1. Develop a C# .NET console application to demonstrate the conditional statements.

```
using System;
class ifdemo
{
  public static void Main()
  {
  int a,b;
  Console.WriteLine("enter 2 no ");
   a=int.Parse (Console.ReadLine());
  b=int.Parse(Console.ReadLine());
  if(a>b)
     {
       Console.WriteLine(a+" is greater");
      }
  else if(a< b)
      {
      Console.WriteLine(b+" is greater");
      }
  else
     {
    Console.WriteLine("Both "+a+" and "+b+" are Equal");
     }
    Console.ReadLine();
    }
}
```

Output:

```
enter 2 no
23
23
Both 23 and 23 are Equal
```

Develop a C# .NET console application to demonstrate Nested if conditional statements.

```
class Program
    {
        static void Main(string[] args)
        {
             int x = 5, y = 20;
             if (x > y)
             {
                 if (x >= 10)
                 {
                     Console.WriteLine("x value greater than or equal to 10");
                 }
                 else
                 {
                     Console.WriteLine("x value less than 10");
                 }
             }
             else
             {
                 if (y <= 20)
                 {
                     Console.WriteLine("y value less than or equal to 20");
                 }
                 else
                 {
                     Console.WriteLine("y value greater than 20");
                 }
             }
             Console.WriteLine("Press Enter Key to Exit..");
             Console.ReadLine();
        }
    }
```

Develop a C# .NET console application to demonstrate Switch statements.

```
using System;
namespace ConditionalStatementDemo
{
   class Switchdemo
   {
      public static void Main()
      {
         Console.WriteLine("Which is your fav. color");
         Console.WriteLine("1. Red");
         Console.WriteLine("2. Green");
         Console.WriteLine("3. Pink");
         int ch = int.Parse(Console.ReadLine());
         switch (ch)
         {
            case 1:
               Console.WriteLine("you choose Red");
               break;
            case 2 :
               Console.WriteLine("you choose Green");
               break;
            case 3:
               Console.WriteLine("you choose Pink");
               break;
            default:
               Console.WriteLine("None of given colors..");
               break;
         }
         Console.ReadLine();
      }
   }
}
```

Output:
Which is your fav. color
1. Red
2. Green
3. Pink
8
None of given colors..

Which is your fav. color
1. Red
2. Green
3. Pink
2
you choose Green.

2. Develop a C# .NET console application to demonstrate to print 20 numbers using for statements.

```
using System;
namespace ConditionalStatementDemo
{
   class ForLoop
   {
      public static void Main()
      {
         Console.WriteLine("Printing first 20 numbers using For");
         for (int i = 0; i <= 20; i++)
         {
            Console.WriteLine(i);
         }
         Console.ReadLine();
      }
   }
}
```

Output:
Printing first 20 numbers using For
0
1
2
3

Develop a C# .NET console application to demonstrate to print 20 numbers even number less than 50 using while statement.

```
using System;
namespace ConditionalStatementDemo
{
   class WhileDemo
   {
      public static void Main()
      {
         int x=0;
         Console.WriteLine("Printing Even nos. less than 50 using while: ");
         while (x <= 50)
         {
            Console.WriteLine(x);
            x=x+2;
         }
      }
   }
}
```

Output
Printing Even nos. less than 50 using while:
0
2
4
6
8
10
12
14

Develop a C# .NET console application to print the multiplication table using Do-While statement.

```
namespace Mult_DO
{
    class Program
    {
        static void Main(string[] args)
        {
            int row, col, y;
            row = 1;
            System.Console.WriteLine("Multiplication Table\n");
            do
            {
                col=1;
                do
                {
                    y=row*col;
                    System.Console.Write("  "+y);
                    col=col+1;
                }
                while (col<=10);
                System.Console.Write("\n");
                row= row+1;

             }while(row<=10);
         }
   }
}
```

Develop a C# .NET console application to print Power of 2 using for loop

```
namespace For_Example
{
    class Program
    {
        static void Main(string[] args)
        {
            long P;
            int n;
            double q;
            Console.WriteLine("2 to power -n    n    2to power n");
            P=1L;
            for(n=0;n<10;n++)
            {
                if(n==0)
                    P=1L;
                else
                    P=P*2;
                q=1.0/(double)P;
                Console.WriteLine("{0:f6} {1:D} {2:D}", q,n,P);
            }
        }
    }
}
```

