Name: Jadhav Somnath Pandurang
Class: BCA – III Sem – V
Roll No: 86
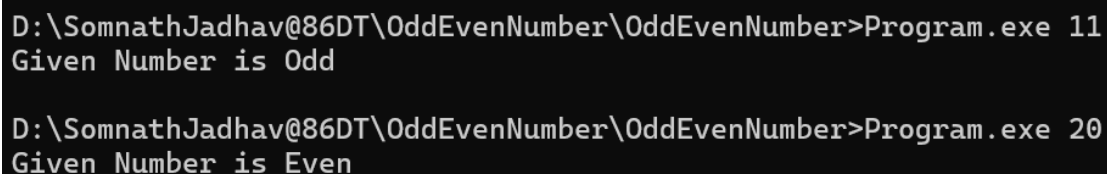
LAB EXERCISE 1

Ques . Write a program to display even no and odd no using C#.

<u>Code:</u>

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace OddEvenNumber
{
   class Program
{
      static void Main(string[] args)
      {
         int num = int.Parse(args[0]);
         if (num % 2 == 0)
         {
            Console.Write("Given Number is Even");
         }
         else
         {
            Console.Write("Given Number is Odd");
         }
         Console.Read();

      }
   }
}
```

<u>Output:</u>

```
D:\SomnathJadhav@86DT\OddEvenNumber\OddEvenNumber>Program.exe 11
Given Number is Odd

D:\SomnathJadhav@86DT\OddEvenNumber\OddEvenNumber>Program.exe 20
Given Number is Even
```

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LAB EXERCISE 2

Ques . Write a program to demonstrate parameter passing mechanism and out parameter.

Code:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace ParameterPassing
{
    class Program
    {
        void SwapByValue(int x, int y)
        {
            int temp = x;
            x = y;
            y = temp;
        }

        void SwapByReference(ref int x, ref int y)
        {
            int temp = x;
            x = y;
            y = temp;
        }

        void AreaOfRectangle(out int length, out int width, out int area)
        {
            length = 10;
            width = 5;
            area = length * width;
        }

        static void Main(string[] args)
        {
            Program obj = new Program();

            int a = 10, b = 20;
            Console.WriteLine("Before Swapping: A = " + a + "  B = " + b);
```
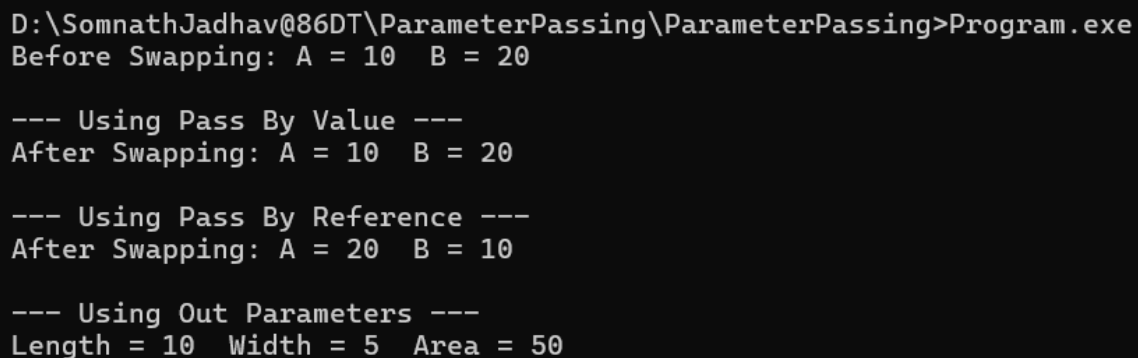
```
        obj.SwapByValue(a, b);
        Console.WriteLine("\n--- Using Pass By Value ---");
        Console.WriteLine("After Swapping: A = " + a + "  B = " + b);

        obj.SwapByReference(ref a, ref b);
        Console.WriteLine("\n--- Using Pass By Reference ---");
        Console.WriteLine("After Swapping: A = " + a + "  B = " + b);

        int len, wid, area;
        obj.AreaOfRectangle(out len, out wid, out area);
        Console.WriteLine("\n--- Using Out Parameters ---");
        Console.WriteLine("Length = " + len + "  Width = " + wid + "  Area = " + area);

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

Output:

```
D:\SomnathJadhav@86DT\ParameterPassing\ParameterPassing>Program.exe
Before Swapping: A = 10  B = 20

--- Using Pass By Value ---
After Swapping: A = 10  B = 20

--- Using Pass By Reference ---
After Swapping: A = 20  B = 10

--- Using Out Parameters ---
Length = 10  Width = 5  Area = 50
```

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LAB EXERCISE 3

Ques . Write a program to demonstrate type casting.

Code:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace TypeCasting
{
    class Program
    {
        static void Main(string[] args)
        {
            int num1 = 100;
            double num2 = num1;

            Console.WriteLine("Type Casting Demonstration** \n");

            Console.WriteLine("Implicit Casting");
            Console.WriteLine("Integer value : " + num1);
            Console.WriteLine(" int --> double: " + num2);
            Console.WriteLine();

            double num3 = 320.98;
            int num4 = (int)num3;

            Console.WriteLine("Explicit Casting");
            Console.WriteLine("Double value : " + num3);
            Console.WriteLine("double --> int: " + num4);
            Console.WriteLine();

            string str = "1234";
            int str1 = int.Parse(str);

            Console.WriteLine("String value      : " + str);
```
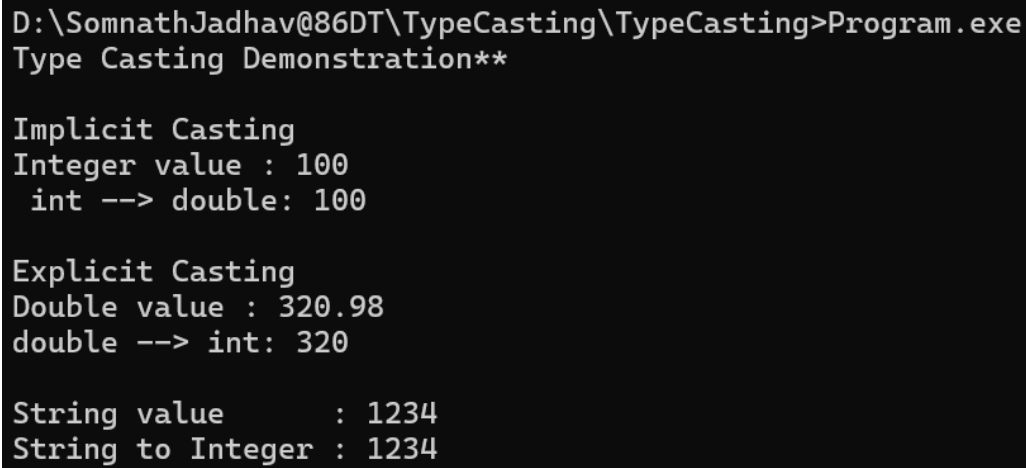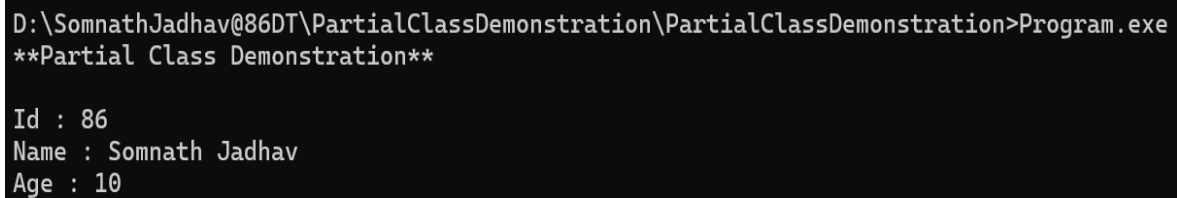
```
        Console.WriteLine("String to Integer : " + str1);
        Console.Read();
    }
  }
}
```

Output:

```
D:\SomnathJadhav@86DT\TypeCasting\TypeCasting>Program.exe
Type Casting Demonstration**

Implicit Casting
Integer value : 100
 int --> double: 100

Explicit Casting
Double value : 320.98
double --> int: 320

String value      : 1234
String to Integer : 1234
```

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LAB EXERCISE 4

Ques . Write a program to demonstrate partial class.

Code:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace PartialClassDemonstration
{
    partial class Student
    {
        int id;
        string name;
        public void setData(int id, string name)
        {
            this.id = id;
            this.name = name;
        }
    }

    partial class Student
    {
        int age;
        public Student()
        {
            age = 10;
        }
        public void display()
        {
            Console.WriteLine("Id : " + id + "\nName : " + name + "\nAge : " + age);
        }
    }

    class Program
```

```
    {
       static void Main(string[] args)
       {
          Console.WriteLine("**Partial Class Demonstration**\n");
          Student s1 = new Student();
          s1.setData(86, "Somnath Jadhav");
          s1.display();
          Console.Read();
       }
    }
}
```

Output:

```
D:\SomnathJadhav@86DT\PartialClassDemonstration\PartialClassDemonstration>Program.exe
**Partial Class Demonstration**

