



.NET PRACTICAL

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

namespace aim
{
    class Program
    {
        static int newint=100;
        public enum TimeOfDay
        {
            Morning = 0,
            Afternoon = 1,
            Evening = 2
        }
    }
}
```

```
    }  
    public static void Main(string[] args)  
    {  
        Console.WriteLine("\n integer types");  
  
        sbyte sb = 10;  
        short s = 33;  
        int i = 10;  
        long l = 33L;  
        byte b = 22;  
        ushort us = 33;  
        uint ul = 33u;  
        ulong ulo = 33ul;  
  
        Console.WriteLine("{0},{1},{2},{3},{4},{5},{6},{7}", sb, s, i, l, b,  
us, ul, ulo);  
  
        float f = 1.122345656767f;  
        double d = 12.1234455657878797;  
  
        Console.Write("\nFloat and Double:\n");  
        Console.WriteLine("{0} and {1}", f, d);  
  
        decimal dec=111.666666666666666666666666M;  
        Console.WriteLine("decimal:\n{0} ",dec);  
        Console.WriteLine("\nBoolean:");  
  
        bool boolean =true;  
        Console.WriteLine("Status: " + boolean);  
  
        // Console.ReadLine();  
  
        char character ='d';  
        Console.WriteLine(character);  
        character = '\0';  
        Console.WriteLine("Now null: " + character);  
  
        object o1 = "Hi, I am ALICE";  
        object o2 = 15.3454365;  
        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 s1, s2;  
s1 = "this is string";  
s2 = s1;  
Console.WriteLine("S1 is: {0} and s2 is {1}", s1, s2);  
s2 = "other string";  
Console.WriteLine("S1 is: {0} and s2 is {1}", s1, s2);  
s1 = "c:C:\\Users\\Dell\\source\\repos\\aim";  
Console.WriteLine(s1);  
s1 = @"c:C:\Users\Dell\source\repos\aim\aim";  
Console.WriteLine(s1);  
s1 = @"We can also write  
like this";  
Console.WriteLine(s1);  
bool isZero;  
Console.WriteLine("\nFlow Control: (if)\ni is " + i);  
if (i == 10)  
{  
    isZero = true;  
    Console.WriteLine("i is Zero {0}",isZero);  
}  
else  
{  
    isZero = false;  
    Console.WriteLine("i is Non - zero");  
}  
int integerA = 1;  
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;}
    WriteGreeting(TimeOfDay.Morning);
    Console.WriteLine("Argument is: {0}",args[1]);

    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;
        }
    }

    Console.WriteLine("Scope of Variables.\n1:");
    int newint=0;
    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", newint, Program.newint);
    }

        Console.WriteLine("2:");
for (int k = 0; k < 3; k++)
{
    Console.WriteLine("{0} ", k);
} //Scope of k ends here
Console.WriteLine("\n");
//Console.WriteLine(k);
//uncomment above line to see error "The name 'k' does not exist in
the current context"
for (int k = 3; k > 0; k--)
{
    Console.WriteLine("{0} ", k);
} //scope of k ends here again

Console.WriteLine("Constants");

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

//uncomment above line to see error "The left-hand side of an
assignment must be a variable, property or indexer"

//const only allow constant variables into the expression
const int valConst2 = valConst + 9 /* + j*/;

//remove comments from the above line to see error "The expression
being assigned to 'valConst2' must be constant"

        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);
        //If a variable is a reference, it is possible to indicate that it
        does not refer to any object by setting its value to null:
        y = null;
        //Console.Write("Value for y is: " + y.value);

        //uncomment above line to see runtime exception
        "System.NullReferenceException: Object reference not set to an instance of an
        object."
//CTS          }
                public class Vector
                {
                    public int value;
                }
    }
}
```


PRACTICAL:2

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;
```

```
using System.Threading.Tasks;
```

```
namespace practical2
```

```
{
```

```
    class Program
```

```
    {
```

```
        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();
```

```
        }
```

```
    }
```

```
}
```

