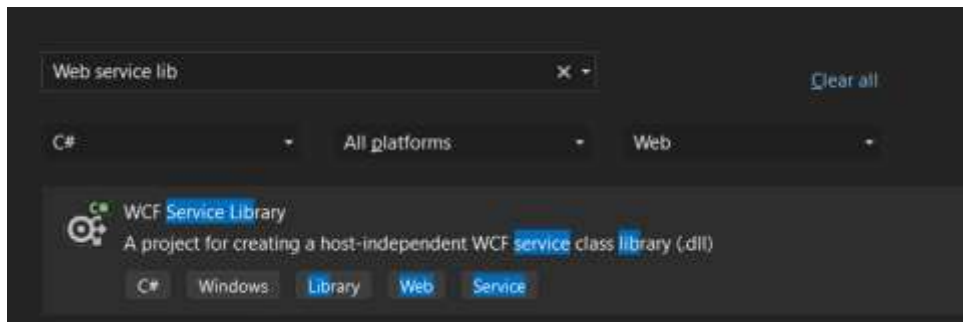


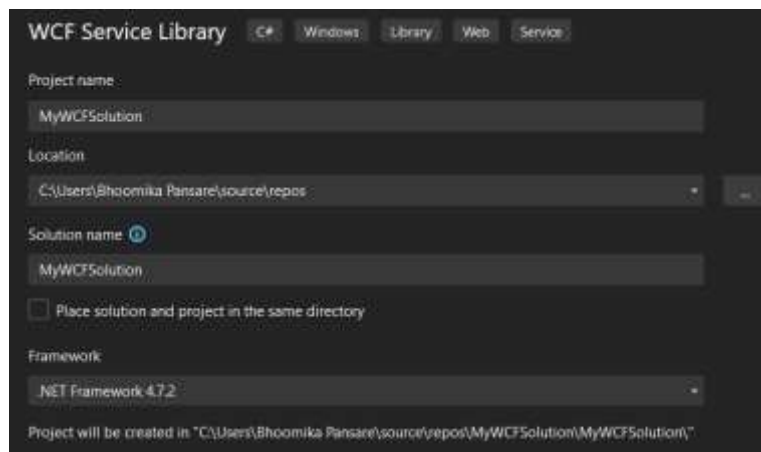
PRACTICAL 7

Aim: Write a program to implement a typical service & client operation using WCF.

- 1) Open Visual Studio. Create a new WCF Service library project.

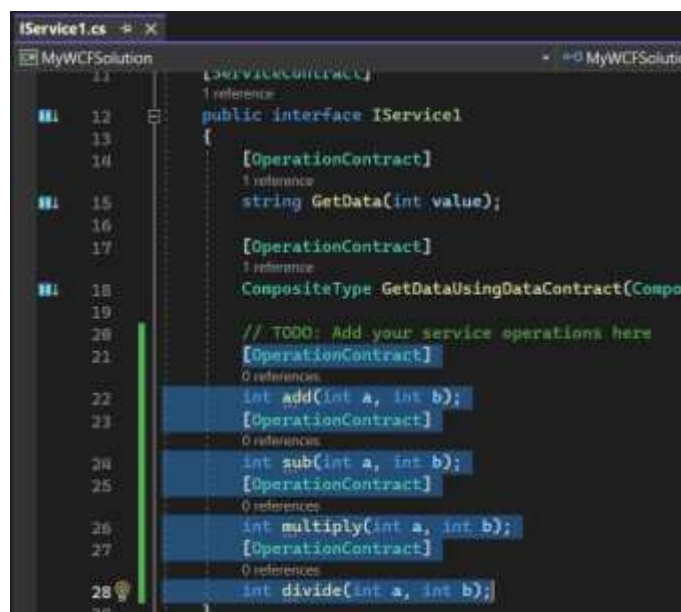


- 2) Write the project name as “MyWCFSolution”.