Id : 86
Name : Somnath Jadhav
Age : 10
```

Name: Jadhav Somnath Pandurang
Class: BCA – III Sem – V
Roll No: 86

LAB EXERCISE 5

Ques . Create web page using server controls- Textbox, List Controls, Calender, Imagebutton, Linkbutton

Code:

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

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

    }
    protected void CheckBoxList1_SelectedIndexChanged(object sender, EventArgs e)
    {
        Label3.Text = "You selected: ";
        foreach (ListItem li in CheckBoxList1.Items)
        {
            if (li.Selected)
            {
                Label3.Text += " " + li;
            }

        }
    }
    protected void DropDownList1_SelectedIndexChanged(object sender, EventArgs e)
    {
        Label4.Text = "You selected: " + DropDownList1.SelectedItem.Text;
    }
    protected void ListBox1_SelectedIndexChanged(object sender, EventArgs e)
    {
        Label5.Text = "You selected: " + ListBox1.SelectedItem.Text;
    }
    protected void RadioButtonList1_SelectedIndexChanged(object sender, EventArgs e)
    {
        Label6.Text = "You selected: " + RadioButtonList1.SelectedItem.Text;
    }
```

```
protected void LinkButton1_Click(object sender, EventArgs e)
{

}
protected void TextBox1_TextChanged(object sender, EventArgs e)
{

}
protected void TextBox1_TextChanged1(object sender, EventArgs e)
{
    Label13.Text = "You Entered  : ";
    Label13.Text += TextBox1.Text;
}
protected void Calendar1_SelectionChanged(object sender, EventArgs e)
{
    Label14.Text = "Selected Date : ";
    Label14.Text += Calendar1.SelectedDate.ToLongDateString();
}
}
```
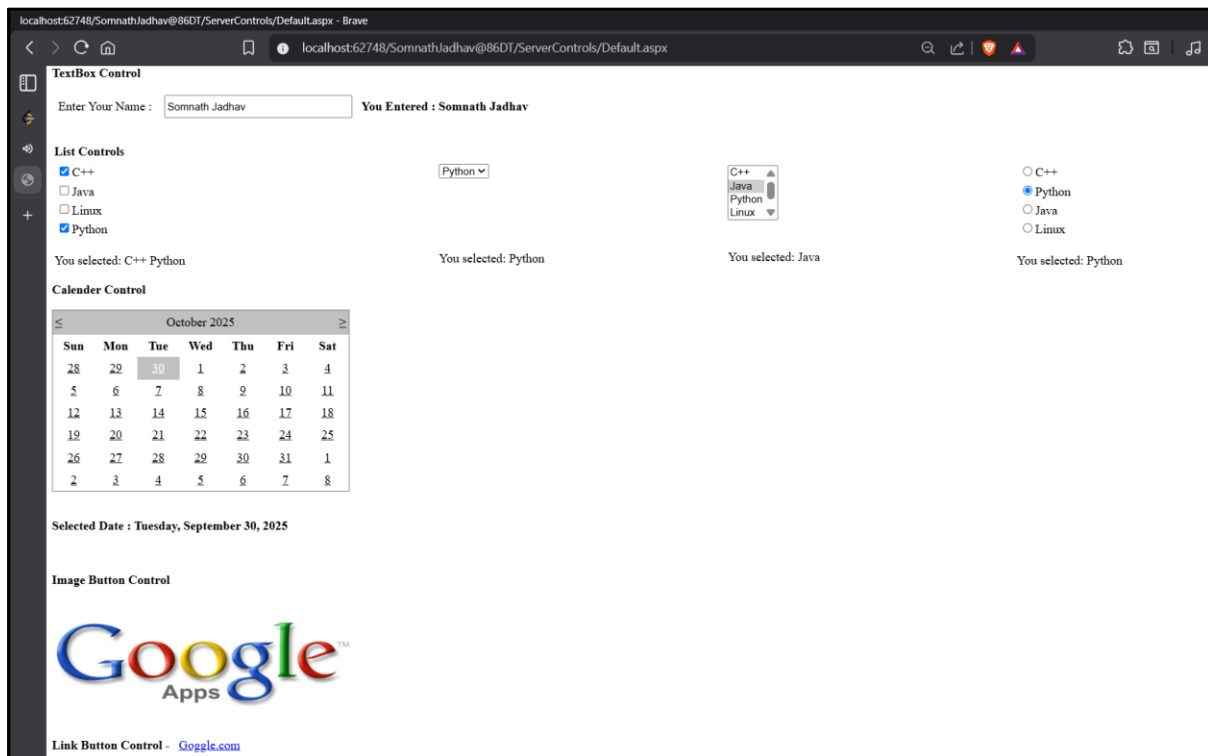
Output:

Name: Jadhav Somnath Pandurang
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LAB EXERCISE 6

Ques . Develop ASP.Net Application through which user upload Image and that Image should be displayed in Image Control.

Code:

```
using System;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

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

    protected void Button2_Click(object sender, EventArgs e)
    {
        if (FileUpload.HasFile)
        {
            string fp = FileUpload.FileName;

            string ext = System.IO.Path.GetExtension(fp).ToLower();


            if (ext == ".bmp" || ext == ".jpg" || ext == ".gif" || ext == ".png")
            {
                FileUpload.SaveAs(Server.MapPath("uploads//") + fp);

                Image1.ImageUrl += "~/ImageUpload/uploads/" + fp;
                Label1.Text = "Image uploded Successfully ";
            }
            else
            {
                Label1.Text = "Invalid File.";
            }
```

```
        }
    Console.Read();
    }
}
```

Output:

Before Upload -
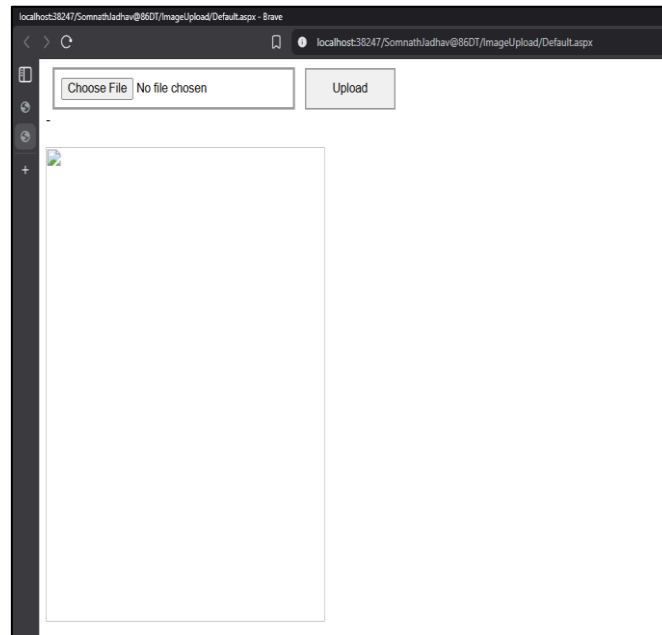
After Upload -
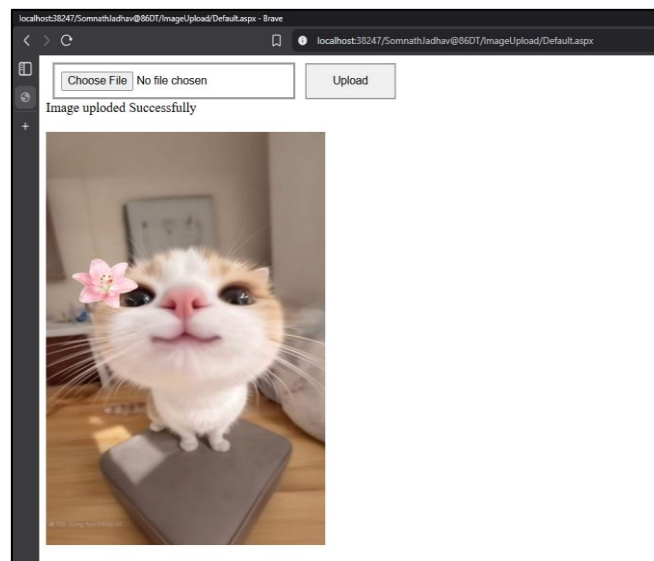
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LAB EXERCISE 7

Ques. Write a program to create a web page showing use of following validation controls - Required field validator, Range validator , Compare validator , Custom validator , Regular expression validator ,Validation summary

RequiredFieldValidator -
- Ensures the user does not leave the field empty.
- Makes a field mandatory.
- Main Properties: ControlToValidate, ErrorMessage

RangeValidator -
- Validates whether the input falls between a specified range.
- Used for checking age, marks, amount, etc.
- Main Properties: MinimumValue, MaximumValue, Type

CompareValidator -
- Compares the value of one control with another or a fixed value.
- Commonly used for confirming password or matching entries.
- Main Properties: ControlToValidate, ControlToCompare, Operator

CustomValidator -
- Allows writing custom server-side or client-side validation logic.
- Used when built-in validators are not sufficient.
- Main Properties: OnServerValidate, ClientValidationFunction
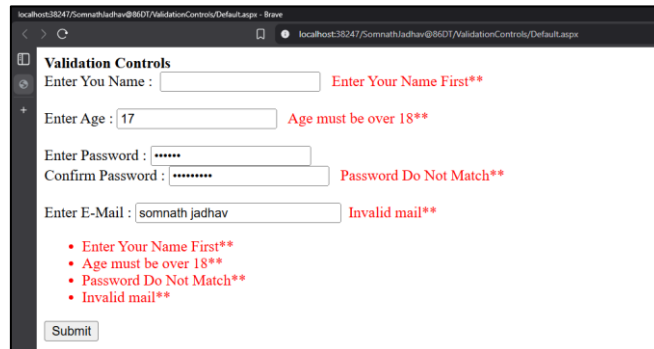
RegularExpressionValidator -
- Validates input based on a defined pattern using regex.
- Ideal for email, phone number, and PIN code validation.
- Main Property: ValidationExpression

ValidationSummary -
- Displays all validation error messages together in one place.
- Improves UI by summarizing errors in a popup or panel.
- Main Properties: ShowSummary, ShowMessageBox, DisplayMode

Output:

With Invalid Information –

With Valid Information –

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LAB EXERCISE 8

Ques . Write a program to create a web page passing multiple values between asp.net pages
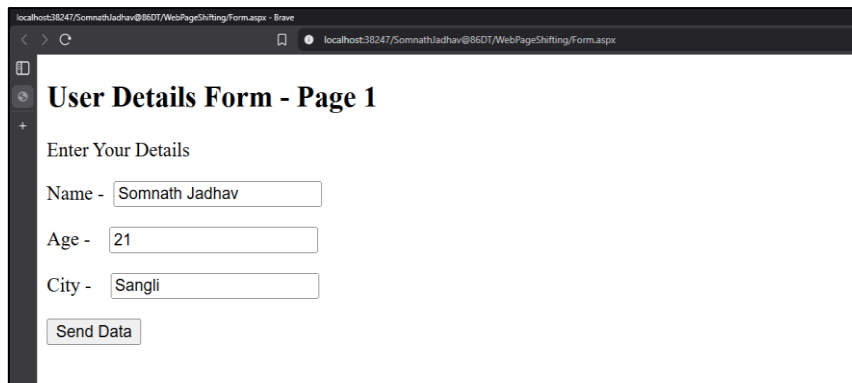
Code:

Form.aspx –
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

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

    }
    protected void Button2_Click(object sender, EventArgs e)
    {
        Session["Name"] = TextBox1.Text;
        Session["Age"] = TextBox2.Text;
        Session["City"] = TextBox3.Text;

        Response.Redirect("UserInfo.aspx");
    }
}
```

UserInfo.aspx –

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

```
public partial class Default2 : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        string name = Session["Name"].ToString() ;
        string age = Session["Age"].ToString();
        string city = Session["City"].ToString();
        Label1.Text = "Name: " + name + "<br/>" +
                "Age: " + age + "<br/>" +
                "City: " + city;
    }
}
```
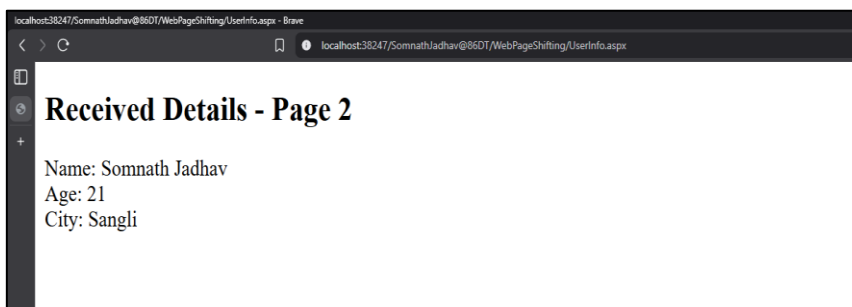
Output:

Page 1 – Form.aspx –

Page 2 – UserInfo.aspx –

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LAB EXERCISE 9

Ques. Write a program to create a web page showing use of response, redirect and server transfer

Code:

Page1.aspx –
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

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

   }
   protected void Button1_Click(object sender, EventArgs e)
   {
      Response.Redirect("Page2.aspx");
   }
   protected void Button2_Click(object sender, EventArgs e)
   {
      Server.Transfer("Page3.aspx");
   }
}
```

Page2.aspx –
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
```

```
public partial class Page2 : System.Web.UI.Page
{
   protected void Page_Load(object sender, EventArgs e)
   {

   }
   protected void Button1_Click(object sender, EventArgs e)
   {
      Server.Transfer("Page1.aspx");
   }
   protected void Button1_Click1(object sender, EventArgs e)
   {
      Server.Transfer("Page1.aspx");
   }
}
```
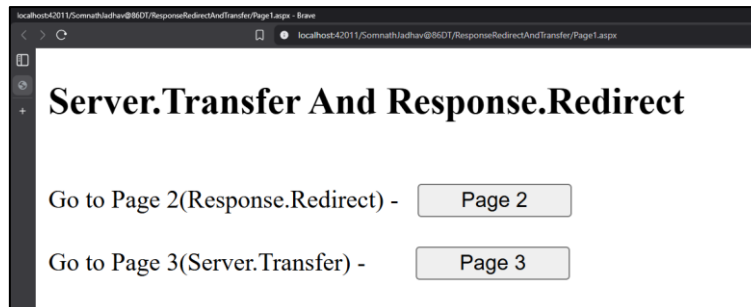
Page3.aspx –

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

public partial class Page3 : System.Web.UI.Page
{
   protected void Page_Load(object sender, EventArgs e)
   {

   }
   protected void Button1_Click(object sender, EventArgs e)
   {
      Server.Transfer("Page1.aspx");
   }
}
```
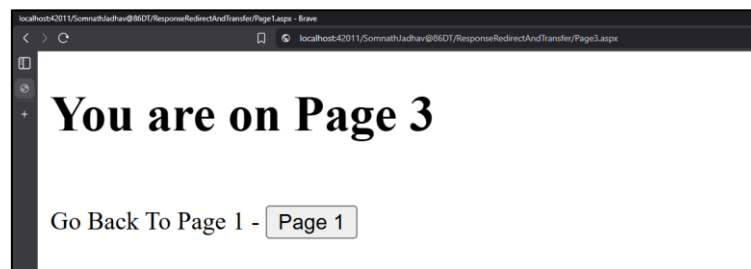
Output:

Page1.aspx –

Page2.aspx –

Page3.aspx –

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Roll No: 86

LAB EXERCISE 10

Ques. Write a program to display student records form database using Grid view

Code:

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

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

    }
    protected void Button1_Click(object sender, EventArgs e)
    {
        SqlConnection conn = new SqlConnection(@"Data
Source=(LocalDB)\v11.0;AttachDbFilename=D:\SomnathJadhav@86DT\App_Data\Databas
e.mdf;Integrated Security=True");
        SqlCommand cmd = new SqlCommand("SELECT * FROM STUDENTS WHERE
Name = @name", conn);

        cmd.Parameters.AddWithValue("@name", TextBox1.Text.Trim());
        conn.Open();
        SqlDataReader res = cmd.ExecuteReader();

        if (res.HasRows)
        {
            while (res.Read())
            {
                Label10.Text = res["Id"].ToString();
                Label11.Text = res["Name"].ToString();
```

