

## Practical 2

### Console Based Applications using C#

- 1) W.A.P to get n number of strings from the user. Find out total no. of duplicate strings and display duplicate strings along with duplicate occurrence using 1D array.

Code:-

```
using System;

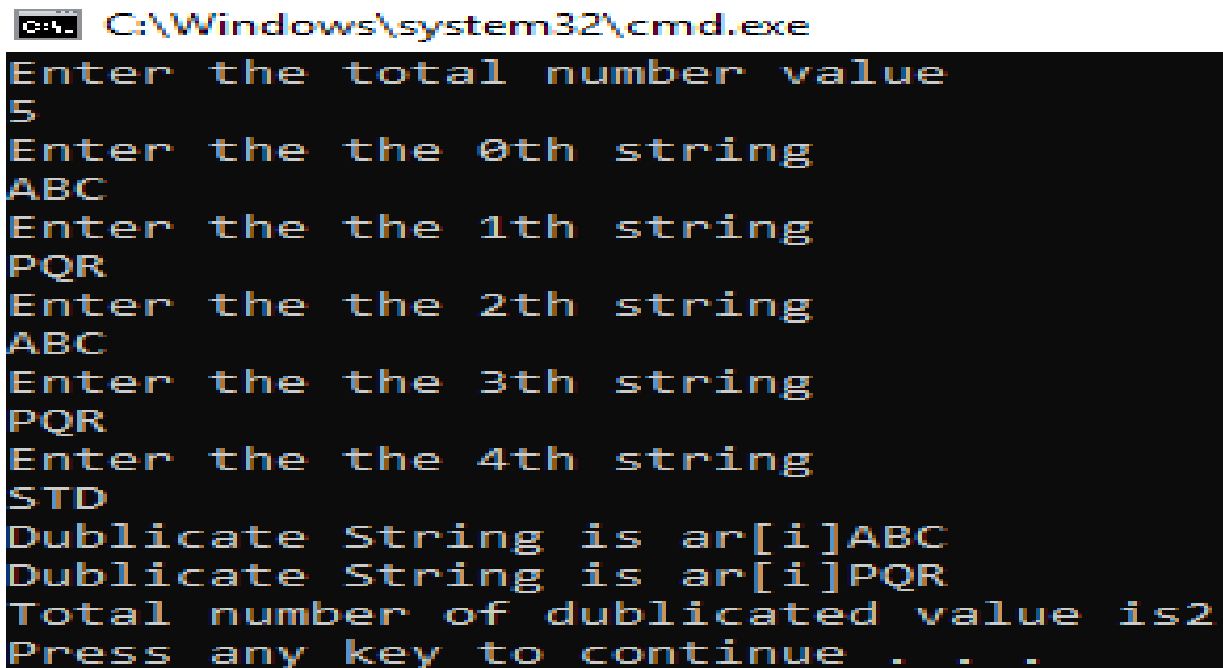
namespace C1
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter the total number value");
            int n = Convert.ToInt32(Console.ReadLine());
            String[] ar = new String[n];
            for (int i = 0; i < n; i++)
            {
                Console.WriteLine("Enter the the " + i + "th string");
                ar[i] = Console.ReadLine();
            }
            int c = 0;
            for (int i = 0; i < n; i++)
            {
                for (int j = i+1; j < n; j++)
                {
                    if (ar[i] == ar[j])
```

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```
        {  
  
            Console.WriteLine("Duplicate String  
is"+ar[i]);  
            c = c + 1;  
        }  
    }  
    Console.WriteLine("Total number of  
duplicated value is" + c);  
}  
}
```

O/P:-



```
C:\Windows\system32\cmd.exe  
Enter the total number value  
5  
Enter the the 0th string  
ABC  
Enter the the 1th string  
PQR  
Enter the the 2th string  
ABC  
Enter the the 3th string  
PQR  
Enter the the 4th string  
STD  
Duplicate String is ar[i]ABC  
Duplicate String is ar[i]PQR  
Total number of duplicated value is2  
Press any key to continue . . .
```

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2) W.A.P to calculate area of Circle, Rectangle, Square and Triangle.

Which contain two classes in which 1<sup>st</sup> class contains main method & 2<sup>nd</sup> class which contains methods to find area for diff. shapes using method overloading?

Code:-

```
using System;

namespace C2
{
    class Calculator
    {
        static double pi = 3.14;
        public double Area(int n)
        {
            return pi * n * n;
        }
        public double Area(int h, int w)
        {
            return h * w;
        }
        public double Area(int a, int b, int c)
        {
            return (a + b + c) / 3;
        }
    }

