Lab Manual

.NET Technology

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Contents

Practical-1

Aim:

Introduction to c#

Variables:
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```
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;
```

```csharp
 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.Write("{0} {1}\n", j, P1.j);
}
Console.WriteLine("2:");
for (int k = 0; k < 3; k++)
{
    Console.Write("{0} ", k);
}
Console.Write("\n");
Console.Write(k);

for (int k = 3; k > 0; k--)
{
    Console.Write("{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.Write("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"); //Notofication 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;
```

```csharp
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:
111.22233344455566677788899

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:
darsht
The string had at least 5 but less than 10 characters
The string was darsht

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.

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

```csharp
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

```csharp
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:
Tavan
Enter your City:
Rajkot
Hello Tavan 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.

```csharp
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 matrics:");
        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

```csharp
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("Tavan");
            Student s2 = new Student("Tavan ","160470107007");
            Student s3 = new Student("Tavan ","160470107007","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 fromclass of running program.(Use Class from previous practical)

```csharp
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.

```csharp
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.

```csharp
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:

```csharp
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) {
s                   subject = subject + " s2";
            }


            string source = @"Data Source=Tavan\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 ('jhgjh')";
        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:

Practical-7

Aim:

ASP.NET Validation Control

Program: ASP.NET Validation Control
        RequiredFieldValidator
        CompareValidator
        RegularExpressionValidator
        CustomValidator
        RangeValidator
        ValidationSummary

```
<%@ Page Title="Home Page" Language="C#"  AutoEventWireup="true"
    CodeBehind="Default.aspx.cs" Inherits="WebApplication2._Default" %>
<form id="form1" runat="server">
    <div>
        <table>
            <tr>
                <td>
                    <asp:Label runat="server" Text="Name"></asp:Label>

                           &nbsp
                 ;          

                    <asp:TextBox ID="txtname" runat="server" ></asp:TextBox>
                    <asp:RequiredFieldValidator ID="RequiredFieldValidator1"
                        runat="server"  ControlToValidate="txtname"
                        ErrorMessage="RequiredFieldValidator">
                    </asp:RequiredFieldValidator>
                    <br />
                </td>
            </tr>
            <tr>
                <td>
                    <asp:Label ID="Email" runat="server" Text="Email"></asp:Label>

                           &nbsp
                 ;          &
                 nbsp;

                    <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
             ;     

                <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>

                    

                <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
             ;          &nbs
             p;  

                <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:s ID="Button1" runat="server" Text="Save" />
            </td>
        </tr>
    </table>
  </div>

 </form>
```

Output:

Name		RequiredFieldValidator
Email	abcde	RegularExpressionValidator
Password	•••	
Confirm Password	•••	CompareValidator
Sem	9	RangeValidator

- RequiredFieldValidator
- RegularExpressionValidator
- CompareValidator
- RangeValidator

Save

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" />
                <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:

```csharp
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:

```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:

```csharp
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:

```csharp
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=Tavan\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:

Header

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

search

A

Footer

ABC

search

ABC   Set Header

Footer

Practical-9

Aim:

Introduction To Web Service

WebForm1.aspx:

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication1.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>

    </div>
    <asp:TextBox ID="txt1" runat="server" ontextchanged="txt1_TextChanged"></asp:TextBox>
    <asp:RegularExpressionValidator ID="RegularExpressionValidator2" runat="server"
        ControlToValidate="txt1" ErrorMessage="RegularExpressionValidator"
        ValidationExpression="[0-9]+"></asp:RegularExpressionValidator>
    <br />
    <asp:TextBox ID="txt2" runat="server"
ontextchanged="TextBox1_TextChanged"></asp:TextBox>
    <asp:RegularExpressionValidator ID="RegularExpressionValidator1" runat="server"
        ControlToValidate="txt2" ErrorMessage="RegularExpressionValidator"
        ValidationExpression="[0-9]+"></asp:RegularExpressionValidator>
    <br />
    <asp:Button ID="btnAdd" runat="server" onclick="btnAdd_Click"
        style="width: 24px" Text="+" />
    <asp:Button ID="btnSub" runat="server" onclick="btnSub_Click" Text="-" />
    <asp:Button ID="btnMul" runat="server" onclick="btnMul_Click"
        style="width: 21px" Text="*" />
    <asp:Button ID="btnDiv" runat="server" onclick="btnDiv_Click" Text="/" />
    <p>
        <asp:Label ID="lblResult" runat="server" Text="Label"></asp:Label>
    </p>
    </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 WebApplication1
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        WebApplication1.Calc.WebService1 calc = new WebApplication1.Calc.WebService1();
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void TextBox1_TextChanged(object sender, EventArgs e)
        {

        }

        protected void btnAdd_Click(object sender, EventArgs e)
        {

            lblResult.Text=calc.Add(Convert.ToInt16(txt1.Text),Convert.ToInt16(txt2.Text
            )).ToString();

        }

        protected void btnSub_Click(object sender, EventArgs e)
        {

            lblResult.Text=calc.Sub(Convert.ToInt16(txt1.Text),Convert.ToInt16(txt2.Text
            )).ToString();
        }

        protected void btnMul_Click(object sender, EventArgs e)
        {

            lblResult.Text=calc.Mul(Convert.ToInt16(txt1.Text),Convert.ToInt16(txt2.Text
            )).ToString();
        }

        protected void btnDiv_Click(object sender, EventArgs e)
        {

            lblResult.Text=calc.Div(Convert.ToInt16(txt1.Text),Convert.ToInt16(txt2.Text
            )).ToString();
        }

        protected void txt1_TextChanged(object sender, EventArgs e)
        {
```

```
        }
    }
}
```

WebService1.asmx.cs:

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

namespace WebApplication2
{

    [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 float Div(int a, int b)
        {
            return a / b;
        }
    }
}
```

Output: