



# LAB MANUAL

## .NET TECHNOLOGY

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## Practical-1

### Aim:

#### Introduction to c#:

#### Variables:

- Initialization

- Scope

- Constant

#### Predefined Data Types

- Value Types

- Reference Types

#### Flow Control

- Conditional Statements(if, switch)

- Loop(for, while, dowhile, foreach)

- Jump(goto, break, continue, return)

#### Eumerations

#### Passing Arguments

```
using System;

using System.Threading;
namespace P1
{
    class P1
    {
        static int j = 90;
        public enum TimeOfDay
        {
            Morning = 0,
            Afternoon = 1,
            Evening = 2
        }
        public static void Main(string[] args)
        {
            Console.WriteLine("First Program");

            int i;
            i = 25;
            Console.WriteLine("Scope of
Variables.\n1:"); int j;
```

```

    for (int j = 0; j < 2; j++) //removing comment from for loop
    will raise error
    {
        //int j;
        //uncomment above line to error "A local variable named 'j'
        cannot be declared in this
        //scope because it would give a different meaning to 'j', which is
        already
        //used in a 'parent or current' scope to denote something else"
        Console.WriteLine("{0} {1}\n", j, P1.j);
    }
    Console.WriteLine("2:");
    for (int k = 0; k < 3; k++)
    {
        Console.WriteLine("{0} ", k);
    }
    Console.WriteLine("\n");
    Console.WriteLine(k);

    for (int k = 3; k > 0; k--)
    {
        Console.WriteLine("{0} ", k);
    }

    Console.WriteLine("Constants");
    const int valConst = 100; // This value cannot be changed.
    Console.WriteLine("{0} is constant value", valConst);
    valConst = 45;

    const int valConst2 = valConst + 9 /* + j*/;

    Console.WriteLine("Another Constant: {0}", valConst2);

    Console.WriteLine("\nPredefined Data Types\n\nValue Types
    and Reference Types");

    //Value Types
    int vali = 2, valj = vali;
    Console.WriteLine("vali is: {0} and valj is: {1}", vali,
    valj); valj = 90;
    Console.WriteLine("vali is: {0} and valj is: {1}", vali, valj);

    //Referece Types
    Vector x, y;
    x = new Vector();
    x.value = 3;
    y = x;
    Console.WriteLine("x is: {0} and y is:{1}", x.value, y.value);
    y.value = 234;
    Console.WriteLine("x is: {0} and y is:{1}", x.value, y.value);

    y = null;
    Console.WriteLine("Value for y is: " + y.value);

    Console.WriteLine("\nInteger Types");

```

```

sbyte sb = 33;
short s = 33;
int _i = 33;
long l = 33L;

//Unsigned Integers
byte b = 33;
ushort us = 33;
uint ui = 33U;
ulong ul = 33UL;
    Console.WriteLine("{0} {1} {2} {3} {4} {5} {6} {7}", sb, s, _i, l,
        b, us, ui, ul);

//Floating point types
float f = 11.22334455F;
double d = 11.2233445566778899;
Console.Write("\nFloat and Double:\n");
Console.WriteLine("{0} and {1}", f, d);

//Decimal Type
decimal dec = 111.222333444555666777888999M;
Console.WriteLine("Decimal:\n{0}", dec);

//Boolean
Console.WriteLine("\nBoolean:"); bool
valBoolean = true;
Console.WriteLine("Status: " + valBoolean);

//Character
Console.WriteLine("\nCharacter:\nSingle Quote \'");
Console.WriteLine("Double Quote \"");
Console.WriteLine("Back Slash \\");
char charA = 'A';
Console.WriteLine(charA);
charA = '\0';
Console.WriteLine("Now null: " + charA);
Console.WriteLine("\a"); //Notification Sound
Thread.Sleep(1000);
Console.Beep(); //another notification sound

object o1 = "Hi, I am an Object";
object o2 = 34;
string strObj = o1 as string;
Console.WriteLine(strObj);
Console.WriteLine(o1.GetHashCode() + " " + o1.GetType());
Console.WriteLine(o2.GetHashCode() + " " + o2.GetType());
Console.WriteLine(o1.Equals(o2));

//string
string s1, s2;
s1 = "String 1";
s2 = s1;

```

```

Console.WriteLine("S1 is: {0} and s2 is {1}", s1,
s2); s2 = "New String 1";
Console.WriteLine("S1 is: {0} and s2 is {1}", s1,
s2); s1 = "c:\\NewFolder\\Hello\\P1.cs";
Console.WriteLine(s1);
s1 = @"c:\NewFolder\Hello\P1.cs";
Console.WriteLine(s1);
s1 = @"We can also write
like this";
Console.WriteLine(s1);

//Flow Control
//The if Statement
bool isZero;
Console.WriteLine("\nFlow Control: (if)\ni is " +
i); if (i == 0)
{
    isZero = true;
    Console.WriteLine("i is Zero");
}
else
{
    isZero = false;
    Console.WriteLine("i is Non - zero");
}

//else if
Console.WriteLine("\nType in a string:");
string input;
input = Console.ReadLine();
if (input == "")
{
    Console.WriteLine("You typed in an empty string");
}
else if (input.Length < 5)
{
    Console.WriteLine("The string had less than 5 characters");
}
else if (input.Length < 10)
{
    Console.WriteLine("The string had at least 5 but less than 10
characters");
}
Console.WriteLine("The string was " + input);

//Switch
int integerA = 2;
Console.WriteLine("\nSwitch:");

switch (integerA)
{
    case 1:
        Console.WriteLine("integerA = 1");
        break;
    case 2:

```

```

        Console.WriteLine("integerA = 2");
        //goto case 3;
        break;
    case 3:
        Console.WriteLine("integerA = 3");
        break;
    default:
        Console.WriteLine("integerA is not 1, 2, or 3");
        break;
}

//Loops - to be explored
//jump statements goto, break, continue, return - to be explored

//Enumerations
//An enumeration is a user-defined integer type.
//Benefits:
//1.As mentioned, enumerations make your code easier to maintain
//2.Enumerations make your code clearer by allowing you to refer to integer values
by descriptive names
//3.Enumerations make your code easier to type, too. When you
go to assign a value to an instance of an enumerated type,
//the Visual Studio .NET IDE will, through IntelliSense, pop up a list
box of acceptable values in order to save
//you some keystrokes and to remind you of what the possible options
are.

    WriteGreeting(TimeOfDay.Morning);
    Console.WriteLine("Argument is: {0}",args[1]);
}

static void WriteGreeting(TimeOfDay timeOfDay)
{
    switch (timeOfDay)
    {
        case TimeOfDay.Morning:
            Console.WriteLine("Good morning!");
            break;
        case TimeOfDay.Afternoon:
            Console.WriteLine("Good afternoon!");
            break;
        case TimeOfDay.Evening:
            Console.WriteLine("Good evening!");
            break;
        default:
            Console.WriteLine("Hello!");
            break;
    }
}
}

```

```

        public class Vector
        {
            public int value;
        }
    }

```

## Output:

E:\SEM-6 .NET\VS>p1.exe

First Program

Scope of Variables.

1:

0 90

1 90

2:

0 1 2

3 2 1 Constants

100 is constant value

Another Constant: 109

Predefined Data Types

Value Types and Reference Types

vali is: 2 and valj is: 2

vali is: 2 and valj is: 90

x is: 3 and y is:3

x is: 234 and y is:234

Integer Types

33 33 33 33 33 33 33 33

Float and Double:

11.22334 and

11.2233445566779

Decimal:

111.222333444555666777888999

Boolean:

Status: True

Character:

Single Quote '

Double Quote "

Back Slash \

A

Now null:

Hi, I am an Object

-1735802816 System.String

34 System.Int32

False

S1 is: String 1 and s2 is String 1

S1 is: String 1 and s2 is New String 1



```
c:\NewFolder\Hello\P1.cs
c:\NewFolder\Hello\P1.cs
We can also write
    like this
```

```
Flow Control: (if)
i is 25
i is Non - zero
```

```
Type in a string:
abhay
The string had at least 5 but less than 10
characters The string was abhay
```

```
Switch:
integerA = 2
Good morning!
```

## Practical-2

### Aim:

### GTU Programs

Program 1. Write console based program in code behind language VB or C# to print following pattern.

```
@ @ @ @ @
@ @ @ @
@ @ @
@ @
@
```

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

namespace p2
{
    class Pattern1
    {
        static void Main(string[] args)
        {
            for (int i = 5; i > 0; i--) {
                for (int j = i; j > 0; j--) {
                    Console.Write('@');
                }
                Console.WriteLine();
            }
            Console.ReadKey();
        }
    }
}
```

### Output:

E:\SEM-6 .NET\VS\p2\p2>Pattern1.exe

```
@@@@@
@@@@@
@@@
@@
@
```

Program 2. Write console based program in code behind language VB or C# to print following pattern.

```
1
12
123
1234
```

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

namespace p2
{
    class Pattern2
    {
        static void Main(String[] ar){
            for(int i=1;i<5;i++){
                for(int j=1;j<=i;j++){
                    Console.Write(j);
                }
                Console.WriteLine();
            }
            Console.ReadKey();
        }
    }
}
```

### Output:

```
E:\SEM-6 .NET\VS\p2\p2>Pattern2.exe
1
12
123
1234
```

Program 3. Write C# code to prompt a user to input his/her name and country name and then the output will be shown as an example below: Hello Ram from country India

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

namespace p2
{
    class Read
    {
        static void Main(String[] ar) { Console.WriteLine("Enter
            your name:"); string name = Console.ReadLine();
            Console.WriteLine("Enter your City:"); string city =
            Console.ReadLine(); Console.WriteLine("Hello {0} from
            city {1}",name,city);
        }
    }
}
```

### Output:

```
E:\SEM-6 .NET\VS\p2\p2>Read.exe
Enter your name:
abhay
Enter your City:
rajkot
Hello abhay from city Rajkot
```

Program 4. What is inheritance? Create C# console application to define Car class and derive Maruti and Mahindra from it to demonstrate inheritance.

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

namespace p2
{
    public class Car
    {
        public virtual void display()
        {
            Console.WriteLine("This is Car class...");
        }
    }
    public class Mahindra : Car
    {
        public override void display()
        {
            Console.WriteLine("This is Mahindra class...");
        }
    }
    public class Maruti : Car
    {
        public override void display()
        {
            Console.WriteLine("This is maruti class");
        }
    }
    class Inheritance
    {
        static void Main(String[] ar){
            Maruti m = new Maruti();
            Mahindra mm = new Mahindra();
            m.display();
            mm.display();
        }
    }
}
```

### Output:

```
E:\SEM-6 .NET\VS\p2\p2>Inheritance.exe
This is maruti class
This is Mahindra class...
```

## Practical-3

### Aim:

### Overloading

Program 1: Write a c# program to add two integers, two vectors and two matrix using method overloading.

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

namespace p2
{
    public class P3_1
    {
        public int add(int a, int b) {
            return a + b;
        }
        public static Vector add(Vector v1, Vector v2)
        {
            Vector v = new Vector();
            v.a = v1.a + v2.a;
            v.b = v1.b + v2.b;
            return v;
        }
        public static int[,] add(int[,] a, int[,] b) {
            int[,] s = new int[2, 2];
            for (int i = 0; i < 2; i++) {
                for (int j = 0; j < 2; j++) {
                    s[i, j] = a[i, j] + b[i, j];
                }
            }
            return s;
        }
        public static void Main(String[] ar) {
            int n, n1, n2;
            Vector v = new Vector();

            Console.WriteLine("Enter Number 1:");
            n1 = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("Enter Number 2:");
            n2 = Convert.ToInt32(Console.ReadLine());
            n = n1 + n2;
            Console.WriteLine("Addition of Number:{0}", n);

            Console.WriteLine("Enter Vector 1:");
            n1 = Convert.ToInt32(Console.ReadLine());
            n2 = Convert.ToInt32(Console.ReadLine());
            Vector v1 = new Vector(n1, n2);

            Console.WriteLine("Enter Vector 2:");
```

```

n1 =Convert.ToInt32(Console.ReadLine());
n2 = Convert.ToInt32(Console.ReadLine());
Vector v2 = new Vector(n1,n2);

v = add(v1, v2);

