EXP-1

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ConsoleApplication5
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hi!");
            Console.ReadLine();
        }
    }
}
```

EXP-2

//Class Library

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ClassLibrary2
{
    public class Class2
    {
        public string Display()
        {
            return ("I m in Display");
        }

        public string Print()
        {

            return ("I m in Print");
        }
    }
}
```

Console Application

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using ClassLibrary2;

namespace ConsoleApp7
{
    public static class XX
    {
        public static void NewMethod(this Class2 ob)
        {
            Console.WriteLine("Hello I m extended method");
        }
    }
    class Program
    {

        static void Main(string[] args)
        {
            Class2 ob = new
            Class2();
            ob.Display();
            ob.Print();
            ob.NewMethod();
            Console.ReadKey(
            );
        }
    }
}
```

EXP-3

//Class Library

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ClassLibrary1
{
    public class Class1
    {
        public int Addition(int x, int y)
        {
            return x + y;
        }
        public int Substraction(int x, int y)
        {
            return x - y;
        }
        public int Multiply(int x, int y)
        {
            return x * y;
        }
        public int Divide(int x, int y)
        {
            return x / y;
        }
    }
}
```

Console Application

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using ClassLibrary1;

namespace exDLL
{
    class Program
    {
        static void Main(string[] args)
        {
            Class1 ob = new Class1();
            int sol = ob.Addition(10,79);
            Console.WriteLine("The addition is:" + sol);
            int ans = ob.Substraction(25, 90);
            Console.WriteLine("The Substraction is:" + ans);
            int res = ob.Multiply(22, 22);
            Console.WriteLine("The Multiplication is:" + res);
            int sol2 = ob.Divide(50, 20);
            Console.WriteLine("The Division is:" + sol2); Console.ReadLine();
        }
    }
}
```

EXP-4

1

```
using System;

class Program
{
    static void Main()
    {
        Console.WriteLine("Enter number of rows for the 2D array:");
        int rows = int.Parse(Console.ReadLine());
        Console.WriteLine("Enter number of columns for the 2D array:");
        int cols = int.Parse(Console.ReadLine());
        int[,] multiArray = new int[rows, cols];
        Console.WriteLine("Enter elements for the 2D array:");
        for (int i = 0; i < rows; i++)
        {
            for (int j = 0; j < cols; j++)
            {
                Console.Write("Enter element for position ({i},{j}):");
                multiArray[i, j] = int.Parse(Console.ReadLine());
            }
        }
        Console.WriteLine("\nMultidimensional Array (2D):");
        for (int i = 0; i < rows; i++)
        {
            for (int j = 0; j < cols; j++)
            {
                Console.Write(multiArray[i, j] + " ");
            }
            Console.WriteLine();

        }
        Console.ReadLine();
    }
}
```

2

```
using System;

class Program
{
    static void Main()
    {
        Console.WriteLine("Enter the number of rows for the jagged array:");
        int rows = int.Parse(Console.ReadLine());
        int[][] jaggedArray = new int[rows][];
        for (int i = 0; i < rows; i++)
        {
            Console.WriteLine("Enter the number of elements for row {[i] + 1}:");
            int cols = int.Parse(Console.ReadLine());
            jaggedArray[i] = new int[cols];
            for (int j = 0; j < cols; j++)
            {
                Console.Write("Enter element for position ({i},{j}):");
                jaggedArray[i][j] = int.Parse(Console.ReadLine());
            }
        }
        Console.WriteLine("\nJagged Array:");
        for (int i = 0; i < rows; i++)
        {
            for (int j = 0; j < jaggedArray[i].Length; j++)
            {
                Console.Write(jaggedArray[i][j] + " ");
            }
            Console.WriteLine();
        }
        Console.ReadLine();
    }
}
```

EXP-5

1