***Program 2***

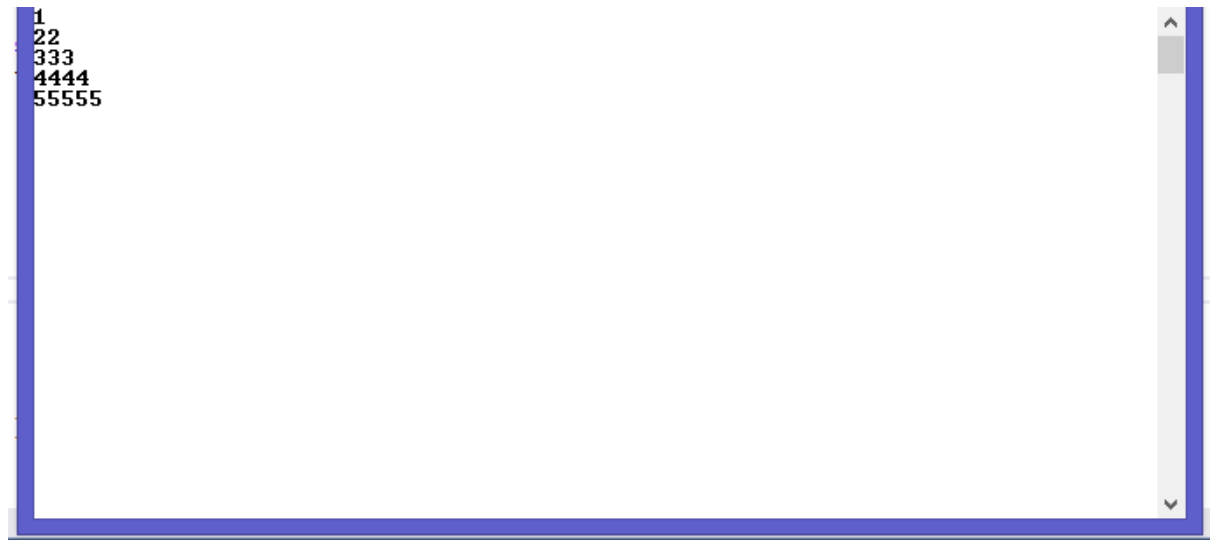
Write console based program in code behind language VB or C# to print following pattern.

```
1
1 2
1 2 3
1 2 3 4
```

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

namespace practical2._1
{
    class Program
    {
        static void Main(string[] args)
        {
            for(int i=1;i<=5;i++)
```

```
        {  
            for(int j=i;j>0;j--)  
            {  
                Console.Write("{0}",i);  
            }  
            Console.WriteLine("");  
        }  
        Console.ReadKey();  
    }  
}
```

A screenshot of a console window with a blue border. The output shows a pattern of numbers: the first line has '1', the second has '22', the third has '333', the fourth has '4444', and the fifth has '55555'. The numbers are left-aligned. The console window has a vertical scrollbar on the right side.

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;  
using System.Threading.Tasks;  
namespace practical2._2  
{
```

```
class Program
{
    static void Main(string[] args)
    {
        string name;
        string country;
        Console.WriteLine("enter your name:");
        name=Console.ReadLine();
        Console.WriteLine("enter your country:");
        country = Console.ReadLine();
        Console.WriteLine("hello {0} from country {1}",name,country);
        Console.ReadKey();
    }
}
```



```
C:\Users\Dell\source\repos\practical2.2\practical2.2\bin\Debug\practical2.2.exe
enter your name:
alice
enter your country:
usa
hello alice from country usa
```

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;
using System.Threading.Tasks;
namespace practical2._3
{
    class car
    {
        public void Method1()
        {
            Console.WriteLine("this is the method of car class");
        }
    }
    class maruti:car
    {
        public void method2()
        {
            Console.WriteLine("this is the method of maruti");
            Console.ReadKey();
        }
    }
    class mahindra:car
    {
        public void method3()
        {
```

