

Q1a - Create an application to print on screen the output of adding, subtracting, multiplying and dividing two numbers entered by the user in C#.

The screenshot shows a web browser window with the title 'WebForm1.aspx'. The page contains a form with the following elements:

- A label 'Enter Number 1:' followed by a text box labeled 'TextBox1'.
- A label 'Enter Number 2:' followed by a text box labeled 'TextBox2'.
- A button labeled 'Result'.
- A label 'Addition is:' followed by a text box labeled 'TextBox3'.
- A label 'Substraction is:' followed by a text box labeled 'TextBox4'.
- A label 'Multiplication is:' followed by a text box labeled 'TextBox5'.
- A label 'Division is:' followed by a text box labeled 'TextBox6'.

```
protected void Button1_Click(object sender, EventArgs e)
{
    double number1 = Convert.ToDouble(TextBox1.Text);
    double number2 = Convert.ToDouble(TextBox2.Text);

    double add = number1 + number2;
    double sub = number1 - number2;
    double mul = number1 * number2;
    double div = number2 == 0 ? double.NaN : number1 / number2;

    TextBox3.Text = add.ToString();
    TextBox4.Text = sub.ToString();
    TextBox5.Text = mul.ToString();
    TextBox6.Text = div.ToString();
}
```

Q1b - Create an application to print Floyd's triangle till n rows in C#

The screenshot shows a web browser window with the title 'WebForm1.aspx'. The page contains a form with the following elements:

- A label 'Floyd's triangle'.
- A label 'Enter Number of Rows:' followed by a text box.
- A button labeled 'Button'.
- A label 'Label'.

```
protected void Button1_Click(object sender, EventArgs e)
```

```

{
    int rows = Convert.ToInt32(TextBox1.Text);
    int number = 1;
    StringBuilder sb = new StringBuilder();

    for (int i = 1; i <= rows; i++)
    {
        for (int j = 1; j <= i; j++)
        {
            sb.Append(number + " ");
            number++;
        }
        sb.AppendLine();
    }

    Label1.Text = sb.ToString();
}

```

Q1c- Create an application to demonstrate following operations i. Generate Fibonacci series. ii. Test for prime numbers.

```

protected void Button1_Click(object sender, EventArgs e)
{
    int a = 0, b = 1, c, i, n;
    Label1.Text = a.ToString() + " " + b.ToString();
    n = Convert.ToInt32(TextBox1.Text);

    for (i = 1; i <= n; ++i)
    {
        c = a + b;
        Label1.Text = Label1.Text + " " + c.ToString();
        a = b;
        b = c;
    }
}

protected void Button2_Click(object sender, EventArgs e)
{
    int n, i, s = 0;
    n = Convert.ToInt32(TextBox1.Text);
}

```

```

        if (n == 0 || n == 1)
            s = 1;

        for (i = 2; i <= n / 2; ++i)
        {
            if (n % i == 0)
            {
                s = 1;
                break;
            }
        }

        if (s == 0)
            Label2.Text = "The given number is Prime";
        else
            Label2.Text = "The given number is Not Prime";
    }
}
}

```

Slip- (a) Write a program in C# to demonstrate multiple inheritance using interfaces

Console App (.NET Framework)

```
using System;
```

```
// First Interface
```

```
interface ITeacher
```

```
{
    void Teach();
}
```

```
// Second Interface
```

```
interface IStudent
```

```
{
    void Study();
}
```

```
// Class implementing multiple interfaces
```

```
class Person : ITeacher, IStudent
```

```

{
    public void Teach()
    {
        Console.WriteLine("Person is teaching.");
    }

    public void Study()
    {
        Console.WriteLine("Person is studying.");
    }
}

```


```

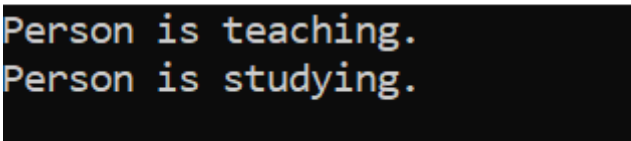
class Program
{
    static void Main(string[] args)
    {
        // Object of Person class
        Person p = new Person();

        // Calling methods of both interfaces
        p.Teach();
        p.Study();

        Console.ReadLine();
    }
}

```

 C:\Windows\system32\cmd.exe



```

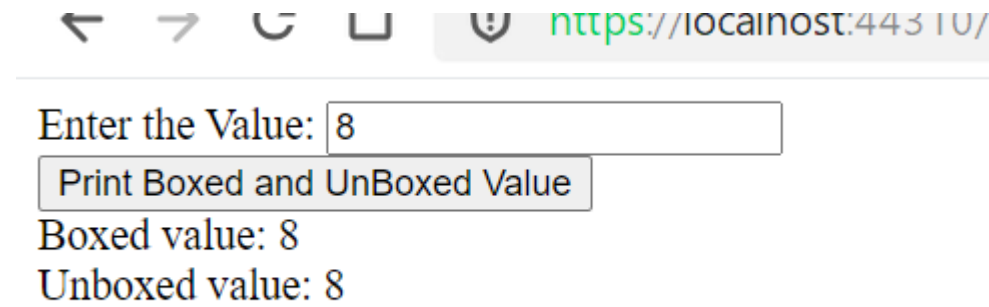
Person is teaching.
Person is studying.

```

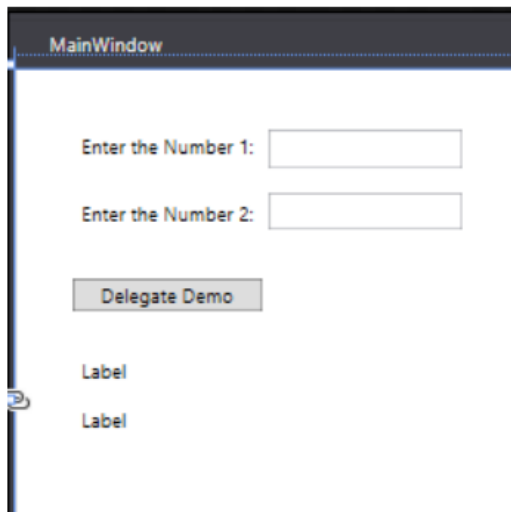
(b) Create a Registration form to demonstrate use of various validation control

Q2(a) - Create a simple application to demonstrate the concepts boxing and unboxing.

```
protected void Button1_Click(object sender, EventArgs e)
{
    int valueType = Convert.ToInt32(TextBox1.Text);
    object boxed = valueType;
    Label1.Text = "Boxed value: " + boxed;
    int unboxed = (int)boxed;
    Label2.Text = "Unboxed value: " + unboxed;
}
```



Q2(b)- Create a simple application to perform addition and subtraction using delegate.



```
public delegate int MathOperation(int a, int b);

public partial class MainWindow : Window
{
    public MainWindow()
    {
        InitializeComponent();
    }
}
```

```

int Add(int a, int b)
{
return a + b;
}

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

private void Button_Click(object sender, RoutedEventArgs e)
{
int x = Convert.ToInt32(TextBox1.Text);
int y = Convert.ToInt32(TextBox2.Text);

MathOperation add = new MathOperation(Add);
MathOperation subtract = new MathOperation(Subtract);

Label1.Content = add(x, y).ToString();
Label2.Content = subtract(x, y).ToString();
}
}

```

Q3(a)- Create a simple web page with various server controls to demonstrate setting and use of their properties. (Example : AutoPostBack)

A screenshot of a web form. It contains a text box for 'Name' with the value 'Shaista Ansari'. Below it is a dropdown for 'Course Name' with 'TY-IT' selected. Then, a 'Select Language' section with three radio buttons: 'Python', 'C#', and 'C++'. Below that is a 'Subjects' section with a list box containing 'IOT', 'Linux', 'AWD', and 'Java'. Then, a 'Select Gender' section with two radio buttons: 'Male' and 'Female'. At the bottom is a 'SUBMIT' button. There are also some labels like [Label12], [Label4], [Label16], [Label6], [Label1], and [Label11] scattered around the form.

A screenshot of the same web form after submission. The 'Name' text box now shows 'Shaista Ansari'. The 'Course Name' dropdown shows 'TV-IT'. The 'Select Language' section now has 'Python' and 'C#' selected. The 'Subjects' list box now shows 'IOT', 'Linux', 'AWD', and 'Java'. The 'Select Gender' section now has 'Male' and 'Female' selected. The 'SUBMIT' button is still present. At the bottom, there is a 'Record Submitted' section with a list of instructions: 'Fill the information correctly.' and 'Select atleast 2 language.'

namespace WebApplication1

```

{

public partial class WebForm1 : System.Web.UI.Page

```

```

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

protected void DropDownList1_SelectedIndexChanged(object sender, EventArgs e)
{
Label4.Text = DropDownList1.SelectedValue;
}

protected void TextBox1_TextChanged(object sender, EventArgs e)
{
String str;
str = TextBox1.Text;
Label2.Text = str;
}

protected void CheckBoxList1_SelectedIndexChanged(object sender, EventArgs e)
{
Label6.Text = "";
foreach(ListItem x in CheckBoxList1.Items)
{
if(x.Selected)
{
Label6.Text += "<br>" + x.Value;
}
}
}

protected void RadioButtonList1_SelectedIndexChanged(object sender, EventArgs e)
{
Label10.Text = RadioButtonList1.SelectedValue;
}

protected void Button1_Click(object sender, EventArgs e)
{

```

```

Label11.Text = "Record Submitted";
}

protected void ListBox1_SelectedIndexChanged(object sender, EventArgs e)
{
    Label8.Text = "";

    foreach(ListItem x in ListBox1.Items)
    {
        if(x.Selected)
        {
            Label8.Text += x.Value;
        }
    }
}

```

Q3(b)- Create a simple application to demonstrate your vacation using calendar control.