```
            Label12.Text = res["Class"].ToString();
            Label13.Text = res["RollNo "].ToString();
            Label14.Text = res["DOB"].ToString();
            Label15.Text = res["PhoneNo"].ToString();
            Label16.Text = res["Email"].ToString();
            Label17.Text = "Record Found!";
        }
    }
    else
    {
      Label10.Text = "NULL";
      Label11.Text = "NULL";
      Label12.Text = "NULL";
      Label13.Text = "NULL";
      Label14.Text = "NULL";
      Label15.Text = "NULL";
      Label16.Text = "NULL";
      Label17.Text = "Record Not Found!";
    }
    conn.Close();
  }

}
```

Output:

Before Searching

After Searching

Name: Jadhav Somnath Pandurang
Class: BCA – III Sem – V
Roll No: 86

LAB EXERCISE 11

Ques. Using ADO.NET, create a student database and perform operations like- insert, update and delete records.

Code:

INSERT:

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

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

    }
    protected void Button1_Click(object sender, EventArgs e)
    {
        SqlConnection conn = new SqlConnection(@"Data
Source=(LocalDB)\v11.0;AttachDbFilename=D:\SomnathJadhav@86DT\App_Data\Databas
e.mdf;Integrated Security=True");
        SqlCommand cmd = new SqlCommand("INSERT INTO STUDENTS(Name, Class,
RollNo, DOB, PhoneNo, Email) VALUES (@name, @class, @rollno, @DOB, @phone,
@email)", conn);
        cmd.Parameters.AddWithValue("@name", TextBox1.Text);
        cmd.Parameters.AddWithValue("@class", TextBox7.Text);
        cmd.Parameters.AddWithValue("@rollno", TextBox8.Text);
        cmd.Parameters.AddWithValue("@DOB", TextBox9.Text);
        cmd.Parameters.AddWithValue("@phone", TextBox10.Text);
        cmd.Parameters.AddWithValue("@email", TextBox11.Text);
        conn.Open();
```
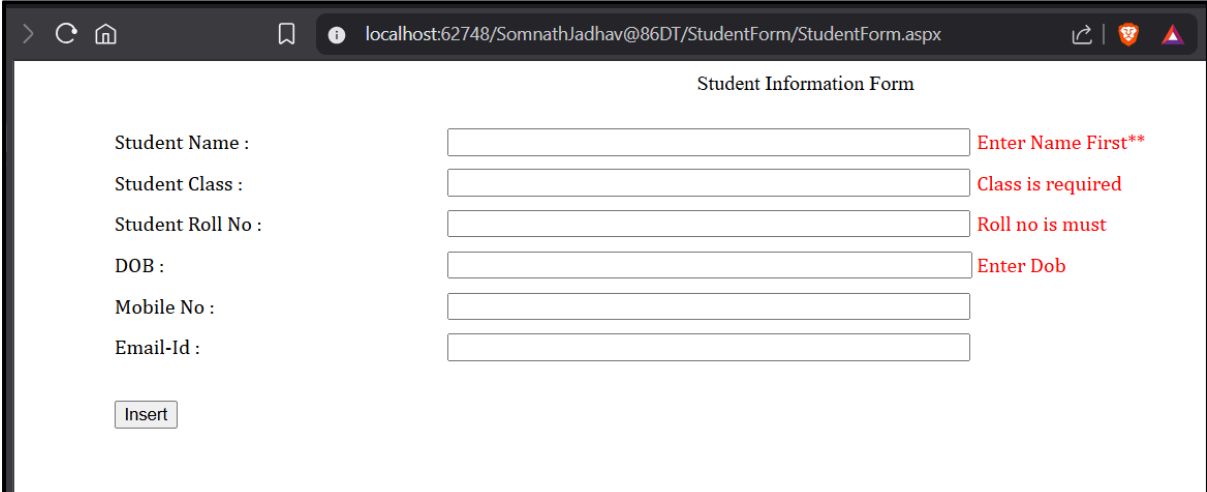
```
        int res = cmd.ExecuteNonQuery();
        conn.Close();
        if (res == 1)
        {
            Label8.Text = "Record Saved Successfully";
        }
        else
        {
            Label8.Text = "Error while inserting!";
        }

    }
}
```
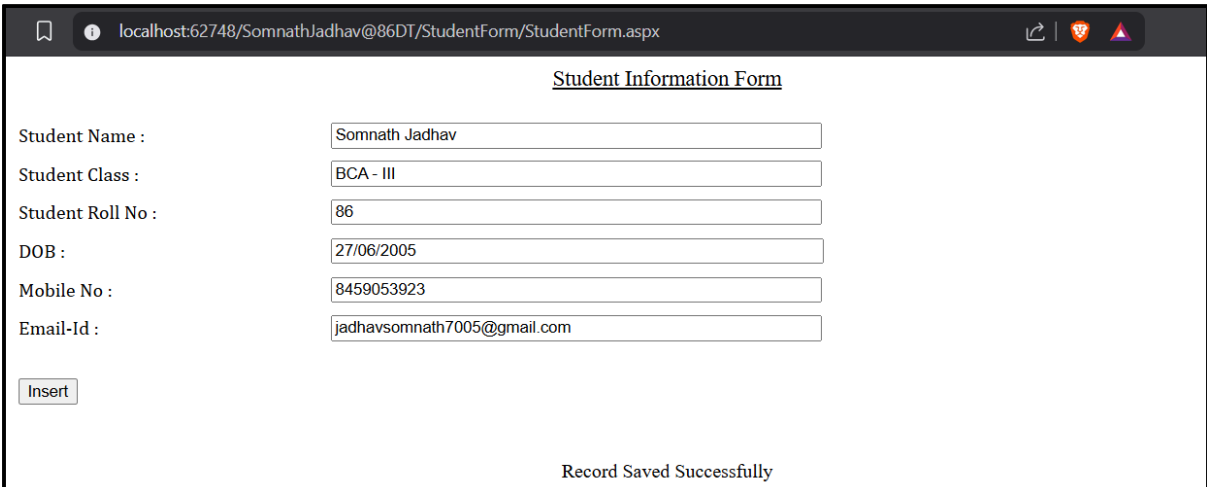
Insert Without Input:

Insert Data:

UPDATE:

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

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

    }
    protected void Button2_Click(object sender, EventArgs e)
    {
        SqlConnection conn = new SqlConnection(@"Data
Source=(LocalDB)\v11.0;AttachDbFilename=D:\SomnathJadhav@86DT\App_Data\Databas
e.mdf;Integrated Security=True");
        SqlCommand cmd = new SqlCommand("UPDATE STUDENTS SET Class = @class,
RollNo = @rollno, DOB = @DOB, PhoneNo = @phone, Email = @email WHERE Name =
@name", conn);

        cmd.Parameters.AddWithValue("@name", TextBox12.Text);
        cmd.Parameters.AddWithValue("@class", TextBox7.Text);
        cmd.Parameters.AddWithValue("@rollno", TextBox8.Text);
        cmd.Parameters.AddWithValue("@DOB", TextBox9.Text);
        cmd.Parameters.AddWithValue("@phone", TextBox10.Text);
        cmd.Parameters.AddWithValue("@email", TextBox11.Text);

        conn.Open();
        int res = cmd.ExecuteNonQuery();
        conn.Close();

        if (res == 1)
        {
            TextBox12.Text = "";
            TextBox7.Text = "";
            TextBox8.Text = "";
            TextBox9.Text = "";
```

```
      TextBox10.Text = "";
      TextBox11.Text = "";
      Label11.Text = "Record Updated Successfully";
    }
    else
    {
      Label11.Text = "Error while Updating!";
    }
  }


  protected void Button4_Click(object sender, EventArgs e)
  {
    SqlConnection conn = new SqlConnection(@"Data
Source=(LocalDB)\v11.0;AttachDbFilename=D:\SomnathJadhav@86DT\App_Data\Databas
e.mdf;Integrated Security=True");
    SqlCommand cmd = new SqlCommand("SELECT * FROM STUDENTS WHERE
Name = @name", conn);

    cmd.Parameters.AddWithValue("@name", TextBox12.Text.Trim());
    conn.Open();
    SqlDataReader res = cmd.ExecuteReader();

    if (res.Read())
    {
      TextBox12.Text = res["Name"].ToString();
      TextBox12.Enabled = true;
      TextBox7.Text = res["Class"].ToString();
      TextBox7.Enabled = true;
      TextBox8.Text = res["RollNo "].ToString();
      TextBox8.Enabled = true;
      TextBox9.Text = res["DOB"].ToString();
      TextBox9.Enabled = true;
      TextBox10.Text = res["PhoneNo"].ToString();
      TextBox10.Enabled = true;
      TextBox11.Text = res["Email"].ToString();
      TextBox11.Enabled = true;
    }
    else
    {
      TextBox12.Text = "";
      TextBox7.Text = "";
      TextBox8.Text = "";
      TextBox9.Text = "";
```
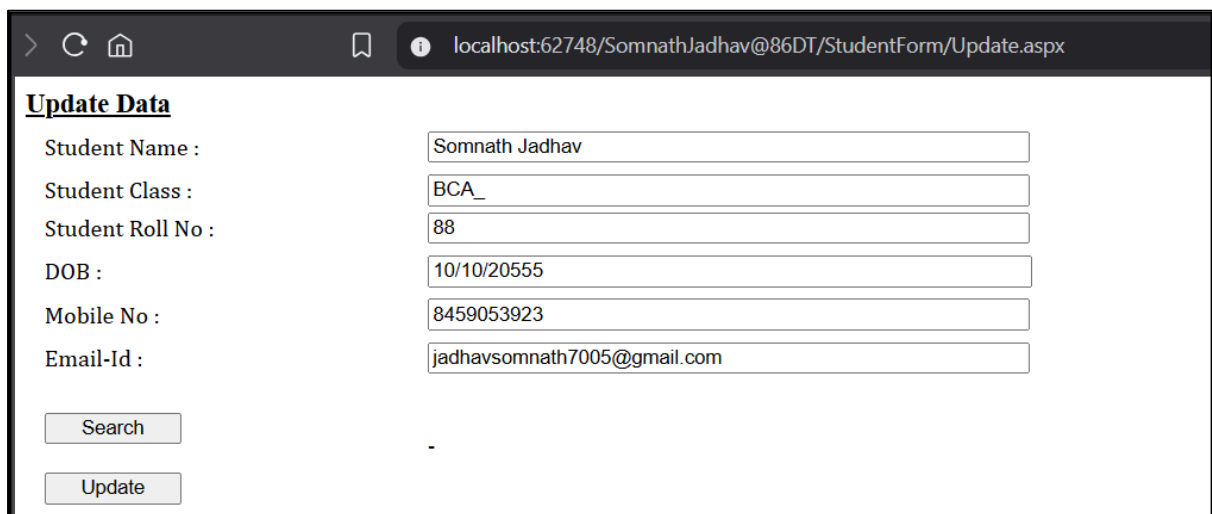
```
        TextBox10.Text = "";
        TextBox11.Text = "";
    }