```
        Console.WriteLine("this is the method of mahindra");
    }
}
class Program
{
    static void Main(string[] args)
    {
        mahindra m = new mahindra();
        maruti m1 = new maruti();
        m.Method1();
        m1.Method1();
        Console.ReadKey();
    }
}
```



```
this is the method of car class
this is the method of maruti
this is the method of car class
this is the method of mahindra
```

PRACTICAL:3

AIM: Method & constructor 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;
using System.Threading.Tasks;
namespace p3
{
    public class Add
    {
        public void add()
        {
            int[,] m1 = new int[50, 50];
            int[,] m2 = new int[50, 50];
            int[,] m3 = new int[50, 50];
            Console.WriteLine("enter size of array:");
            int size = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("enter first array:");
            for (int i = 0; i < size; i++)
            {
                for (int j = 0; j < size; j++)
                {
                    m1[i, j] = Convert.ToInt32(Console.ReadLine());
                }
            }
            Console.WriteLine("enter second array:");
            for (int i = 0; i < size; i++)
            {
                for (int j = 0; j < size; j++)
```



```
        {
            m2[i, j] = Convert.ToInt32(Console.ReadLine());
        }
    }

    for (int i = 0; i < size; i++)
    {
        for (int j = 0; j < size; j++)
        {
            m3[i, j] = m1[i, j] + m2[i, j];
        }
    }

    Console.WriteLine("addition array:");
    for (int i = 0; i < size; i++)
    {
        Console.WriteLine("\n");
        for (int j = 0; j < size; j++)
        {
            Console.WriteLine("{0}\t", m3[i, j]);
        }
        Console.WriteLine("\n");
    }
}

public int add(int a, int b)
{
    return (a + b);
}

}

public class Vector
{
    public void add()
    {
        Console.WriteLine("enter first vector");
        int x = Convert.ToInt32(Console.ReadLine());
```

```
        int y = Convert.ToInt32(Console.ReadLine());
        int z = Convert.ToInt32(Console.ReadLine());
        Console.WriteLine("enter second vector");
        int x1 = Convert.ToInt32(Console.ReadLine());
        int y1 = Convert.ToInt32(Console.ReadLine());
        int z1 = Convert.ToInt32(Console.ReadLine());
        int x2 = x + x1;
        int y2 = y + y1;
        int z2 = z + z1;
        Console.WriteLine("<" + x2 + ", " + y2 + ", " + z2 + ">");

    }
}

class Program
{
    static void Main(string[] args)
    {

        Add a1 = new Add();
        Vector v1 = new Vector();
        v1.add();
        a1.add();
        int res=a1.add(1, 2);
        Console.Write("method overloading for addtion{0}",res);
        Console.ReadLine();

    }
}
}
```

```

enter first vector
1
2
3
enter second vector
1
2
3
<2,4,6>
enter size of array:
2
enter first array:
1
2
3
4
enter second array:
1
2
3
4
addition array:
2      4
6      8
method overloading for addition3

```

Program 2

Write a c# program that create student object. Overload constror 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;
using System.Threading.Tasks;
using System.Reflection;
namespace p3a1
{
    class Program
    {
        public int ID { get; set; }
    }
}

```

```
public string Name { get; set; }
String name, branch;
int enrol;
public Program(String name)
{
    this.name = name;
    Console.WriteLine("constructor 1:" + name);
}
public Program(String name, int enrol)
{
    this.name = name;
    this.enrol = enrol;
    Console.WriteLine("constructor 2:" + name + " " + enrol);
}
public Program(String name, int enrol, String branch)
{
    this.name = name;
    this.enrol = enrol;
    this.branch = branch;
    Console.WriteLine("constructor 3:" + name + " " + enrol + " " +
branch);
}
static void Main(string[] args)
{
Program p1 = new Program("bob");
    Program p2 = new Program("bob", 1);
    Program p3 = new Program("bob", 1, "computer");
    Console.ReadLine();
}
}
```