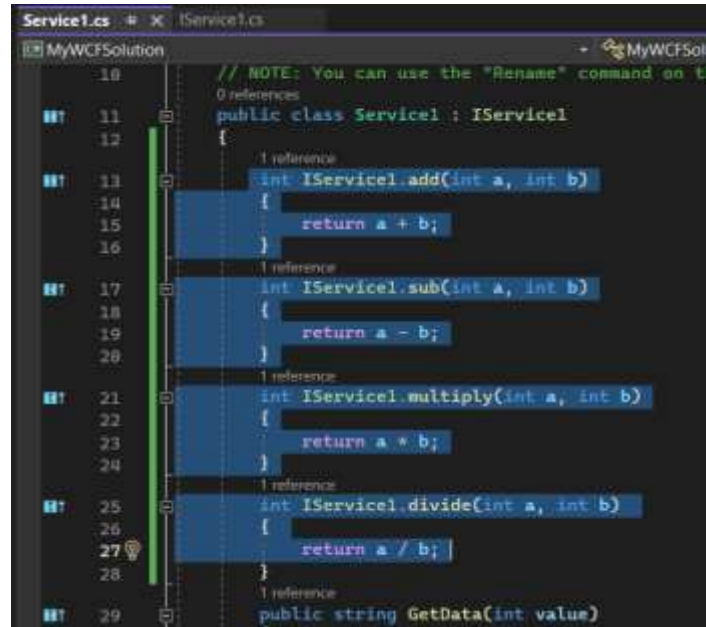
- 3) In solution explorer, Click on project. Open IService1.cs file. Type the following code to perform addition, subtraction, multiplication & division operation.

```
[OperationContract]
int add(int a, int b);
[OperationContract]
int sub(int a, int b);
[OperationContract]
int multiply(int a, int b);
[OperationContract]
int divide(int a, int b);
```



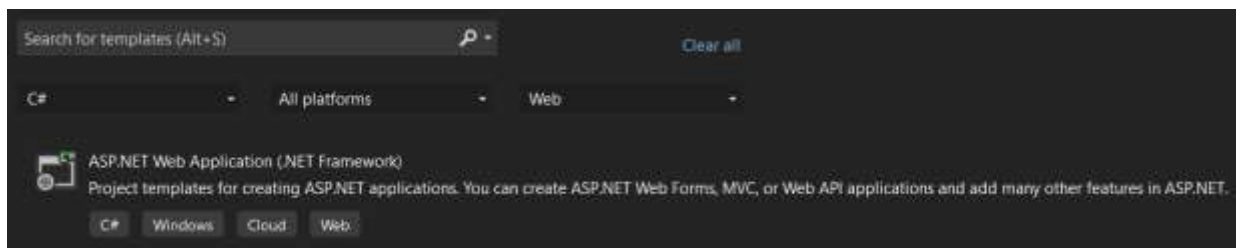
4) After that save the file. Now open Service1.cs file. Type the following code:

```
int IService1.add(int a, int b)
{
    return a + b;
}
int IService1.sub(int a, int b)
{
    return a - b;
}
int IService1.multiply(int a, int b)
{
    return a * b;
}
int IService1.divide(int a, int b)
{
    return a / b;
}
```

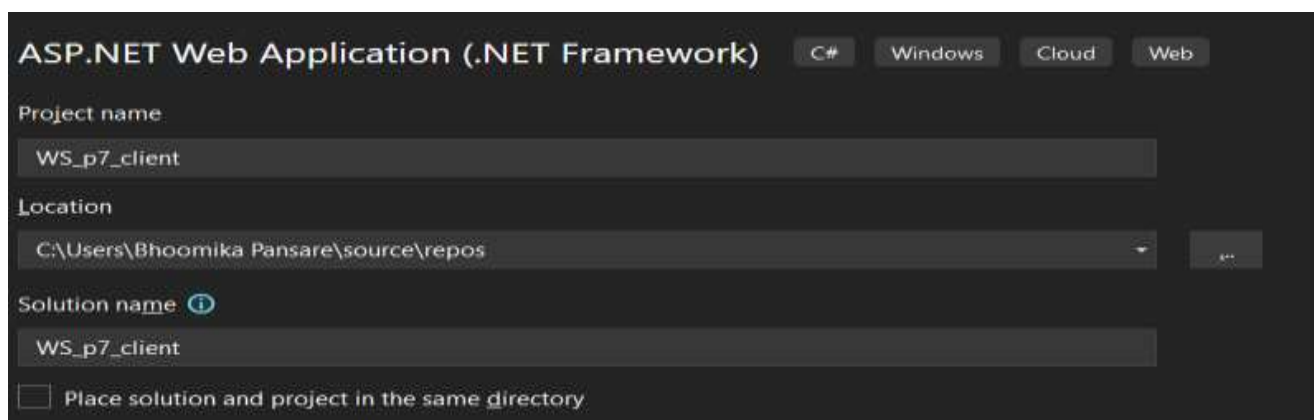


5) Create a new Asp.Net Web Application (.NET Framework) project. For this new project, open new visual studio.