    conn.Close();
  }

}
```
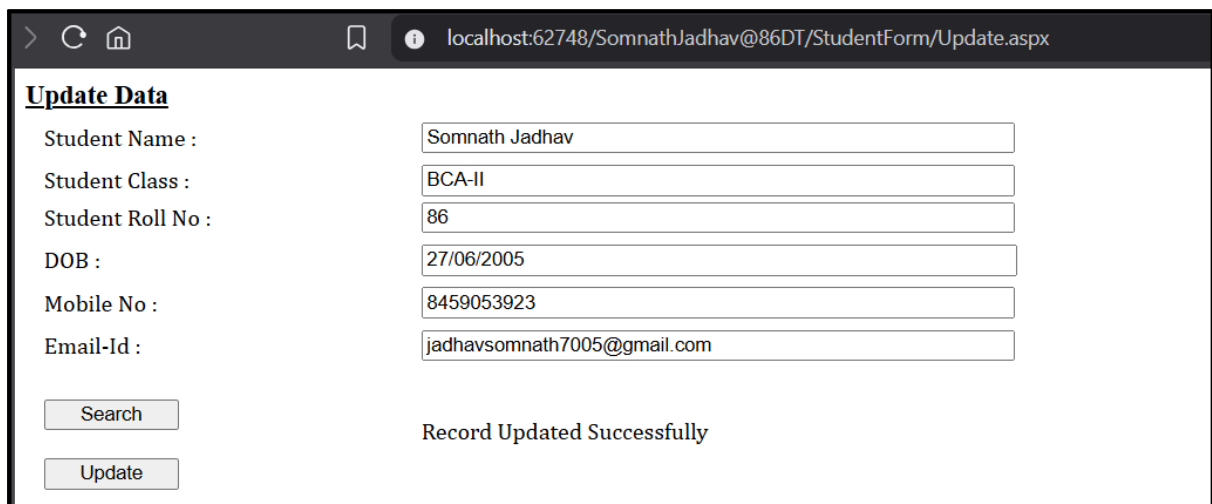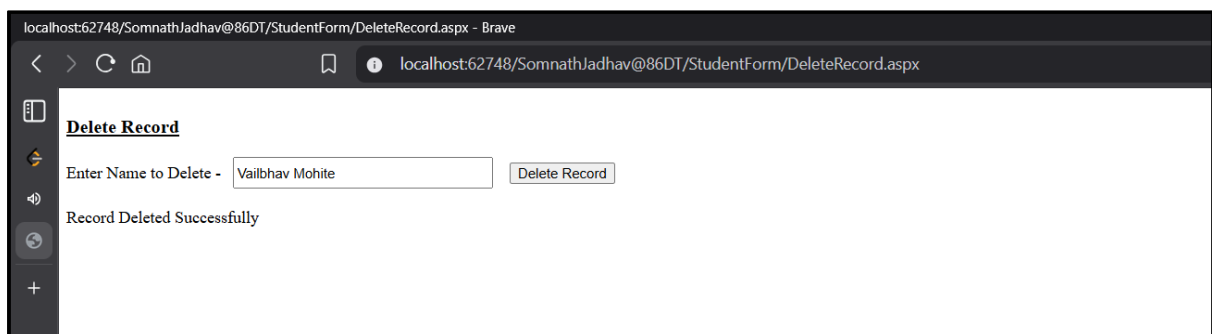
Search and Update

DELETE:

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

```
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.SqlClient;
public partial class StudentForm_DeleteRecord : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
    }
    protected void Button1_Click(object sender, EventArgs e)
    {
        SqlConnection conn = new SqlConnection(@"Data
Source=(LocalDB)\v11.0;AttachDbFilename=D:\SomnathJadhav@86DT\App_Data\Databas
e.mdf;Integrated Security=True");
        SqlCommand cmd = new SqlCommand("DELETE FROM STUDENTS WHERE Id =
@id OR Name = @name", conn);
        cmd.Parameters.AddWithValue("@id", TextBox1.Text);
        cmd.Parameters.AddWithValue("@name", TextBox1.Text);
        conn.Open();
        int res = cmd.ExecuteNonQuery();
        conn.Close();
        if (res == 1)
        {
            Label3.Text = "Record Deleted Successfully";
        }
        else
        {
            Label3.Text = "Record Not Found!";
        }
    }
}
```


@@@