```
using System;
class Student
{
    public string Name
    {
        get;
        set;
    }
    public int MathMarks
    {
        get;
        set;
    }
    public int ScienceMarks
    {
        get;
        set;
    }
    public int EnglishMarks
    {
        get;
        set;
    }
    public Student(string name, int mathMarks, int scienceMarks, int englishMarks)
    {
        Name = name;
        MathMarks = mathMarks;
        ScienceMarks = scienceMarks;
        EnglishMarks = englishMarks;
    }
    public static Student operator +(Student student1, Student student2)
    {
        int combinedMathMarks = student1.MathMarks + student2.MathMarks;
        int combinedScienceMarks = student1.ScienceMarks + student2.ScienceMarks;
        int combinedEnglishMarks = student1.EnglishMarks + student2.EnglishMarks;
        return new Student( student1.Name + " & " +  student2.Name, combinedMathMarks,
combinedScienceMarks, combinedEnglishMarks );
    }
    public void Display()
    {
        Console.WriteLine("Name:"+ Name);
        Console.WriteLine("Math Marks:"+ MathMarks);
        Console.WriteLine("Science Marks:"+ ScienceMarks);
        Console.WriteLine("English Marks:"+ EnglishMarks);
        Console.WriteLine("Total Marks: "+ MathMarks + ScienceMarks + EnglishMarks);
        Console.WriteLine(" ");
    }
}
class Program
{
    static void Main(string[] args)
    {
        Console.WriteLine("Enter details for Student 1:");
        Console.Write("Name: "); string name1 = Console.ReadLine();
        Console.Write("Math Marks: ");
        int mathMarks1 = Convert.ToInt32(Console.ReadLine());
        Console.Write("Science Marks: ");
        int scienceMarks1 = Convert.ToInt32(Console.ReadLine());
        Console.Write("English Marks: ");
        int englishMarks1 = Convert.ToInt32(Console.ReadLine());

        Student student1 = new Student(name1, mathMarks1, scienceMarks1, 
englishMarks1);
        Console.WriteLine("\nEnter details for Student 2:");
        Console.Write("Name: ");
        string name2 = Console.ReadLine();
        Console.Write("Math Marks: ");
        int mathMarks2 = Convert.ToInt32(Console.ReadLine());
        Console.Write("Science   Marks:   ");
        int   scienceMarks2   = Convert.ToInt32(Console.ReadLine());
        Console.Write("English Marks: ");
        int englishMarks2 = Convert.ToInt32(Console.ReadLine());
        Student student2 = new Student(name2, mathMarks2, scienceMarks2, 
englishMarks2);
        Console.WriteLine("\nStudent 1 details:");
        student1.Display();
        Console.WriteLine("Student 2 details:");
        student2.Display();
        Student combinedStudent = student1 + student2;
        Console.WriteLine("Combined Student details:");
        combinedStudent.Display();
        Console.ReadLine();
    }
}
```

2

```
using System;
class Program
{
    static void Main()
{
        string str1 = "Hello";
        string str2 = "World";
        string result = str1 + " " + str2;
        Console.WriteLine(result);
        string interpolated = str1 + ""+str2;
        Console.WriteLine(interpolated );
        string  sub = result.Substring(0, 5);
        Console.WriteLine(sub);
        string replaced = result.Replace("World", "C#");
        Console.WriteLine(replaced);
        string[] words = result.Split(' ');
        Console.WriteLine(words[0]);
        string joined = string.Join("-", words);
        Console.WriteLine(joined);
        Console.WriteLine(result.ToUpper());
        Console.WriteLine(result.ToLower());
        string spaced = " Trim me ";
        Console.WriteLine(spaced.Trim());
        Console.ReadLine();
    }
}
```

3

```
using System;
using System.Text;
class Program
{
    static void Main()
    {
        StringBuilder sb = new StringBuilder("Hello");
        sb.Append(" World");
        Console.WriteLine(sb);
        sb.Insert(5, ",");
        Console.WriteLine(sb);
        sb.Replace("World", "C#");
        Console.WriteLine(sb);
        sb.Remove(5, 1);
        Console.WriteLine(sb);
        sb.Clear();
        sb.Append("New String");
        Console.WriteLine(sb);}
}
```

EXP-6

Windows Form

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace _6
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void newToolStripMenuItem_Click(object sender, EventArgs e)
        {
            Form2 newMDIChild = new Form2();
            newMDIChild.MdiParent = this;
            newMDIChild.Show();
        }
    }
}
```

EXP-7

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;
using System.Data.SqlClient;

namespace WindowsFormsApplication3
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            SqlConnection con = new SqlConnection();
            con.ConnectionString = @"Data
Source=(LocalDB)\v11.0;AttachDbFilename=C:\USERS\NIHAR SATISH
BAMBARE\ONEDRIVE\DESKTOP\C#\WINDOWSFORMSAPPLICATION3\WINDOWSFORMSAPPLICATION3\DATABASE
1.MDF;Integrated Security=True";

            try
            {
                con.Open();