Console.WriteLine("Addition of vector: x={0}, y={1}",v.a,v.b);

int[,] a = new int[,] { { 1, 2 }, { 3, 4 } };
int[,] b = new int[,] { { 5, 6 }, { 7, 8 } };

int[,] c = add(a, b);
Console.WriteLine("Addition of two matrices:");
for (int z = 0; z < 2; z++) {
    for (int m = 0; m < 2; m++) {
        Console.WriteLine("Addition: "+ c[z, m]);
    }
    Console.ReadKey();
}
}
public class Vector {
    public int a, b;
    public Vector() { }
    public Vector(int a, int b)
    {
        this.a = a;
        this.b = b;
    }
}
}

```

### Output:

E:\SEM-6 .NET\VS\p2\p2>P3.1.exe

Enter Number 1:

1

Enter Number 2:

2

Addition of Number:3

Enter Vector 1:

1

2

Enter Vector 2:

3

1

Addition of vector: x=4, y=3

Addition of two metrics:

Addition: 6

Addition: 8

Addition: 10

Addition: 12

Program 2: Write a c# program that create student object. Overload constructor to create new instant with following details.

1. Name
2. Name , Enrollment
3. Name , Enrollment, Branch

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

namespace p2
{
    public class Student
    {
        string name, enrollment, branch;
        public Student(string name) {
            this.name = name;
            Console.WriteLine("First Constructor initiated..");
        }
        public Student(string name, string enrollment) {
            this.name = name;
            this.enrollment = enrollment; Console.WriteLine("Second
            Constructor initiated..");
        }
        public Student(string name, string enrollment, string branch)
        { this.name = name;
            this.enrollment = enrollment;
            this.branch = branch;
            Console.WriteLine("Third Constructor initiated..");
        }
        public static void Main(String[] ar) {
            Student s1 = new Student("Abhay");
            Student s2 = new Student("Abhay", "160470107028");
            Student s3 = new Student("Abhay", "160470107028", "Computer");
        }
    }
}
```

### Output:

```
E:\SEM-6 .NET\VS\p2\p2>P3.2.exe
First Constructor initiated..
Second Constructor initiated..
Third Constructor initiated..
```



## Practical-4

### Aim:

### Reflection

Create a c# program to find Methods, Properties and Constructors from class of running program.(Use Class from previous practical)

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Reflection;

namespace p2
{
    class Reflection
    {
        static void Main()
        {
            Type T = Type.GetType("p2.Customer");
            MethodInfo[] methods = T.GetMethods();
            foreach (MethodInfo method in methods)
            {
                Console.WriteLine(method.ReturnType + " " + method.Name);
            }

            PropertyInfo[] properties = T.GetProperties();

            Console.WriteLine("\nProperties");
            foreach (PropertyInfo property in properties)
            {
                Console.WriteLine(property.PropertyType + " " + property.Name);
            }

            Console.WriteLine("\nConstructors");
            ConstructorInfo[] constructors =
            T.GetConstructors(); foreach (ConstructorInfo
            constructor in constructors) {
                Console.WriteLine(constructor.ToString());
            }
        }
    }
    class Customer
    {
        public int ID { get; set; }
        public string Name { get; set; }
        public Customer(int ID, string Name)
        {
            this.ID = ID;
            this.Name = Name;
        }
    }
}
```

```
        public Customer()
        {
            this.ID = -1;
            this.Name = string.Empty;
        }
        public void printID()
        {
            Console.WriteLine("ID is: {0}", this.ID);
        }
        public void printName()
        {
            Console.WriteLine("Name is: {0}", this.Name);
        }
    }
}
```

### Output:

E:\SEM-6 .NET\VS\p2\p2>Reflection.exe

System.Int32 get\_ID

System.Void set\_ID

System.String get\_Name

System.Void set\_Name

System.Void printID

System.Void printName

System.String ToString

System.Boolean Equals

System.Int32 GetHashCode

System.Type GetType

Properties

System.Int32 ID

System.String Name

Constructors

Void .ctor(Int32, System.String)

Void .ctor()

## Practical-5

### Aim:

### File Handling

Program 1: Write a C# program to copy data from one file to another using StreamReader and StreamWriter class.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.IO;

namespace p2
{
    class P4_1
    {
        public static void Main(){
            string f1 = @"f1.txt";
            string f2 = @"f2.txt";
            using (StreamReader reader = new StreamReader(f1))
            using (StreamWriter writer = new StreamWriter(f2))
                writer.Write(reader.ReadToEnd());
        }
    }
}
```

### Output:

F1.txt: Hello World..  
F2.txt: Hello World..