```
constructor 1:bob  
constructor 2:bob 1  
constructor 3:bob 1 computer  
-
```

PRACTICAL:4

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

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

namespace p2
{
    class P4
    {
        public static void Main() {
            Type T = Type.GetType("p2.Example");
            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 Example {
    public string name { get; set; }
    public int enrollment { get; set; }
    public string branch { get; set; }

    public Example() { }
    public Example(int enrollment, string name) {
        this.enrollment = enrollment;
        this.name = name;
    }
    public Example(int enrollment, string name, string branch)
    {
        this.enrollment = enrollment;
        this.name = name;
        this.branch = branch;
    }
    public void displayName() {
        Console.WriteLine("Name={0}", this.name);
    }
    public void displayEnroll() {
        Console.WriteLine("Enrollment={0}", this.enrollment);
    }
    public void displayBranch()
    {
        Console.WriteLine("Branch={0}", this.branch);
    }
}
}
}

```

OUTPUT:

```

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());
        }
    }
}
```

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);

        }
    }
}
```

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(fil
                    e);

            Console.ReadKey();

        }
    }
}
```



```
Directories are:
F:\16ce012\P2
F:\16ce012\P3
F:\16ce012\P4
F:\16ce012\Practical4
F:\16ce012\Practical5
File are:
F:\16ce012\a.txt.txt
F:\16ce012\b.txt.txt
F:\16ce012\P1.cs
F:\16ce012\P1.exe
F:\16ce012\Practical4\Practical4>
```

PRACTICAL:6

Program 1:

Create Windows Form Application for Student Registration and store student Details in DataBase.

```
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 ('jhghh')";
        SqlConnection conn = new SqlConnection(source);

        SqlCommand cmd = new SqlCommand(insert,conn);
        conn.Open();
        int i = cmd.ExecuteNonQuery();
        conn.Close();

    }

    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 application window with a light gray background. On the left side, there are four labeled input fields: 'First Name' containing 'ABC', 'Last Name' containing 'AAA', 'Gender' with radio buttons for 'Male' and 'Female' (where 'Female' is selected), and 'subject' with checkboxes for 's1' (checked) and 's2'. Below these fields is a 'Save' button with a blue border. To the right of the input fields is a square placeholder for a profile picture, showing a blurry image of a person. Below the placeholder is an 'Upload' button.


```
        </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

Program 1:

Site1.Master:

```
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>

```

WebForm.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;
        }

    }
}

```

OUTPUT:

jkk

jkk Button

Footer

Program 2:

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:

Header

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

Footer

PRACTICAL:9

AIM: How to create Web Service and consume it.

Program:1

WebForm1.aspx:

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication6.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="TextBox1" runat="server"></asp:TextBox><br />

            <asp:RequiredFieldValidator ControlToValidate="TextBox1" ID="rfv1"
ErrorMessage="Please enter" runat="server"></asp:RequiredFieldValidator>

            <asp:RegularExpressionValidator runat="server" id="rexNumber"
controltovalidate="TextBox1" validationexpression="^[0-9]$" errormessage="Please
enter digit number!"></asp:RegularExpressionValidator>
<br /><br />
            <asp:TextBox ID="TextBox2" runat="server"></asp:TextBox><br />

            <asp:RegularExpressionValidator runat="server"
id="RegularExpressionValidator1" controltovalidate="TextBox2"
validationexpression="^[0-9]$" errormessage="Please enter digit
number!"></asp:RegularExpressionValidator>
<br /><br />

            <asp:RequiredFieldValidator ControlToValidate="TextBox2"
ID="RequiredFieldValidator1" runat="server" ErrorMessage="Please
enter"></asp:RequiredFieldValidator>

            <asp:Label ID="Label1" runat="server" Text="Result"></asp:Label><br />
            <asp:Button ID="Button1" runat="server" Text="+" onclick="Button1_Click"
Width="53px" />
            <asp:Button ID="Button2" runat="server" Text="-" onclick="Button2_Click"
Width="49px" />
            <asp:Button ID="Button3" runat="server" Text="/" onclick="Button3_Click"
Width="45px" />
            <asp:Button ID="Button4" runat="server" Text="*" onclick="Button4_Click"
Width="55px" />
        </div>
    </form>
</body>
</html>
```

