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The Software Interview Question Bank

-- Maintained by Shivprasad Koirala shiv_koirala@yahoo.com

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Contents

From the Author

First thing thanks to all those who have sent me complaints and also appreciation for what ever titles i have written till today. But interview question series is very near to my heart as i can understand the pain of searching a job. Thanks to my publishers (BPB) , readers and reviewers to always excuse all my stupid things which i always do.

So why is this PDF free ?. Well i always wanted to distribute things for free specially when its a interview question book which can fetch a job for a developer. But i am also bounded with publishers rules and regulations. And why not they have a whole team of editor, printing guys, designers, distributors, shopkeepers and including me. But again the other aspect, readers should know of what they are buying , the quality and is it really useful to buy this book. So here are sample free questions which i am giving out free to the readers to see the worth of the book.

I can be contacted at shiv_koirala@yahoo.com its bit difficult to answer all answers but as i get time i do it.

We have recently started a career counselling drive absolutely free for new comers and experienced guys. So i have enlisted the following guys on the panel. Thanks to all these guys to accept the panel job of consulting. Feel free to shoot them questions just put a title in the mail saying “Question about Career”. I have always turned up to them when i had some serious career decision to take.

Shivprasad Koirala :- Not a great guy but as i have done the complete book i have to take up one of the positions. You can contact me at shiv_koirala@yahoo.com for technical career aspect.

Tapan Das :- If you think you are aiming at becoming a project manager he is the right person to consult. He can answer all your questions regarding how to groom your career as a project manager tapand@vsnl.com.

Kapil Siddharth :- If you are thinking to grow as architect in a company then he is a guy. When it comes to role model as architect i rate this guy at the top. You can contact him at kapilsiddharth@hotmail.com

Second if you think you can help the developers mail me at shiv_koirala@yahoo.com and if i find you fitting in the panel i will display your mail address. Please note there are no financial rewards as such but i am sure you will be proud of the work you are doing and whos knows what can come up.

Lets make Software Industry a better place to work ..... Happy Job Hunting and Best of Luck

Career Path Institute

Author runs the “Softwar Career Path Insitute” personally in mumbai. If you are interested you can contact him regarding admissions at shiv_koirala@yahoo.com. Our courses are mainly targetting from how to get a job perspective.

Below are some of the courses offered :-

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4. Remoting and Webservices

(B)What is a application domain?

Previously "PROCESS" where used as security boundaries.One process has its own virtual memory and does not over lap the other process virtual memory , due to this one process can not crash the other process.So any problem or error in one process does not affect the other process.In .NET they went one step ahead introducing application domains.In application domains multiple application can run in same process with out influencing each other.If one of the application domains throws error it does not affect the other application domains.To invoke method in a object running in different application domain .NET remoting is used.

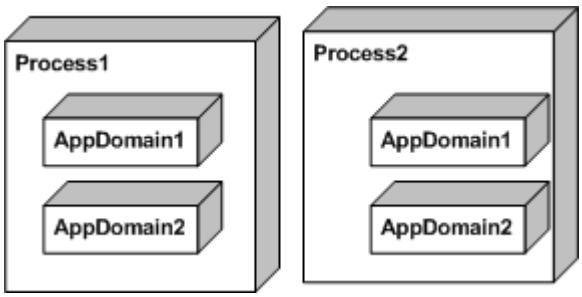

Figure :- 4.1 One process can have multiple Application domains

(B) What is .NET Remoting ?

.NET remoting is replacement of DCOM.Using .NET remoting you can make remote object calls which lie in different Application Domains.As the remote objects run in different process client calling the remote object can not call it directly.So the client uses a proxy which looks like a real object.

When client wants to make method call on the remote object it uses proxy for it.These method calls are called as "Messages".Messages are serialized using "formatter" class and sent to client "channel".Client Channel communicates with Server Channel.Server Channel uses as formatter to deserialize the message and sends to the remote object.