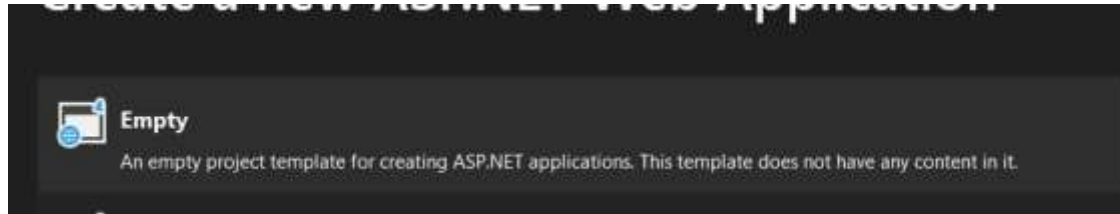
New Project → Asp.Net Web Application (.NET Framework) → Next.



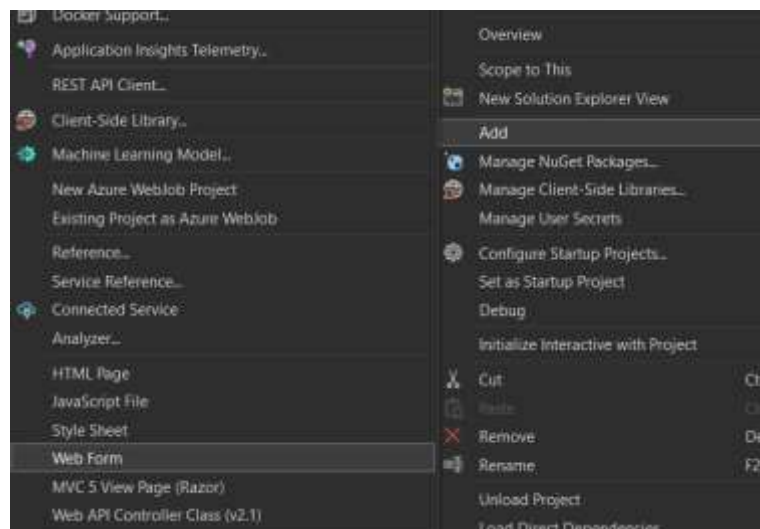
6) Give the project name. I have given project name as “WS_p7_client”. Click on next.



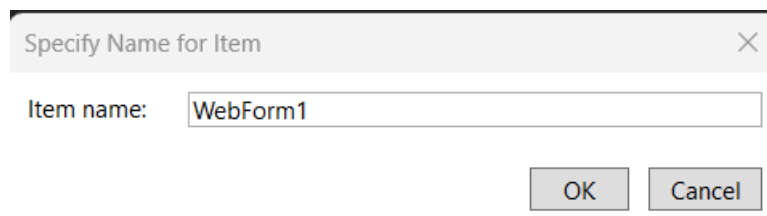
7) Select the Empty project.



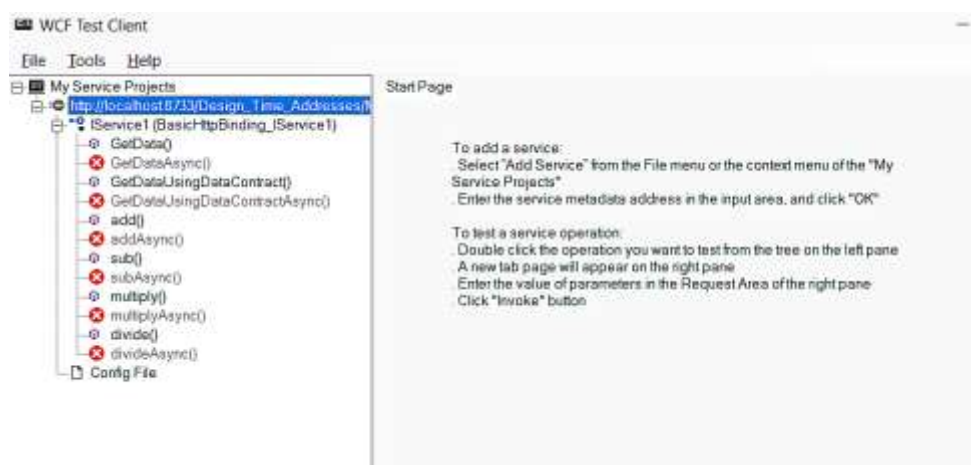
8) Go to the solution explorer. Right click on project → Click on Add → Select web forms.



9) Give the web form name is “WebForm1”.

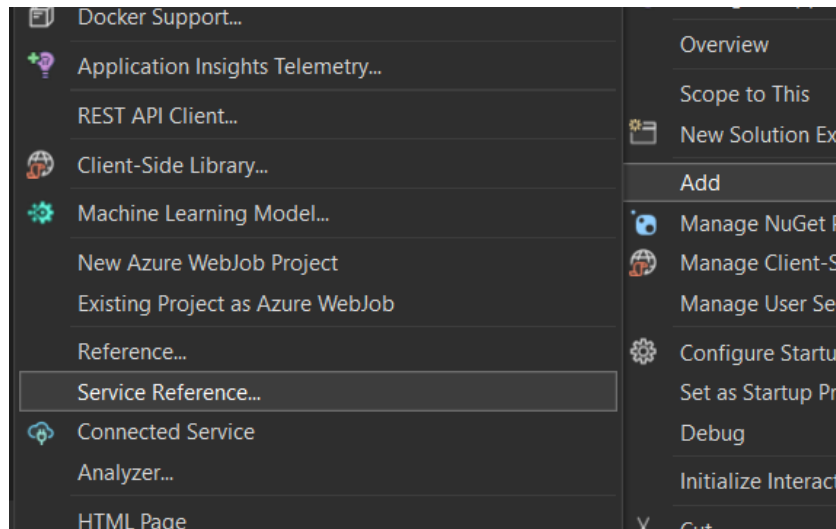


10) Once, the web form is created. You have to add reference in project. For this process, go to the previously created “MyWCFSolution” project. Right click on that project. Build the project. Once build succeeded. Run that project. It will display the following screen. Copy the following highlighted URL.

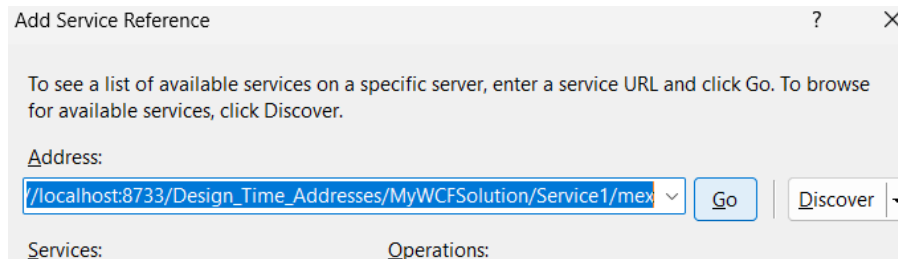


Note: Don't close the window. Minimize the window.

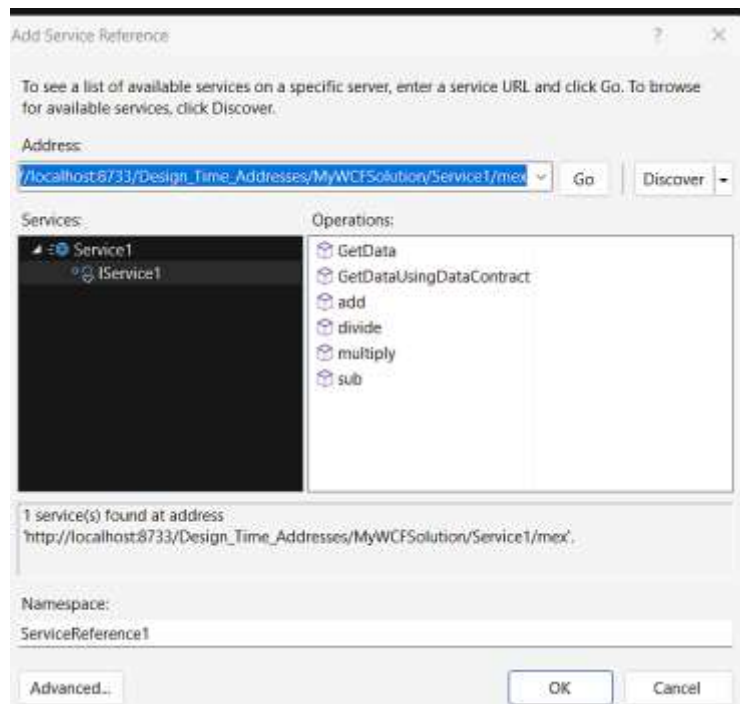
11) Now, open the “WS_p7_client” project. Right click on the project, Click on Add. Select Service Reference.



12) Now paste the copied URL in address. Click on GO button.

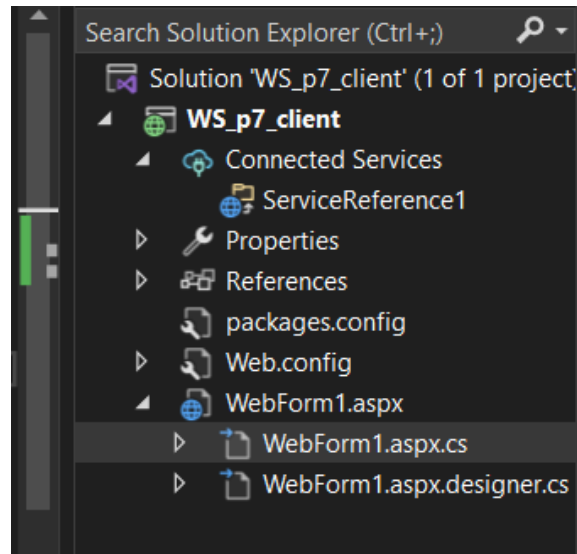


13) After that, it will display the following window. Click on Service 1. Expand that service & then click on OK.

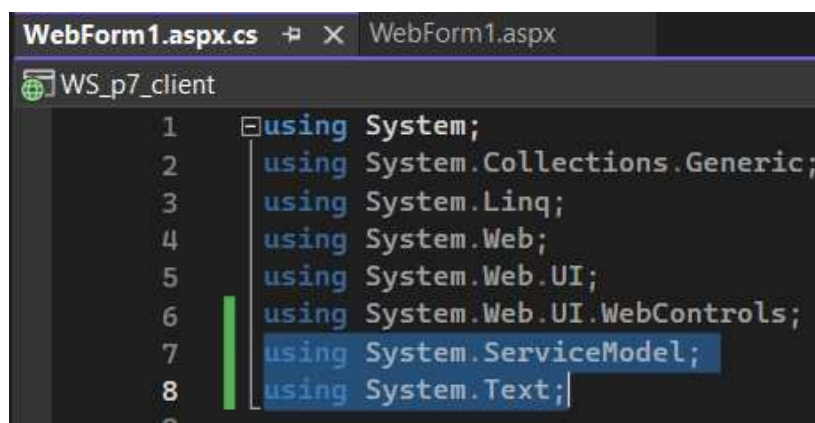


Note: After this step, check the solution explorer. Click on reference, you can see there are many references are added.

14) Go to the solution explorer, expand the WebForm1.aspx. Open the WebForm1.aspx.cs file.

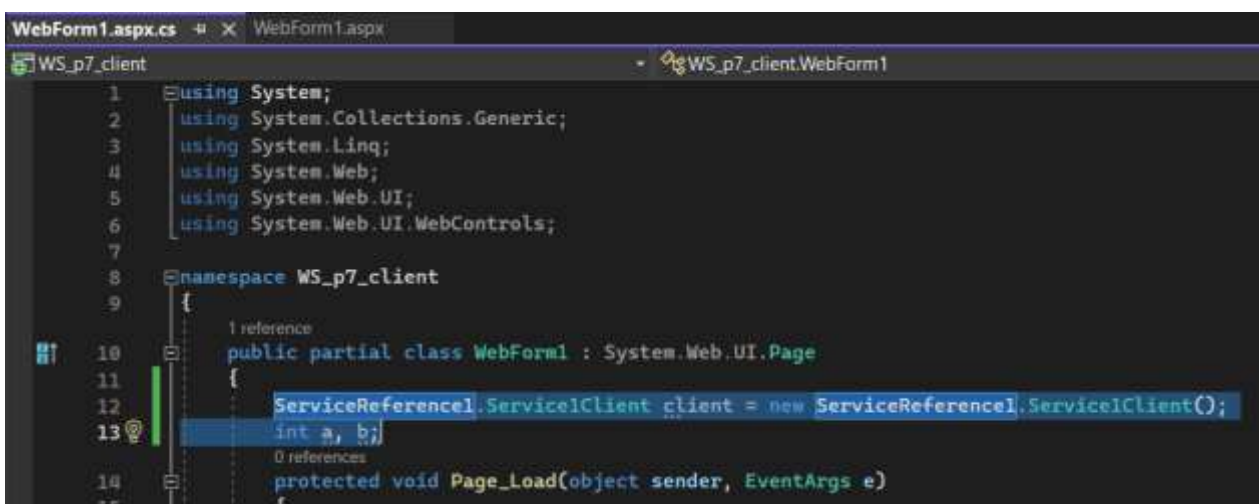


15) Type the following highlighted code.