                SqlCommand insertCommand = new SqlCommand("INSERT INTO [Table] (Vname,
Vcolor) VALUES (@Vname, @Vcolor)", con);
                insertCommand.Parameters.AddWithValue("@Vname", textBox1.Text);
                insertCommand.Parameters.AddWithValue("@Vcolor", textBox2.Text);

                insertCommand.ExecuteNonQuery();
                SqlCommand selectCommand = new SqlCommand("SELECT * FROM [Table]",
con);
                SqlDataAdapter dAdapter = new SqlDataAdapter(selectCommand);
                DataSet ds = new DataSet();
                dAdapter.Fill(ds);
                dataGridView1.ReadOnly = true;
                dataGridView1.DataSource = ds.Tables[0];

                MessageBox.Show("Record Submitted", "Congrats");
            }
            catch (Exception ex)
            {
                MessageBox.Show("Error: " + ex.Message, "Error");
            }
            finally
            {
                con.Close();
            }
        }
    }
}
```

EXP-8

EXP-9

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Net.NetworkInformation;

namespace Networking_Program
{
    class Program
    {
        static void Main(string[] args)
        {
            var nics = from nic in NetworkInterface.GetAllNetworkInterfaces()where
nic.OperationalStatus== OperationalStatus.Up select nic;
            foreach (var nic in nics)
            {
                Console.WriteLine("Network ID: " + nic.Id);
                Console.WriteLine("Network Name: " + nic.Name);
                Console.WriteLine("Network Desription: " + nic.Description);
                Console.WriteLine("Network Interface Type: " +
nic.NetworkInterfaceType);
                Console.WriteLine("Network Operational Status: " +
nic.OperationalStatus);
                Console.WriteLine("Network Speed: " + nic.Speed);
                Console.WriteLine();
            }
            Console.ReadLine();
        }
    }
}
```

EXP-10

```
m id="form1" runat="server">
<asp:Label ID="Label1" runat="server" Text="Enter Your Name"></asp:Label>
<asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
<asp:RequiredFieldValidator ID="RequiredFieldValidator1" runat="server"
ControlToValidate="TextBox1" ErrorMessage="Enter Something"></asp:RequiredFieldValidator>
<p>
<asp:Label ID="Label2" runat="server" Text="Enter Your Surname"></asp:Label>
<asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>
<asp:RequiredFieldValidator ID="RequiredFieldValidator2" runat="server"
ControlToValidate="TextBox2" ErrorMessage="Enter Something"></asp:RequiredFieldValidator>
</p>
<p>
<asp:Label ID="Label7" runat="server" Text="Enter Your Roll No"></asp:Label>
<asp:TextBox ID="TextBox7" runat="server"></asp:TextBox>
<asp:RequiredFieldValidator ID="RequiredFieldValidator7" runat="server"
ControlToValidate="TextBox7" ErrorMessage="Enter Something"></asp:RequiredFieldValidator>
</p>
<p>
<asp:Label ID="Label4" runat="server" Text="Enter Mobile No"></asp:Label>
<asp:TextBox ID="TextBox4" runat="server"></asp:TextBox>
<asp:RequiredFieldValidator ID="RequiredFieldValidator4" runat="server"
ControlToValidate="TextBox4" ErrorMessage="Enter Something"></asp:RequiredFieldValidator>
<asp:RangeValidator ID="RangeValidator1" runat="server" ErrorMessage="Should be
10 digit" MaximumValue="10" MinimumValue="10"></asp:RangeValidator>
</p>
<p>
<asp:Label ID="Label8" runat="server" Text="Enter Email"></asp:Label>
<asp:TextBox ID="TextBox5" runat="server" Height="16px"
Width="126px"></asp:TextBox>
<asp:RequiredFieldValidator ID="RequiredFieldValidator8" runat="server"
ControlToValidate="TextBox5" ErrorMessage="Enter Something"></asp:RequiredFieldValidator>
<asp:RegularExpressionValidator ID="RegularExpressionValidator1" runat="server"
ControlToValidate="TextBox5" ErrorMessage="Enter Correct Email"
ValidationExpression="\w+([-+.']\w+)*@\w+([-.]\w+)*\.\w+([-
.]\w+)*"></asp:RegularExpressionValidator>
</p>
<p>
<asp:Label ID="Label6" runat="server" Text="Enter Address"></asp:Label>
<asp:TextBox ID="TextBox6" runat="server"></asp:TextBox>
<asp:RequiredFieldValidator ID="RequiredFieldValidator6" runat="server"
ControlToValidate="TextBox6" ErrorMessage="Enter Something"></asp:RequiredFieldValidator>
</p>

<p>
<asp:Button ID="Button1" runat="server" Text="Submit" />
</p>
</form>
```