    class Program
    {
        static void Main(string[] args)
```

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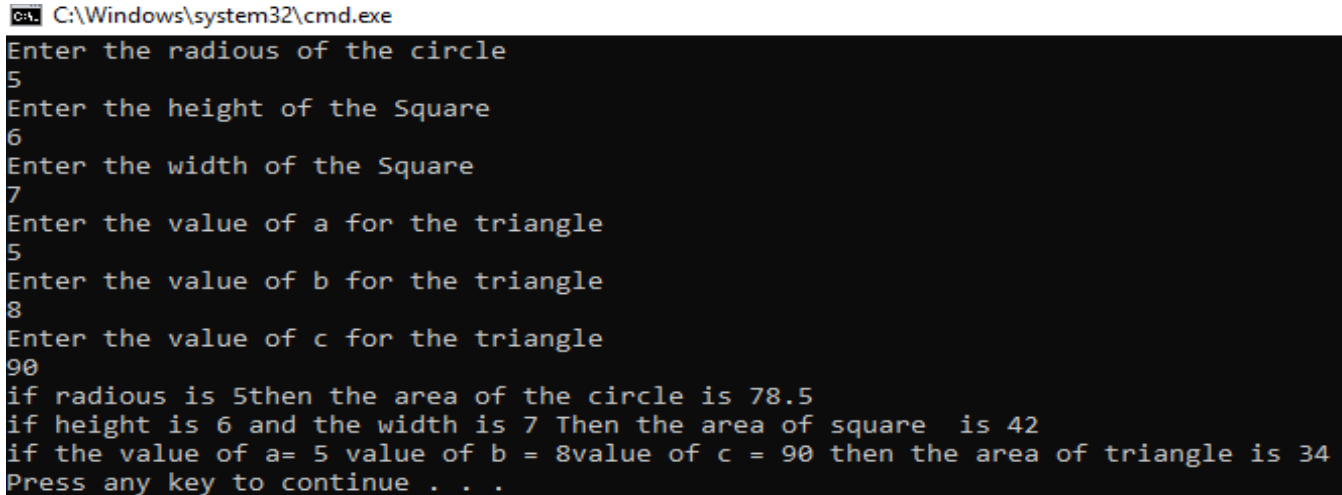
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```
{
    Calculator c1 = new Calculator();
    Console.WriteLine("Enter the radius of the circle");
    int r = Convert.ToInt32(Console.ReadLine());
    double ans = c1.Area(r);
    Console.WriteLine("Enter the height of the Square");
    int h = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("Enter the width of the Square");
    int w = Convert.ToInt32(Console.ReadLine());
    double ans1 = c1.Area(h, w);
    Console.WriteLine("Enter the value of a for the triangle");
    int a = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("Enter the value of b for the triangle");
    int b = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("Enter the value of c for the triangle");
    int c = Convert.ToInt32(Console.ReadLine());
    double ans2 = c1.Area(a, b, c);
    Console.WriteLine("if radius is " + r + "then the area of the circle is " + ans);
    Console.WriteLine("if height is " + h + " and the width is " + w + " Then the area of square is " + ans1);
    Console.WriteLine("if the value of a= "+a+" value of b = "+b+"value of c = "+c+" then the area of triangle is "+ans2);
}
```

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```
    }  
}  
O/P:-
```



```
C:\Windows\system32\cmd.exe  
Enter the radius of the circle  
5  
Enter the height of the Square  
6  
Enter the width of the Square  
7  
Enter the value of a for the triangle  
5  
Enter the value of b for the triangle  
8  
Enter the value of c for the triangle  
90  
if radius is 5 then the area of the circle is 78.5  
if height is 6 and the width is 7 Then the area of square is 42  
if the value of a= 5 value of b = 8 value of c = 90 then the area of triangle is 34  
Press any key to continue . . .
```

3) W.A.P. to find max and min number from an integer array. Create a method getMinMax() by passing out parameter.