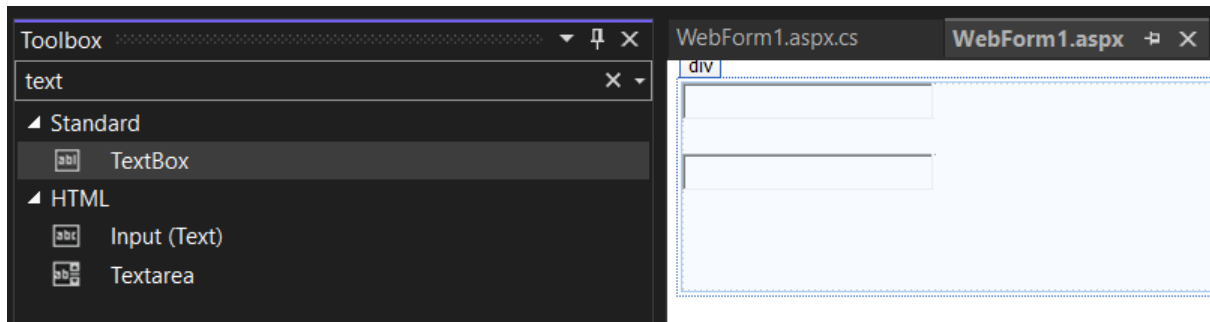


16) Type the following code.

ServiceReference1.Service1Client client = new ServiceReference1.Service1Client();
int a, b;

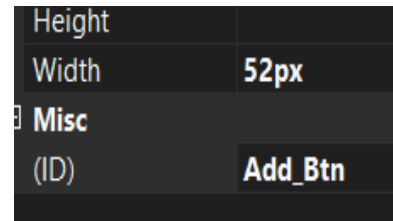
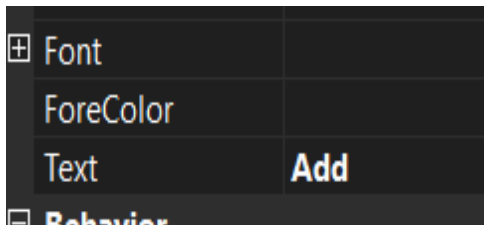


17) Now, open the WebForm1.aspx file. Go to the source. Click on toolbox → Add 2 textbox field to enter numbers.



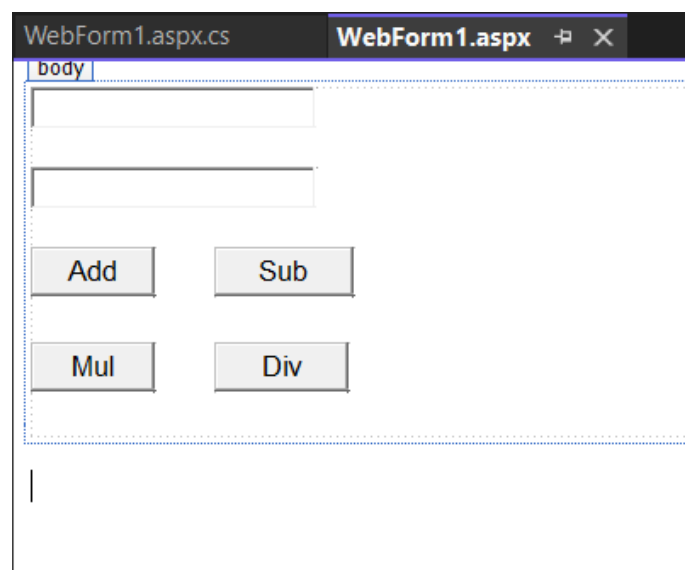
18) Now you have to add 4 buttons.

- Go to toolbox, search for button. Drag & drop the button in source.
- Right click on add button. Go to the properties. Give the button Text is “Add” & ID is “Add_Btn”.