## Program 2: Write a C# Program to Read Lines from a File until the End of File is Reached.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.IO;

namespace p2
{
    public class CopyFile
    {
        public void copyFile(string f1, string f2)
        {
            using (StreamReader reader = new StreamReader(f1))
            using (StreamWriter writer = new StreamWriter(f2))
            {
                string line = null;
                while ((line = reader.ReadLine()) != null)
                    writer.WriteLine(line);
            }
        }
    }

    public class mmain{
        public static void Main(){
            CopyFile cp = new CopyFile();
            string f1 = @"E:\SEM-6 .NET\VS\p2\p2\f1.txt";
            string f2 = @"E:\SEM-6 .NET\VS\p2\p2\f2.txt";
            cp.copyFile(f1,f2);
        }
    }
}
```

### Output:

F1.txt:  
Hello World.....  
hii

how  
are you  
???

F2.txt:  
Hello World.....  
hii

how  
are you  
???

### Program 3: Write a C# Program to List Files in a Directory.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.IO;

namespace p2
{
    class ListFile
    {
        public static void Main() {
            string[] Directories = Directory.GetDirectories(@"E:\SEM-6
.NET\VS"); foreach (string dir in Directories)
                Console.WriteLine(dir);
            string[] files = Directory.GetFiles(@"E:\SEM-6
.NET\VS"); foreach (string file in files)
                Console.WriteLine(file);

            Console.ReadKey();
        }
    }
}
```

### Output:

```
E:\SEM-6 .NET\VS\p2\p2>P4.3.exe

E:\SEM-6 .NET\VS\P1-master
E:\SEM-6 .NET\VS\p2
E:\SEM-6 .NET\VS\Assignment.docx
E:\SEM-6 .NET\VS\C# word.txt
E:\SEM-6 .NET\VS\Doc1.docx
E:\SEM-6 .NET\VS\P1-master.zip
E:\SEM-6 .NET\VS\p1.cs
E:\SEM-6 .NET\VS\p1.exe
E:\SEM-6 .NET\VS\VS.docx
E:\SEM-6 .NET\VS\~$VS.docx
```

## Practical-6

### Aim:

### Windows Form Application

Program: Create Windows Form Application for Student Registration and store student Details in Database.

### Form.cs:

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

namespace StudentForm
{
    public partial class Form1 : Form
    {
        string imgPath;
        public Form1()
        {
            InitializeComponent();
        }

        private void btnsave_Click(object sender, EventArgs e)
        {
            string gen = null;
            string subject = null;
            if (genMale.Checked == true) {
                gen = "m";
            }
            if (genFemale.Checked == true) {
                gen = "f";
            }
            if (ck1.Checked == true) {
                subject = subject + " s1";
            }
            if (ck2.Checked == true) {
                subject = subject + " s2";
            }
        }
    }
}
```

```

        string source = @"Data Source=Abhay-
        Kathrotiya\SQLExpress;Initial Catalog=DemoDb;Integrated
        Security=True;Pooling=False";

        string insert = "insert into tblstudent
        (fname,lname,gender,subject,imgStudent) values ('" + txtfname.Text + "','"
        + txtlname.Text + "','" + gen + "','" + subject + "','" + (imgPath
        == null ? "" : imgPath) + "')";
        //MessageBox.Show(insert);
        //string insert = "insert into tblstudent(fname) values
        ('jhghj')"; SqlConnection conn = new SqlConnection(source);

        SqlCommand cmd = new
        SqlCommand(insert,conn); conn.Open();
        int i = cmd.ExecuteNonQuery();
        conn.Close();
        Console.WriteLine("Success....");
    }

    private void Form1_Load(object sender, EventArgs e)
    {

    }

    private void btnimg_Click(object sender, EventArgs e)
    {
        openFileDialog1.Filter = "Jpg|*.jpg";
        if (openFileDialog1.ShowDialog() == DialogResult.OK)
        {
            imgPath = openFileDialog1.SafeFileName;
            pictureBox.Image = Image.FromFile(openFileDialog1.FileName);
            //MessageBox.Show(imgPath);
        }
    }

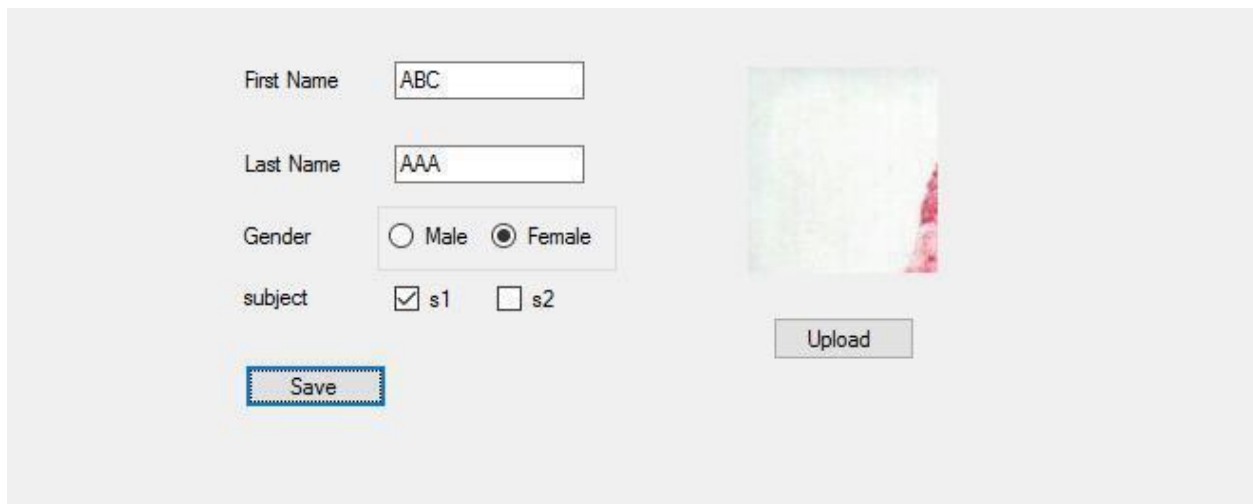
}

```

**Program.cs:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Windows.Forms;

namespace StudentForm
{
    static class Program
    {
        /// <summary>
        /// The main entry point for the application.
        /// </summary>
        [STAThread]
        static void Main()
        {
            Application.EnableVisualStyles();
            Application.SetCompatibleTextRenderingDefault(false);
            Application.Run(new Form1());
        }
    }
}
```

**Output:**

The screenshot displays a Windows Form application with a light gray background. On the left side, there are four labeled input fields: 'First Name' with the text 'ABC', 'Last Name' with the text 'AAA', 'Gender' with radio buttons for 'Male' (unselected) and 'Female' (selected), and 'subject' with checkboxes for 's1' (checked) and 's2' (unchecked). Below these fields are two buttons: 'Save' and 'Upload'. The 'Save' button is highlighted with a blue border. The 'Upload' button is located to the right of the 'subject' fields. To the right of the form fields, there is a small, square image placeholder showing a blurry, abstract pattern.





```
<asp:TextBox ID="txtemail" runat="server"></asp:TextBox>  
    <asp:RegularExpressionValidator ID="RegularExpressionValidator1"  
runat="server"  
  
        ErrorMessage="RegularExpressionValidator"  
ValidationExpression="\w+([-+.']\w+)*@\w+([-.]\w+)*\.\w+([-  
.]\w+)*"  
ControlToValidate="txtemail"></asp:RegularExpressionValidator>  
    <br />  
</td>  
</tr>  
<tr>  
    <td>  
        <asp:Label ID="Label3" runat="server"  
Text="Password"></asp:Label>  
  
        &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&~::~  
        <asp:TextBox ID="txtpass" runat="server"  
TextMode="Password"></asp:TextBox>  
    <br />  
</td>  
</tr>  
<tr>  
    <td>  
        <asp:Label ID="Label4" runat="server"  
Text="Confirm Password"></asp:Label>  
  
        &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&~::~  
        <asp:TextBox ID="txtcpass" runat="server"  
TextMode="Password"></asp:TextBox>  
        <asp:CompareValidator ID="CompareValidator1" runat="server"  
ControlToCompare="txtcpass" ControlToValidate="txtpass"  
ErrorMessage="CompareValidator"></asp:CompareValidator>  
    <br />  
</td>  
</tr>  
<tr>  
    <td>  
        <asp:Label ID="Label5" runat="server" Text="Sem"></asp:Label>  
  
        &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&~::~  
        <asp:TextBox ID="txtsem" runat="server"></asp:TextBox>  
        <asp:RangeValidator ID="RangeValidator1" runat="server"  
ControlToValidate="txtsem" ErrorMessage="RangeValidator"  
MaximumValue="8"  
MinimumValue="1"></asp:RangeValidator>
```

```

        <br />
        <asp:ValidationSummary ID="ValidationSummary1" runat="server"
    /> </td>
</tr>
<tr>
    <td>
        <asp:Button ID="Button1" runat="server" Text="Save"
    /> </td>
</tr>
</table>
</div>
</form>