```
using System;  
namespace C3  
{  
    class Program  
    {  
        public static void getMinMax (int[] a, int b)  
        {  
            int min, max;  
            min = a[0];  
            max = a[0];  
            for (int i = 1; i < b; i++)  
            {  
                if (min >= a[i])  
                {
```

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```
        min=a[i];
    }
    if(max<= a[i])
    {
        max = a[i];
    }
}
Console.WriteLine ("Minimum number into
array is "+min);
Console.WriteLine ("Maximum number into
array is" + max);

}
static void Main(string[] args)
{
    Console.WriteLine ("Enter the number of element
of an array");
    int n = Convert.ToInt32(Console.ReadLine());
    int[] ar = new int[n];
    for (int i = 0; i < n; i++)
    {
        Console.WriteLine ("Entered the ar [" + i
+ "] th index value");
        ar[i]= Convert.ToInt32(Console.ReadLine());
    }

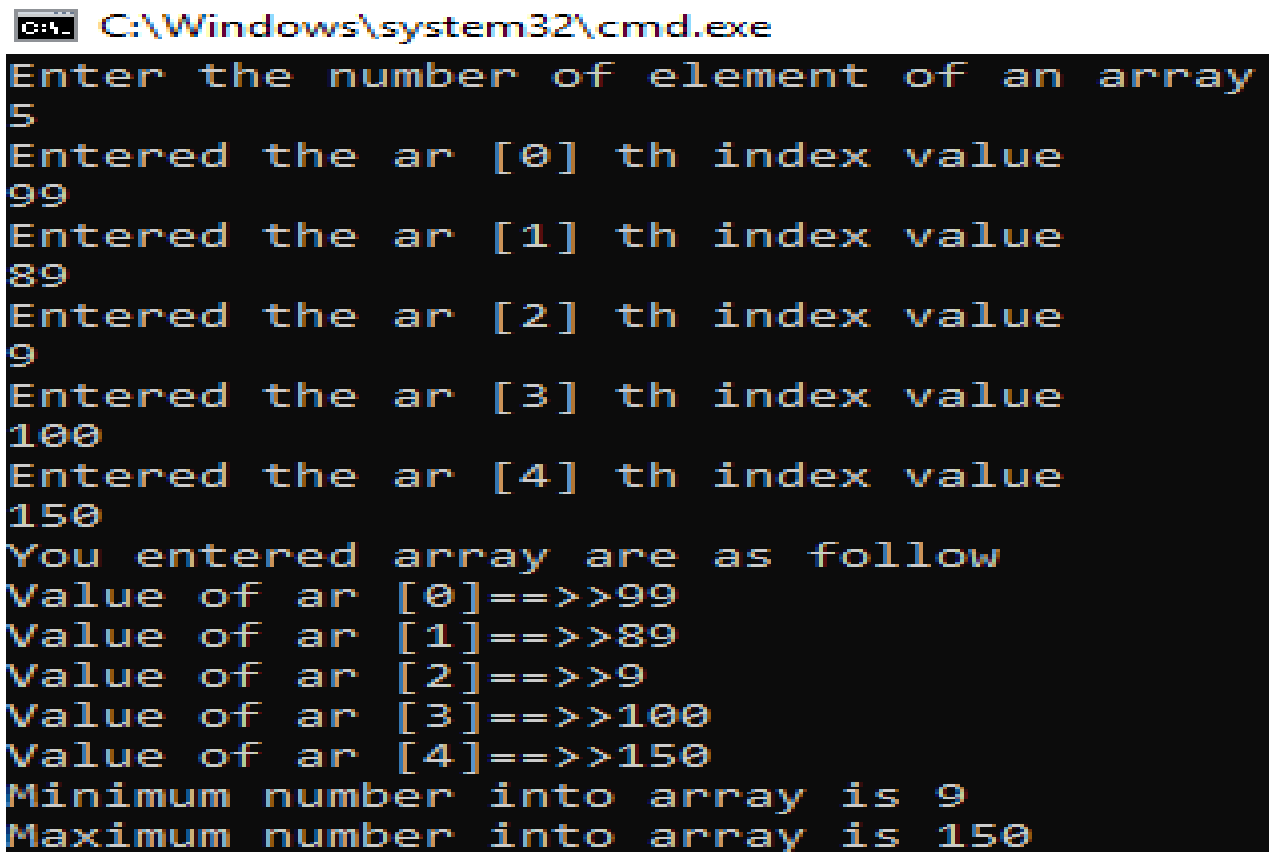
    Console.WriteLine("You entered array are as
follow");
    for (int i = 0; i < n; i++)
    {
```

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```
        Console.WriteLine    ("Value    of    ar  
        ["+i+"]==>>" + ar[i]);  
    }  
    getMinMax(ar, n);  
    Console.ReadKey();  
  
    }  
}  
}
```

O/P:-



```
C:\Windows\system32\cmd.exe  
Enter the number of element of an array  
5  
Entered the ar [0] th index value  
99  
Entered the ar [1] th index value  
89  
Entered the ar [2] th index value  
9  
Entered the ar [3] th index value  
100  
Entered the ar [4] th index value  
150  
You entered array are as follow  
Value of ar [0]==>>99  
Value of ar [1]==>>89  
Value of ar [2]==>>9  
Value of ar [3]==>>100  
Value of ar [4]==>>150  
Minimum number into array is 9  
Maximum number into array is 150
```

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4) Write a Program to create an int Jagged Array which consists at least 5 array in it. Sort every array of Jagged array and display all jagged array after sorting.

Code:-

```
using System;
namespace C4
{
    class Program
    {
        static void Main(string[] args)
        {
            int[][] jagged_array = new int[5][];
            jagged_array[0] = new int[] { 1, 5, 4, 3, 2 };
            jagged_array[1] = new int[] { 67, 34, 11 };
            jagged_array[2] = new int[] { 44, 22, 66, 10 };
            jagged_array[3] = new int[] { 99, 22, 44, 11, 55 };
        };
        jagged_array[4] = new int[] { 55, 22, 77, 44, 11, 55, 66 };
        };
        for (int i = 0; i < 5; i++)
        {
            Array.Sort(jagged_array[i]);
            Console.WriteLine("After Sorting [" + i
                + "] th array");
            for (int j = 0; j < jagged_array[i].Length; j++)
            {
                Console.WriteLine(jagged_array
                    [i][j]);
            }
        }
    }
}
```



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```
    }  
}  
O/P:-
```

```
C:\Windows\system32\cmd.exe  
After Sorting [0] th array  
1  
2  
3  
4  
5  
After Sorting [1] th array  
11  
34  
67  
After Sorting [2] th array  
10  
22  
44  
66  
After Sorting [3] th array  
11  
22  
44  
55  
99  
After Sorting [4] th array  
11  
22  
44  
55  
55  
66  
77
```

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