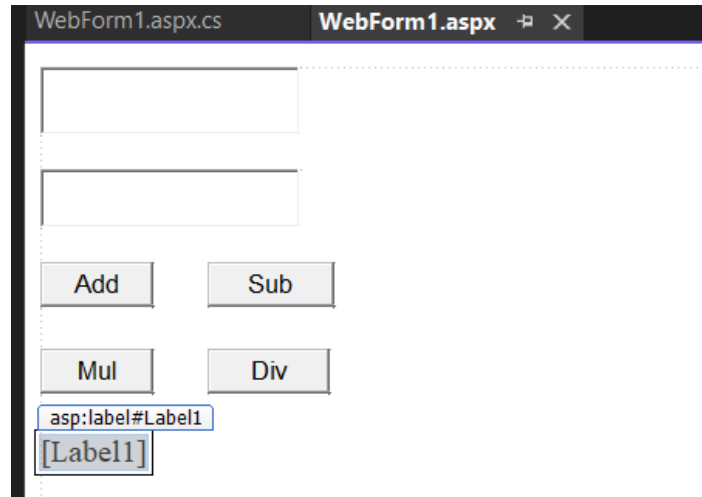


Repeat the step 18 for Subtract, Multiply & division button. Only change the button text name & ID.

19) The following screen will be displayed.

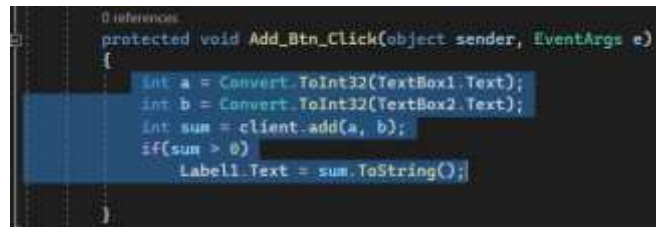


20) Now add 1 Label field to display the output. Go to the label properties & remove the name of label.



21) In this step, double click on Add button, that will lead you to function of respective button. Type the following code

```
int a = Convert.ToInt32(TextBox1.Text);
int b = Convert.ToInt32(TextBox2.Text);
int sum = client.add(a, b);
if(sum > 0)
    Label1.Text = sum.ToString();
```



22) Repeat the step 21 for Subtraction, Multiplication & division.

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

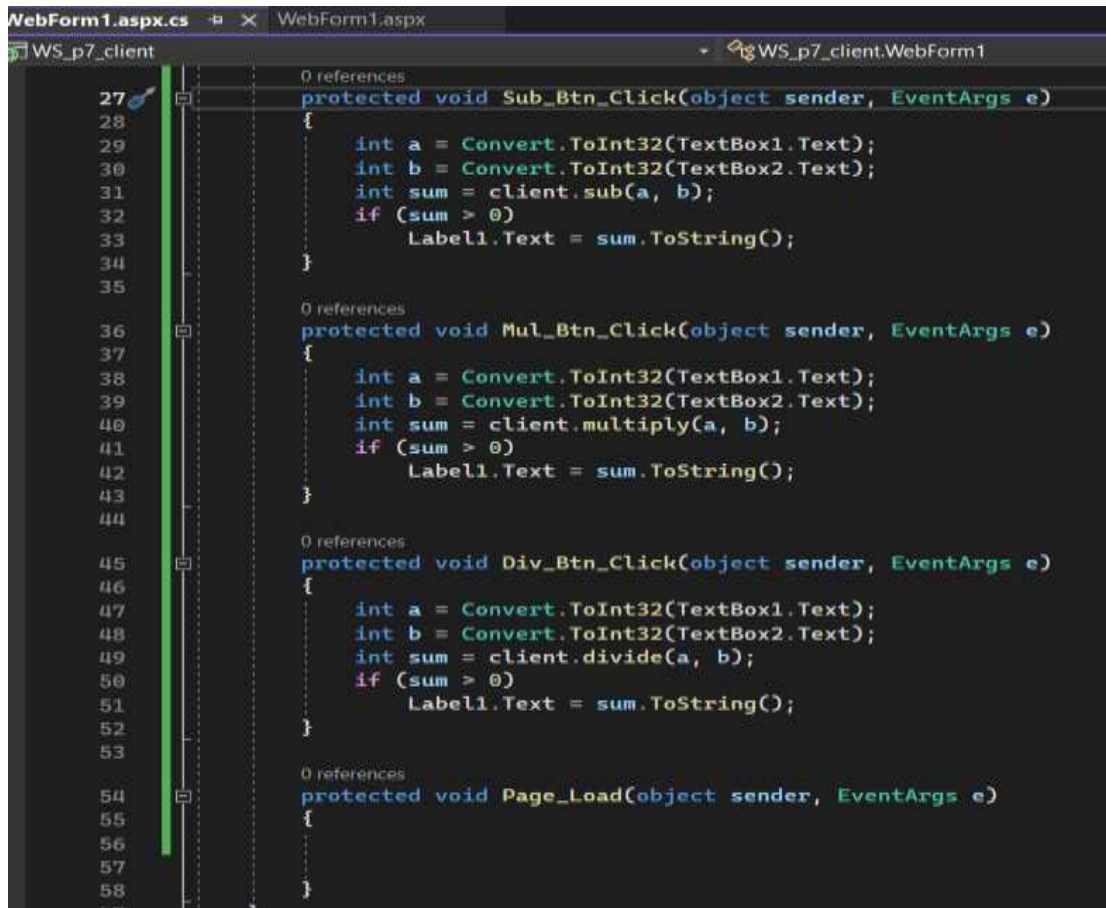
```
{
    int a = Convert.ToInt32(TextBox1.Text);
    int b = Convert.ToInt32(TextBox2.Text);
    int sum = client.sub(a, b);
    if (sum > 0)
        Label1.Text = sum.ToString();
}
```