```

### Output:

Name	<input type="text"/>	RequiredFieldValidator
Email	<input type="text" value="abcde"/>	RegularExpressionValidator
Password	<input type="password" value="..."/>	
Confirm Password	<input type="password" value="..."/>	CompareValidator
Sem	<input type="text" value="9"/>	RangeValidator

- RequiredFieldValidator
- RegularExpressionValidator
- CompareValidator
- RangeValidator

## Practical-8

### Aim:

### Introduction To Master Pages

### Site1.Master:

```
<%@ Master Language="C#" AutoEventWireup="true"
CodeBehind="Site1.master.cs" Inherits="WebApplication1.Site1" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"> <head
runat="server">
    <title></title>
    <asp:ContentPlaceHolder ID="head"
runat="server"> </asp:ContentPlaceHolder> <style
type="text/css">
        .style1 {
            width: 97px;
            height: 141px;
        }
        .style2
        {
            width: 97px;
            height: 105px;
        }
        .style3
        {
            width: 97px;
            height: 99px;
        }
        .style4
        {
            width: 9px;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <table height="50%" width="50%">
            <tr>
                <td class="style2" colspan="2">
                    <asp:Label ID="lblheader" runat="server"
Text="Header"></asp:Label> </td>
            </tr>
            <tr>
                <td class="style4">
                    <asp:Button ID="btnsearch" runat="server" Text="search" />
                </td>
            </tr>
        </table>
    </form>
</body>
</html>
```

```
        <asp:TextBox ID="txtsearch"
runat="server"></asp:TextBox> </td>
<td class="style3">
        <asp:ContentPlaceHolder ID="ContentPlaceHolder1"
runat="server"> content page
</asp:ContentPlaceHolder>
</td>
</tr>
<tr>
        <td class="style1" colspan="2">
                <asp:Label ID="lblfooter" runat="server"
Text="Footer"></asp:Label> </td>
        </tr>
</table>
</form>
</body>
</html>
```

**Site1.Master.cs:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace WebApplication1
{
    public partial class Site1 :
        System.Web.UI.MasterPage {
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        public Label lblHeader {
            get {
                return lblheader;
            }
        }

        public Button BtnSearch {
            get {
                return btnsearch;
            }
        }

        public TextBox TxtSearch {
            get {
                return txtsearch;
            }
        }
    }
}
```

**WebForm1.aspx:**

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication1.WebForm1" %>

<asp:Content ID="Content1" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    <asp:TextBox ID="txtname" runat="server" ></asp:TextBox>
    <asp:Button ID="Button1" runat="server" Text="Set Header" onclick="Button1_Click"
/> </asp:Content>
```

**WebForm1.aspx.cs:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace WebApplication1
{
    public partial class WebForm1 :
        System.Web.UI.Page {
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void Button1_Click(object sender, EventArgs e)
        {
            ((Site1)Master).LblHeader.Text = txtname.Text;
        }
    }
}
```

**WebForm2.aspx:**

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"
Inherits="WebApplication1.WebForm2" %>
    <asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1"
        runat="server"> <asp:GridView
ID="grdstudent" runat="server"> </asp:GridView>
</asp:Content>
```

**WebForm2.aspx.cs:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data.SqlClient;
namespace WebApplication1
{
    public partial class WebForm2 :
        System.Web.UI.Page {
        protected void Page_Init(object sender, EventArgs e)
        {
            ((Site1)Master).BtnSearch.Click += new EventHandler(BtnSearch_Click);
        }

