



LAB MANUAL

.NET TECHNOLOGY

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VVPEC CE SEM-6

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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 \n{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\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:

mishil

The string had at least 5 but less than 10 characters

The string was mishil

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\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\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\VS\p2\p2>Read.exe
Enter your name:
mishil
Enter your City:
rajkot
Hello mishil 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\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 metric 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\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("Mishil");
            Student s2 = new Student("Mishil", "160470107004");
            Student s3 = new Student("Mishil", "160470107004", "Computer");
        }
    }
}
```

Output:

```
E:\Sem-6\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\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\VS\p2\p2\f1.txt";
            string f2 = @"E:\Sem-6\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\VS");
            foreach (string dir in Directories)
                Console.WriteLine(dir);
            string[] files = Directory.GetFiles(@"E:\Sem-6\VS");
            foreach (string file in files)
                Console.WriteLine(file);

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

Output:

E:\Sem-6\VS\p2\p2>P4.3.exe

E:\Sem-6\VS\P1-master
E:\Sem-6\VS\p2
E:\Sem-6\VS\Assignment.docx
E:\Sem-6\VS\C# word.txt
E:\Sem-6\VS\Doc1.docx
E:\Sem-6\VS\P1-master.zip
E:\Sem-6\VS\p1.cs
E:\Sem-6\VS\p1.exe
E:\Sem-6\VS\VS.docx
E:\Sem-6\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=Mishil-Patel\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 shows a Windows Form application with a light gray background. On the left side, there are four labels with corresponding input fields: 'First Name' with a text box containing 'Mishil', 'Last Name' with a text box containing 'Patel', 'Gender' with radio buttons for 'Male' (selected) and 'Female', and 'subject' with two checked checkboxes labeled 's1' and 's2'. Below these fields are two buttons: 'Save' (highlighted with a blue border) and 'Upload'. On the right side, there is a placeholder for a profile picture, showing a blurred image of a person's face, and an 'Upload' button below it.

[illegible]

```

        <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=Mishil-Patel\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

Footer

PRACTICAL-9

AIM:

Create Web Service for Calculator and consume it

WebService1.asmx.cs

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

namespace WebApplication1
{
    /// <summary>
    /// Summary description for WebService1
    /// </summary>
    [WebService(Namespace = "http://tempuri.org/")]
    [WebServiceBinding(ConformsTo = WsiProfiles.BasicProfile1_1)]
    [System.ComponentModel.ToolboxItem(false)]
    // To allow this Web Service to be called from script, using ASP.NET AJAX, uncomment
    the following line.
    // [System.Web.Script.Services.ScriptService]
    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.cs

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

namespace WebApplication8
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        localhost.WebService1 calc = new localhost.WebService1();

        protected void Page_Load(object sender, EventArgs e)
        {

        }

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

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

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

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

    }
}
```

WebForm1.aspx

```

<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication8.WebForm1" %>

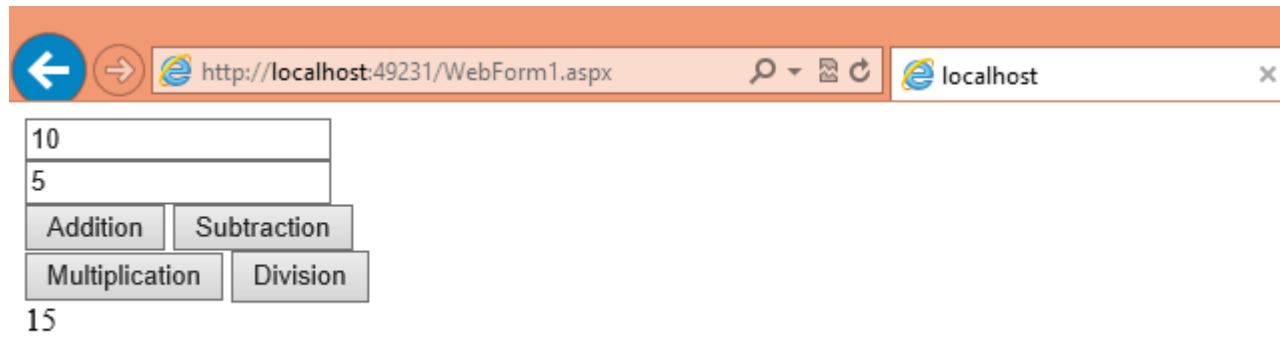
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <style type="text/css">
        #form1
        {
            height: 157px;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <asp:TextBox ID="txtA" runat="server"></asp:TextBox>
        <asp:RegularExpressionValidator ID="regEx" runat="server"
            ErrorMessage="RegularExpressionValidator" ControlToValidate="txtA"
            ValidationExpression="^[0-9]+$"></asp:RegularExpressionValidator>
        <asp:RequiredFieldValidator ID="rfv1" runat="server"
            ErrorMessage="RequiredFieldValidator"
            ControlToValidate="txtA"></asp:RequiredFieldValidator>
        <div>

            <asp:TextBox ID="txtB" runat="server"></asp:TextBox>
            <asp:RequiredFieldValidator ID="rfv2" runat="server"
                ErrorMessage="RequiredFieldValidator"
                ControlToValidate="txtB"></asp:RequiredFieldValidator>
            <br />
            <asp:Button ID="btnAdd" runat="server" onclick="btnAdd_Click" Text="Addition" />
            <asp:Button ID="btnSub" runat="server" onclick="btnSub_Click"
                Text="Subtraction" />
            <br />
            <asp:Button ID="btnMul" runat="server" Text="Multiplication"
                onclick="btnMul_Click" />
            <asp:Button ID="btnDiv" runat="server" Text="Division" onclick="btnDiv_Click"
                style="height: 26px" />
            <br />
            <asp:Label ID="lblRes" runat="server" Text="Result"></asp:Label>

        </div>
    </form>
    <p>
        &nbsp;   </p>
</body>
</html>

```

OUTPUT

The screenshot shows a web browser window with the address bar displaying `http://localhost:49231/WebForm1.aspx`. The page content includes two input fields with the values 10 and 5, four buttons labeled Addition, Subtraction, Multiplication, and Division, and a result field displaying 15.

10	
5	
Addition	Subtraction
Multiplication	Division
15	