WebForm.aspx.cs:

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

namespace WebApplication6
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        localhost.WebService1 calc = new localhost.WebService1();

        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void Button1_Click(object sender, EventArgs e)
        {

            Label1.Text = calc.Add(Convert.ToInt16(TextBox1.Text),
Convert.ToInt16(TextBox2.Text)).ToString();

        }

        protected void Button2_Click(object sender, EventArgs e)
        {

            Label1.Text = calc.Subtract(Convert.ToInt16(TextBox1.Text),
Convert.ToInt16(TextBox2.Text)).ToString();
        }

        protected void Button3_Click(object sender, EventArgs e)
        {

            Label1.Text = calc.Div(Convert.ToInt16(TextBox1.Text),
Convert.ToInt16(TextBox2.Text)).ToString();
        }

        protected void Button4_Click(object sender, EventArgs e)
        {
```

```
Label1.Text=calc.Multiply(Convert.ToInt16(TextBox1.Text),Convert.ToInt16(TextBox2.
Text)).ToString();
    }
}
}
```

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 Subtract(int a, int b)
        {
            return a - b;
        }
    }
}
```



```

        [WebMethod]
        public int Multiply(int a, int b)
        {
            return a * b;
        }

        [WebMethod]
        public int Div(int a, int b)
        {
            return a / b;
        }
    }
}

```

OUTPUT:

1
2
3

WebService1

Click [here](#) for a complete list of operations.

Add

Test

To test the operation using the HTTP POST protocol, click the 'Invoke' button.

Parameter	Value
a:	<input type="text" value="9"/>
b:	<input type="text" value="1"/>

SOAP 1.1

The following is a sample SOAP 1.1 request and response. The [placeholders](#) shown need to be replaced with actual values.

```

POST /WebService1.aspx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "http://tempuri.org/Add"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <Add xmlns="http://tempuri.org/">
      <i>9</i>
      <i>1</i>
    </Add>
  </soap:Body>
</soap:Envelope>

```

WebService1

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [Add](#)
- [Div](#)
- [HelloWorld](#)
- [Multiply](#)
- [Subtract](#)

This web service is using <http://tempuri.org/> as its default namespace.

Recommendation: Change the default namespace before the XML Web service is made public.

Each XML Web service needs a unique namespace in order for client applications to distinguish it from other services on the Web. <http://tempuri.org/> is available for XML Web services that are under development, but published XML Web services should use a more permanent namespace.

Your XML Web service should be identified by a namespace that you control. For example, you can use your company's Internet domain name as part of the namespace. Although many XML Web service namespaces look like URLs, they need not point to actual resources on the Web. (XML Web service namespaces are URIs.)

For XML Web services created using ASP.NET, the default namespace can be changed using the WebService attribute's Namespace property. The WebService attribute is an attribute applied to the class that contains the XML Web service methods. Below is a code example that sets the namespace to "http://microsoft.com/webservices/":

C#

```
[WebService(Namespace="http://microsoft.com/webservices/")]
public class MyWebService {
    // implementation
}
```

Visual Basic

```
<WebService(Namespace="http://microsoft.com/webservices/")> Public Class MyWebService
    ' implementation
End Class
```

C++

```
[WebService(Namespace="http://microsoft.com/webservices/")]
public ref class MyWebService {
    // implementation
};
```