

Internet Application Development

Assignment WebServices

Submitted To

Dr.Irfan Hameed

Submitted By

Insha Afzal

DEPARTMENT: CIS(22-26)

Question-1:

Draw web services execution model?

Answer:



Fig:-web services execution model

Question-2:

Create an ASP.NET Web Service with the following four methods:

- (a) Add
- (b) Subtract
- (c) Multiply
- (d) Divide Each method should:
- Accept two input parameters (e.g., numbers to operate on)
- Return the result as a string

Answer:

WebService.asmx:

«% WebService Language="VB" CodeBehind="~/App_Code/WebService.vb" Class="WebService" %

WebService.vb:

Imports System.Web.Services
Imports System.Web.Services.flrotocols Imports System.ComponentModel

```
<WebService( amespace:="http://tempuri.org/")>
```

```
<WebServiceBinding(ConformsTo:=Wsiflrofiles.Basicflrofile1_1)>
<Global.Microsoft.VisualBasic.CompilerServices.DesignerGenerated()> flublic Class
WebService
Inherits System.Web.Services.WebService
```

```
<WebMethod()>
flublic Function Add(ByVal a As Double, ByVal b As Double) As String Return (a +
b).ToString()
End Function
```

```
<WebMethod()>
flublic Function Subtract(ByVal a As Double, ByVal b As Double) As String Return (a
- b).ToString()
End Function
```

```
<WebMethod()>
flublic Function Multiply(ByVal a As Double, ByVal b As Double) As String Return (a
* b).ToString()
End Function
```

```
<WebMethod()>
flublic Function Divide(ByVal a As Double, ByVal b As Double) As String If b = 0
Then
Return "Cannot divide by zero" Else
Return (a / b).ToString() End If
End Function End Class
```

Question-3:

Test the web service using browser on local pc.

Install Internet Information Services on your laptop/pc (if not installed)

Using IIS manager create two separate applications as follows:

- (a) MathLibService
- (b) ServiceClient

Answer: Steps

Step 1:



Step 2:

dd Applicatio	'n		?
Site name: Path:	Default Web Site /		
Alias:		Application pool:	
MathLibServi	ce	DefaultAppPool	Select
Example: sale	s		

dd Application			? ×
Site name: Def Path: /	ault Web Site		
Alias:		Application pool:	
MathLibService		DefaultAppPool	Select
Physical path: :\Users\shahe\One	eDrive\Desktop\IA	AD-LABS\Assignment	
Pass-through auth	nentication		
Connect as	Test Settings		
Enable Preload			
		ОК	Cancel

Output Screen :

WebService

The following operations are supported. For a formal definition, please review the Service Description.

- <u>Add</u>
- Divide
- <u>Multiply</u>
- <u>Subtract</u>

ADDITION TEST:

Add

Test

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

a:	12
b:	12
	Invoke

Output SCREEN:

<string xmlns="http://tempuri.org/">24</string>

DIVISION TEST:

WebService

Click here for a complete list of operations.

Divide

Test

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

a:	12	
b:	4	
		Invoke

Output SCREEN:

<string xmlns="http://tempuri.org/">3</string>

MULTIPLICTION TEST:

Multiply

Test

To test the	operation using the HTTP POST protocol, click the 'Invoke' button
Parameter	Value
a:	12
b:	100
	Invoke

Output Screen :

<string xmlns="http://tempuri.org/">1200</string>

SUBTRACTION TEST:

Subtract

Test

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

Parameter	Value	
a:	100000	
b:	50000	
		Invoke

Output SCREEN:

<string xmlns="http://tempuri.org/">50000</string>

Question-4:

Implement a web application "ServiceClient" which will use the MathLibService as a web service. Develop a suitable web page for its demonstration. Use some text boxes to take input from user. Use proxy class to get answer (response from web service) and display it on page to user.

Answer:

- Create a New Web Application Project named ClientService.
- Add a Service Reference to consume the existing web service:
 - Right-click on the project in Solution Explorer.
 - Select Add > Service Reference.
- In the dialog box, enter the URL of the previously created web service.
- Once added, the web service will be available for use within the ClientService application.

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		New EditorConfig			Open in Terminal	

Address: http://localhost/mathlibse Services:	ervice/webservice.asmx				
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Services:			G	o Disco	ver -
	Operations:				
Namespace: MathLibRef					
Advanced			ОК	Can	cel
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Default.aspx:

```
<%@ flage Language="vb" AutoEventWireup="false" CodeFile="Default.aspx.vb"
Inherits="_Default" %>
```

```
<!DOCTYflE html>
<html>
<head><title>Math Web Service Client</title></head>
<bodv>
<form id="form1" runat="server">
<h2>Math Operations</h2>
<asp:TextBox ID="txt um1" runat="server" />
<asp:TextBox ID="txt um2" runat="server" />
<asp:DropDownList ID="ddlOperation" runat="server">
<asp:ListItem Text="Add" />
<asp:ListItem Text="Subtract" />
<asp:ListItem Text="Multiply" />
<asp:ListItem Text="Divide" />
</asp:DropDownList>
<asp:Button ID="btnCalculate" runat="server" Text="Calculate"</pre>
OnClick="btnCalculate Click" />
<br /><br />
<asp:Label ID="lblResult" runat="server" />
</form>
</body>
</html>
```

Default.aspx.vb:

flartial Class _Default
Inherits System.Web.UI.flage

```
flrotected Sub btnCalculate_Click(sender As Object, e As EventArgs) Dim num1 As
Double = Convert.ToDouble(txt um1.Text)
Dim num2 As Double = Convert.ToDouble(txt um2.Text) Dim result As String = ""
```

```
Select Case ddlOperation.SelectedValue Case "Add"
result = (num1 + num2).ToString() Case "Subtract"
result = (num1 - num2).ToString() Case "Multiply"
result = (num1 * num2).ToString() Case "Divide"
If num2 <> 0 Then
result = (num1 / num2).ToString()
Else
result = "Error: Division by zero" End If
End Select
```

lblResult.Text = "Result: " fi result End Sub End Class

Output:

Math Operations

12 13 Add V Calculate

Result: 25

SUBTRACT:

Math Operations

100	13	Subtract Calculate	
			_

Result: 87

MULTIPLY:

Math Operations

10034	13	Multiply 🗸	Calculate

Result: 130442

DIVIDE:

Math Operations

and the second			
10034	13	Divide 🗸	Calculate

Result: 771.846153846154