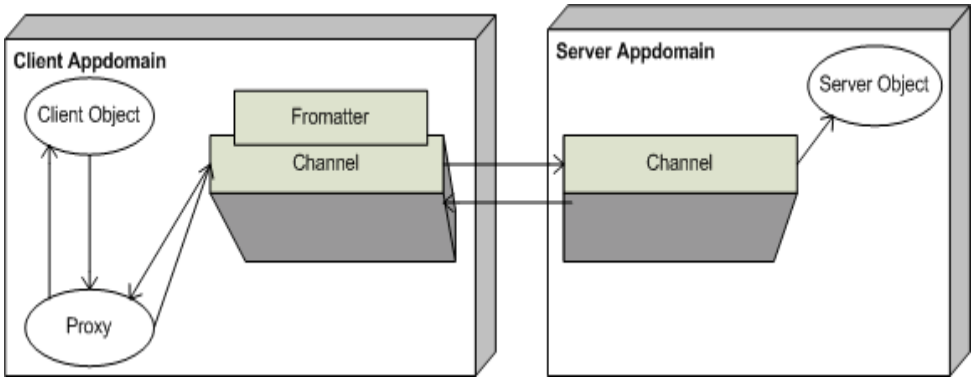

Figure :- 4.2 Channels,Formatters and Proxy in action.

(B) Which class does the remote object has to inherit ?

All remote object should inherit from System.MarshalbyRefObject.

(I) What are two different types of remote object creation mode in .NET ?

There are two different ways in which object can be created using Remoting :-

- √ SAO (Server Activated Objects) also called as Well-Known call mode.
- √ CAO (Client Activated Objects)

SAO has two modes “Single Call” and “Singleton”.With Single Call object the object is created with every method call thus making the object stateless.With Singleton the object is created only once and the object is shared with all clients.

CAO are stateful as compared to SAO. In CAO the creation request is sent from client side.Client holds a proxy to the server object created on server.

(A) Describe in detail Basic of SAO architecture of Remoting?

For these type of questions interviewer expects small and sweet answers.He is basically looking at what you know about the specific subject.For these type of question this book will provide detail code which is not necessary to be said during interview.Only the basic steps and overall brief are enough to convince that you have knowledge about the subject.Even though this question has detail code and answer say only what is needed in interview.

Remoting has atleast three sections :-

- √ Common Interface which will be shared between them.
- √ Server.
- √ Client.

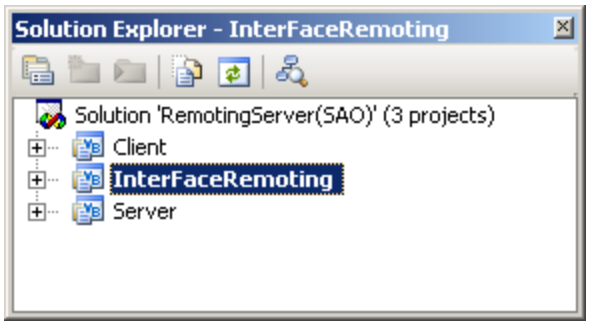

Figure :- 4.3 Solution Explorer of Remoting Project

In CD "RemotingSample(SAO)" project is provided which gives a insight of remoting.Above is the figure which shows the three important project sections needed to implement remoting.

First important section is the common interface between Server and Client."InterFaceRemoting" project has the interface code.For sample project interface is very simple with only two methods :- SetValue and GetValue.

```
Public Interface InterFaceRemoting
    Sub SetValue(ByVal value As String)
    Function GetValue() As String
End Interface
```

Second important section is the server.In this sample server is using HTTP channel and the server object is singleton.

```
Imports System
Imports System.Runtime.Remoting
Imports System.Runtime.Remoting.Channels.Http
Imports System.Runtime.Remoting.Channels
Imports InterFaceRemoting

Public Class RemotingServer
    Inherits MarshalByRefObject
```

```
    Implements InterFaceRemoting.InterFaceRemoting
    Private strData As String
    Public Function GetValue() As String Implements
InterFaceRemoting.InterFaceRemoting.GetValue
        Return strData
    End Function
    Sub New()
        strData = “testing..”
    End Sub
    Public Sub SetValue(ByVal value As String) Implements
InterFaceRemoting.InterFaceRemoting.SetValue
        strData = value
    End Sub
End Class
Module ModuleRemotingStartUp
    Sub Main()
        Dim objHttpChannel As HttpChannel
        Console.WriteLine(“Server Started....”)
        objHttpChannel = New HttpChannel(1234)
        ChannelServices.RegisterChannel(objHttpChannel)
     RemotingConfiguration.RegisterWellKnownServiceType(GetType(RemotingServer),
“RemoteObject”, WellKnownObjectMode.Singleton)
        Console.WriteLine(“Server registered and listening waiting
for clients...”)
        Console.ReadLine()

    End Sub
End Module
```