        void BtnSearch_Click(object sender, EventArgs e)
        {
            getData();
        }
        protected void Page_Load(object sender, EventArgs e)
        {}
        void getData() {
            string s = ((Site1)Master).TxtSearch.Text;
            Console.WriteLine(s);
            string source = @"Data Source=Abhay-Kathrotiya\SQLExpress;Initial
Catalog=DemoDb;Integrated Security=True;Pooling=False";
            string select = "select * from tblstudent where fname like '%" +
            ((Site1)Master).TxtSearch.Text + "%'";
            SqlConnection con = new
            SqlConnection(source); SqlCommand cmd =
            new SqlCommand(select, con); con.Open();
            SqlDataReader rdr = cmd.ExecuteReader();
            grdstudent.DataSource = rdr;
            grdstudent.DataBind();
            con.Close();
        }
    }
}
```



**Output:**

ABC

search	<input type="text"/>	ABC	Set Header
--------	----------------------	-----	------------

Footer

Header

search

A

pkstudent	fname	lname	gender	subject	imgStudent
22	ABC	AAA	f	s1	IMG-20170326-WA0009.jpg

Footer

## Practical-9

### Aim:

Create Web Service of calculator and consume it.

### WebService1.asmx.cs:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Services;

namespace Service
{
    [WebService(Namespace = "http://tempuri.org/")]
    [WebServiceBinding(ConformsTo = WsiProfiles.BasicProfile1_1)]
    [System.ComponentModel.ToolboxItem(false)]

    public class WebService1 :
        System.Web.Services.WebService {

        [WebMethod]
        public string HelloWorld()
        {
            return "Hello World";
        }
        [WebMethod]
        public int Add(int a, int b)
        {
            return a + b;
        }
        [WebMethod]
        public int Sub(int a, int b)
        {
            return a - b;
        }
        [WebMethod]
        public int Mul(int a, int b)
        {
            return a * b;
        }
        [WebMethod]
        public int Div(int a, int b)
        {
            return a / b;
        }
    }
}
```

**WebForm1.aspx:**

```

<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebService.WebForm1" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>

            <asp:TextBox ID="txtA" runat="server"></asp:TextBox>
            <asp:RequiredFieldValidator ID="RequiredFieldValidator1" runat="server"
                ControlToValidate="txtA" ErrorMessage="RequiredFieldValidator"></asp:RequiredFieldValidator>
            <asp:RegularExpressionValidator ID="RegularExpressionValidator2" runat="server"
                ControlToValidate="txtA" ErrorMessage="RegularExpressionValidator"
                ValidationExpression="^[0-9]+$"></asp:RegularExpressionValidator>
            <br />
            <asp:TextBox ID="txtB" runat="server"></asp:TextBox>
            <asp:RequiredFieldValidator ID="RequiredFieldValidator2" runat="server"
                ControlToValidate="txtB" ErrorMessage="RequiredFieldValidator"></asp:RequiredFieldValidator>
            <asp:RegularExpressionValidator ID="RegularExpressionValidator1" runat="server"
                ControlToValidate="txtB" ErrorMessage="RegularExpressionValidator"
                ValidationExpression="^[0-9]+$"></asp:RegularExpressionValidator>
            <br />
            <asp:Button ID="btnadd" runat="server" onclick="btnadd_Click" Text="Add" />
            <asp:Button ID="btnsub" runat="server" onclick="btnsub_Click" Text="Sub" />
            <asp:Button ID="btnmul" runat="server" onclick="btnmul_Click" Text="Mul"
            /> <asp:Button ID="btndiv" runat="server" onclick="btndiv_Click" Text="Div"
            /> <br />
            <asp:Label ID="lblresult" runat="server" Text="Result"></asp:Label>

        </div>
    </form>
</body>
</html>

```

**WebForm1.aspx.cs:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace WebService
{
    public partial class WebForm1 :
        System.Web.UI.Page {
        localhost.WebService1 calc = new localhost.WebService1();

        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void btnadd_Click(object sender, EventArgs e)
        {
            lblresult.Text = calc.Add(Convert.ToInt16(txtA.Text),
                Convert.ToInt16(txtB.Text)).ToString();
        }

        protected void btnsub_Click(object sender, EventArgs e)
        {
            lblresult.Text = calc.Sub(Convert.ToInt16(txtA.Text),
                Convert.ToInt16(txtB.Text)).ToString();
        }

        protected void btnmul_Click(object sender, EventArgs e)
        {
            lblresult.Text = calc.Mul(Convert.ToInt16(txtA.Text),
                Convert.ToInt16(txtB.Text)).ToString();
        }

        protected void btndiv_Click(object sender, EventArgs e)
        {
            lblresult.Text = calc.Div(Convert.ToInt16(txtA.Text),
                Convert.ToInt16(txtB.Text)).ToString();
        }
    }
}
```

**Output:**

1			
3			
Add	Sub	Mul	Div

4