The screenshot shows a web application interface. On the left, there is a calendar control for July 2025. The calendar displays days from 1 to 31, with the 14th of July highlighted. Below the calendar, there are five labels (Label1 to Label5) and two buttons labeled 'Submit' and 'Reset'. On the right, there is a summary of the selected date and vacation details. The summary text reads: 'Your Selected Date: 14-07-2025 00:00:00', 'Today's Date: 14-07-2025', 'Diwali Vacation Start: 10-23-2025', 'Days Remaining For Diwali Vacation: 95', and 'Days Remaining for New Year: 170'. Below this text are two buttons labeled 'Submit' and 'Reset'.

July 2025						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

[Label1]
 [Label2]
 [Label3]
 [Label4]
 [Label5]

Submit Reset

June		July			August	
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

Your Selected Date: 14-07-2025 00:00:00
 Today's Date: 14-07-2025
 Diwali Vacation Start: 10-23-2025
 Days Remaining For Diwali Vacation: 95
 Days Remaining for New Year: 170

Submit Reset

```

protected void Calendar1_SelectionChanged(object sender, EventArgs e)
{
    Label1.Text = "Your Selected Date:" + Calendar1.SelectedDate.Date.ToString();
}

```



```

protected void Button1_Click(object sender, EventArgs e)
{
{
Calendar1.Caption = "DISHA KUNDAR";
Calendar1.FirstDayOfWeek = FirstDayOfWeek.Sunday;
Calendar1.NextPrevFormat = NextPrevFormat.FullMonth;
Calendar1.TitleFormat = TitleFormat.Month;
Label2.Text = "Todays Date" + Calendar1.SelectedDate.ToShortDateString();
Label3.Text = "Diwali Vacation Start: 10-23-2025";
TimeSpan d = new DateTime(2025, 10, 17) - Calendar1.SelectedDate;
Label4.Text = "Days Remaining For Diwali Vacation:" + d.Days.ToString();
TimeSpan d1 = new DateTime(2025, 12, 31) - Calendar1.SelectedDate;
Label5.Text = "Days Remaining for New Year:" + d1.Days.ToString();
if (Calendar1.SelectedDate.ToShortDateString() == "10-17-2025")
Label3.Text = "<b>Diwali Festival Start</b>";
if (Calendar1.SelectedDate.ToShortDateString() == "10-23-2025")
Label3.Text = "<b>Diwali Festival End</b>";
}
}

protected void Button2_Click(object sender, EventArgs e)
{
{
Label1.Text = "";
Label2.Text = "";
Label3.Text = "";
Label4.Text = "";
Label5.Text = "";
Calendar1.SelectedDates.Clear();
}
}

```

Q3(c)- Demonstrate the use of Treeview operations on the web form.

Xmal file:

```
<?xml version="1.0" encoding="utf-8" ?>

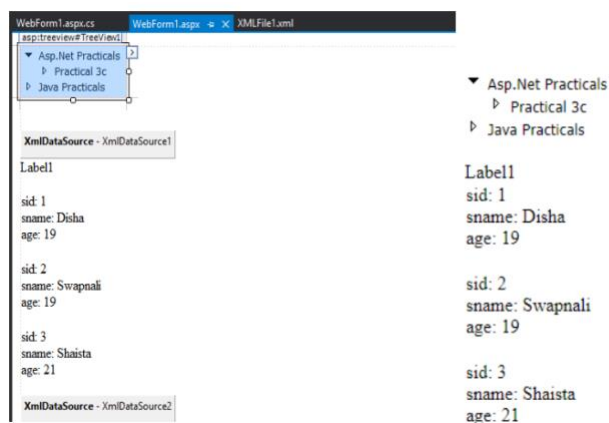
<students>

<student sid="1" sname="Disha" age="19" ></student>

<student sid="2" sname="Swapnali" age="19" ></student>

<student sid="3" sname="Shaista" age="21" ></student>

</students>
```



namespace Practical3C

```
{

public partial class WebForm1 : System.Web.UI.Page

{

protected void Page_Load(object sender, EventArgs e)

{

}

protected void DataList1_SelectedIndexChanged(object sender, EventArgs e)

{

}

protected void TreeView1_SelectedNodeChanged(object sender, EventArgs e)

{

Label1.Text = TreeView1.SelectedNode.Text;
```

}

}

}