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

```
{
    int a = Convert.ToInt32(TextBox1.Text);
    int b = Convert.ToInt32(TextBox2.Text);
    int sum = client.multiply(a, b);
    if (sum > 0)
        Label1.Text = sum.ToString();
}
```

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

```
{
    int a = Convert.ToInt32(TextBox1.Text);
    int b = Convert.ToInt32(TextBox2.Text);
    int sum = client.divide(a, b);
    if (sum > 0)
        Label1.Text = sum.ToString();
}
```

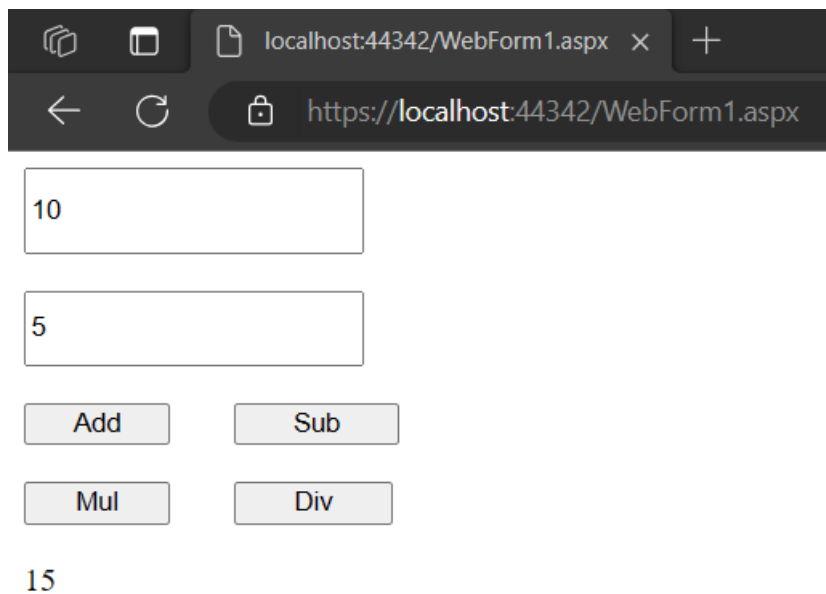
```
WebForm1.aspx.cs  WebForm1.aspx
WS_p7_client
0 references
protected void Sub_Btn_Click(object sender, EventArgs e)
{
    int a = Convert.ToInt32(TextBox1.Text);
    int b = Convert.ToInt32(TextBox2.Text);
    int sum = client.sub(a, b);
    if (sum > 0)
        Label1.Text = sum.ToString();
}

0 references
protected void Mul_Btn_Click(object sender, EventArgs e)
{
    int a = Convert.ToInt32(TextBox1.Text);
    int b = Convert.ToInt32(TextBox2.Text);
    int sum = client.multiply(a, b);
    if (sum > 0)
        Label1.Text = sum.ToString();
}

0 references
protected void Div_Btn_Click(object sender, EventArgs e)
{
    int a = Convert.ToInt32(TextBox1.Text);
    int b = Convert.ToInt32(TextBox2.Text);
    int sum = client.divide(a, b);
    if (sum > 0)
        Label1.Text = sum.ToString();
}

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

23) Finally, run the project & check whether the expected output is displayed or not.



localhost:44342/WebForm1.aspx × +

← ↻ 🔒 https://localhost:44342/WebForm1.aspx

10

5

Add Sub

Mul Div

15