Develop a C# .NET console application to Find biggest of two number using Nested Method.

```
namespace Method_Max
{
    class Nesting
    {
        void Largest(int m, int n)
        {
            int large = max(m, n); //nesting
            Console.WriteLine(large);
        }
        int max(int a, int b)
        {
            int x = (a > b) ? a : b;
            return (x);
        }

        static void Main(string[] args)
        {
            Nesting p = new Nesting();
            p.Largest(100,200);
        }
    }
}
```

Develop a C# .NET console application to swap two variable using Passing Parameter by reference.

```
namespace Swao_Example
{
    class PassByRef
    {
        static void swap(ref int x, ref int y)
        {
            int temp = x;
            x = y;
            y = temp;
        }

        public static void Main(string[] args)
        {
            int m = 100;
            int n = 200;
            Console.WriteLine("Before Swaping");
            Console.WriteLine("m="+m);
            Console.WriteLine("n="+n);
            swap(ref m, ref n);
```

```
            Console.WriteLine("After Swaping");
            Console.WriteLine("m=" + m);
            Console.WriteLine("n=" + n);

        }
    }
}
```

Example of using an Array class to sort or filter or reverse array elements in the c# programming language.

```
namespace Array_Example
{
    class Program
    {
        static void Main(string[] args)
        {
            int[] array = new int[5] { 1, 4, 2, 3, 5 };
            Console.WriteLine("---Initial Array Elements---");
            foreach (int i in array)
            {
                Console.WriteLine(i);
            }
            Array.Sort(array);
            Console.WriteLine("---Elements After Sort---");
            foreach (int i in array)
            {
                Console.WriteLine(i);
            }
            Array.Reverse(array);
            Console.WriteLine("---Elements After Reverse---");
            foreach (int i in array)
            {
                Console.WriteLine(i);
            }
            Console.WriteLine("Press Enter Key to Exit..");
            Console.ReadLine();
        }
    }
}
```

Develop a C# .NET console application to sorting a List of number

```
namespace Sorting_Array
{
    class Program
    {
        static void Main(string[] args)
        {
            int[] num = { 55, 40, 80, 65, 71 };
            int n = num.Length;

            Console.Write("Giving List");
            for (int i = 0; i < n; i++)
            {
                Console.Write("  " + num[i]);
            }
            Console.WriteLine("\n");

            for (int i = 0; i < n; i++)
            {
                for (int j = i + 1; j < n; j++)
                {
                    if (num[i] < num[j])
                    {
                        int temp = num[i];
                        num[i] = num[j];
                        num[j] = temp;
                    }
                }
            }
            Console.WriteLine("Sorted List :");
            for (int i = 0; i < n; i++)
            {
                Console.WriteLine("\n" + num[i]);
            }
            Console.WriteLine(" ");
        }
    }
}
```

Develop a C# .NET console application to arrange city names using Array List

```
using System;
using System.Collections.Generic;
using System.Collections;

namespace Array_List_Example
{
    class Program
    {
        static void Main(string[] args)
        {
           // ArrayList n = new ArrayList();

            ArrayList n = new ArrayList();
            n.Add("Madras");
            n.Add("Bombay");
            n.Add("Ananda");
            n.Add("Calcutta");
            n.Add("Delhi");
            n.Add("Mysore");

            Console.WriteLine("Capacity =" + n.Capacity);
            Console.WriteLine("Elements Present=" + n.Count);
            n.Sort();
            for (int i = 0; i < n.Count; i++)
            {
                Console.WriteLine(n[i]);
            }
            Console.WriteLine();
            n.RemoveAt(4);
            for (int i = 0; i < n.Count; i++)
            {
                Console.WriteLine(n[i]);
            }
        }
    }
}
```

Develop a C# .NET console application to find area of circle and Square using Enum type.

```
namespace Enum_Example
{
    class Program
```

```
    {
        public enum Shape
        {
            Circle,
            Square
        }

        public void AreaShape(int x, Shape shape)
        {
            double area;
            switch (shape)
            {
                case Shape.Circle:
                    area =Math.PI* x*x;
                    Console.WriteLine("Circle Area ="+area);
                    break;
                case Shape.Square:
                    area = x*x;
                    Console.WriteLine("Square Area ="+area);
                    break;

                default:
                    Console.WriteLine("Invalid Input");
                    break;
            }
        }

        static void Main(string[] args)
        {
        Program a = new Program();
            a.AreaShape(15, Program.Shape.Circle);
            a.AreaShape(15, Program.Shape.Square);
            a.AreaShape(15, (Program.Shape)1);
            a.AreaShape(15, (Program.Shape)10);

        }
    }
}
```