1. Riverse Arrays

```
int[] a = new int[] { 1, 2, 3 };
int i, n;
n = a.Length;
for (i = 0; i < n; i++)
{
    Console.WriteLine(a[i]);
}
Console.WriteLine("Reverse");
for (i = n - 1; i >= 0; i--)
{
    Console.WriteLine(a[i]);
}
```

2. Find Out the Duplicate No:

```
  int[] arr = new int[] {1,2,3,1,6,2};
  int i, length, j;
  length = arr.Length;
for (i = 0; i < length; i++)
{
    for (j = i+1; j < length; j++)
    {
        if(arr[i]== arr[j])
        {

            Console.WriteLine("Duplicate No \t " + arr[i]);
        }
    }

}
```

3. Unique No

```
int[] arr = new int[] {1,2,3,1,6,2};
int i, length, count, j;
length = arr.Length;
     for (i = 0; i < length; i++)
     {
         count = 0;
         for (j = 0; j < length; j++)
         {
             if(i !=j)
             {
                 if (arr[i] == arr[j])
                 {
                     count++;
                 }
             }

         }
         if (count == 0)
           Console.WriteLine("Unique No \t " + arr[i]);
     }
```

4. Find maximum and minimum element in an array.

```
  int[] arr = new int[] { 2,3,5,1,7,4 };
  int i, length, largestNo,smallestNO;
  largestNo = arr[0];
  smallestNO = arr[0];
  length = arr.Length;
for (i = 0; i < length; i++)
{

    if (smallestNO > arr[i])
    {
        smallestNO = arr[i];
    }
    if (largestNo < arr[i])
    {
        largestNo = arr[i];
    }
}

Console.WriteLine("Smallest No: "+ smallestNO);
Console.WriteLine("Largest No: "+ largestNo);
```

5. Find odd and even integers in from arrays

```
  int[] arr = new int[] { 2,3,5,1,7,4 };
  int i, length;
  length = arr.Length;
for (i = 0; i < length; i++)
{

    if (arr[i]%2==0)
    {
        //evenNOList.Add(arr[i]);
        Console.WriteLine("Even No: \t" + arr[i]);
    }
    else
    {
        Console.WriteLine("Odd No: \t" + arr[i]);
    }
}
```

6. Sort elements of array in ascending order

```
int[] arr = new int[] { 2,3,5,1,7,4 };
int i,j, length,temp;
length = arr.Length;
for (i = 0; i < length; i++)
{

    for (j = i+1; j < length; j++)
    {
        if(arr[j]< arr[i])
        {
            temp = arr[i];
            arr[i] = arr[j];
            arr[j] = temp;
        }
    }
}
Console.Write("\nElements of array in sorted ascending order:\n");
for (i = 0; i < length; i++)
{
    Console.Write("{0}  ", arr[i]);
}
```

7. Sort elements of the array in descending order

```
int[] arr = new int[] { 2,3,5,1,7,4 };
int i,j, length,temp;
length = arr.Length;
for (i = 0; i < length; i++)
{

    for (j = i+1; j < length; j++)
    {
        if(arr[i] < arr[j])
        {
            temp = arr[i];
            arr[i] = arr[j];
            arr[j] = temp;
        }
    }
}
Console.Write("\nElements of array in sorted descending  order:\n");
for (i = 0; i < length; i++)
{
    Console.Write("{0}  ", arr[i]);
}
```

8. insert New value in the array (sorted list)

```
int[] arr = new int[10];
int i, j, length, insertedValue, indexPosition;
Console.WriteLine("Input the size of the array");
length = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("Input {0} element of the array in ascending order.");
for ( i = 0; i < length; i++)
{
    arr[i] = Convert.ToInt32(Console.ReadLine());
}

indexPosition = 0;

Console.WriteLine("Input the value to be inserted : ");
insertedValue = Convert.ToInt32(Console.ReadLine());
// insertedValue = 3;
Console.WriteLine("The exist array list is :\n ");
for (i = 0; i < length; i++)
{
    Console.WriteLine("{0} ", arr[i]);
}

for (i = 0; i < length; i++)
{
    if(insertedValue < arr[i])
    {
        indexPosition = i;
        break;
    }

}
for (i = length; i >= indexPosition; i--)
{
    arr[i] = arr[i - 1];
}
arr[indexPosition] = insertedValue;
Console.WriteLine("\nElements of array in sorted descending  order:\n");
for (i = 0; i <= length; i++)
{
    Console.WriteLine("{0}  ", arr[i]);
}
```

9. find the second largest element in an array.

```
int[] arr = new int[]{2,4,6,8,10};
 //Array.Sort(arr);
 //Console.WriteLine(arr[(arr.Length - 1) - 1]);

 int i, j, length, largestLocation = 0, largestNO, largestNO2 = 0;
 length = arr.Length;
 largestNO = 0;
 for (i = 0; i < length; i++)
 {
     if (largestNO < arr[i])
     {
         largestNO = arr[i];
         largestLocation = i;
     }
 }
 for (i = 0; i < length; i++)
 {
     if (i != largestLocation)
     {
         if (largestNO2 < arr[i])
         {
             largestNO2 = arr[i];
         }
     }
 }
 Console.WriteLine(largestNO2);
```

10. How to print duplicate characters in a String using C#?

```
  string repeatedWord = "wooooooooow";
 int[] cal = new int[256];
for (int i = 0; i < repeatedWord.Length; i++)
    cal[repeatedWord[i]]++;

for (int i = 0; i < 256; i++)
    if (cal[i] > 1)
    {
        Console.WriteLine("Character " + (char)i);
        Console.WriteLine("Occurrence = " + cal[i] + " times");
    }
```