadLine());
      }
      Console.WriteLine("Output Array: ");


      moveZeros(arr);


      foreach(int num in arr)
      {
         Console.Write(num+" ");
```

```
    }

    static void moveZeros(int [] arr)
    {
      int n= arr.Length;
      int j=0;
      for(int i=0;i<n;i++)
      {
        if (arr[i]!=0)
        {
          arr[j++]=arr[i];
        }
      }
      // filling the remaing Zeros
      while(j<n)
      {
        arr[j++]=0;
      }
    }
  }
}
```