Following is detail explanation :-

√ Channel object is created and registered.Following is the code.

```
Dim objHttpChannel As HttpChannel
Console.WriteLine(“Server Started....”)
objHttpChannel = New HttpChannel(1234)
ChannelServices.RegisterChannel(objHttpChannel)
```

√ Server then hosts the object so that client can connect to it.This is the time when we specify what mode the server object will be created i.e. Singleton or SingleCall.This is done by the following below given code.Note in sample we are hosting the server object in singleton mode that means that the same object

will be shared between all clients.Also note the server object is implementing "InterFaceRemoting" and inheriting from "MarshalByRefObject".

RemotingConfiguration.RegisterWellKnownServiceType(GetType(RemotingServer), "RemoteObject", WellKnownObjectMode.Singleton)

Now comes the final section that is third section the client which will connect to this hosted remoting object.

Following is a detail explanation of client code :-

√ First we create the channel i.e. HTTP.Note whatever channel the server is using same will be used by the client.

ChannelServices.RegisterChannel(objHttpChannel)

√ As said before the common interface i.e."InterFaceRemoting" will be used to communicate with client.

√ After that we can get the server object reference using following code

objRemoting = CType(Activator.GetObject(GetType(InterFaceRemoting.InterFaceRemoting), "http://localhost:1234/RemoteObject"), InterFaceRemoting.InterFaceRemoting)

√ Then the client can make method call as if the object is local.But actually the object is a proxy.

Console.WriteLine("Value on server :- " & objRemoting.GetValue.ToString())

```
Imports System
Imports System.Runtime.Remoting
Imports System.Runtime.Remoting.Channels.Http
Imports System.Runtime.Remoting.Channels
Imports InterFaceRemoting

Module ModuleStartClient
    Sub Main()
        Dim objHttpChannel As New HttpChannel
        Dim objRemoting As InterFaceRemoting.InterFaceRemoting
        ChannelServices.RegisterChannel(objHttpChannel)
        objRemoting =
CType(Activator.GetObject(GetType(InterFaceRemoting.InterFaceRemoting),
"http://localhost:1234/RemoteObject"),
InterFaceRemoting.InterFaceRemoting)
```

```
        Console.WriteLine("Referenced the main object.... Now
displaying Data")
        Console.WriteLine("Value on server :-  " &
objRemoting.GetValue.ToString())
        Console.WriteLine("Press enter to Terminate")
        Console.ReadLine()
    End Sub

End Module
```

You an run the program and see the output.For running the program run the server program which is in server directory.Run "Server.exe" from BIN directory.If the EXE runs properly following will be the screen as shown below.

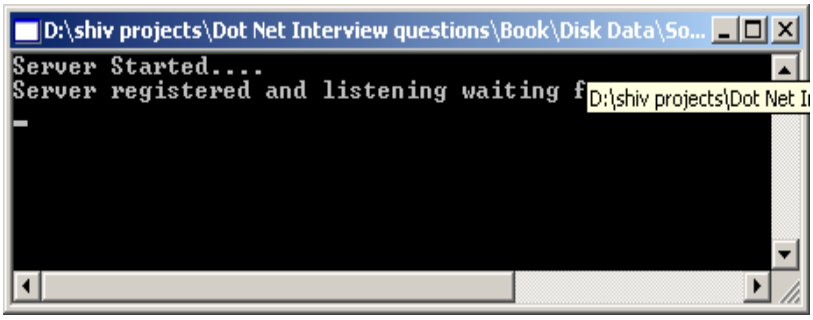

Figure :- 4.4 Running Server Program of Remoting

Now run "Client.exe" from client folder in BIN directory.Following will be the output seen.This means that the client connected to the server program and displayed the data in the server object.In the server object we have initialized value "testing....." In constructor of class "RemotingServer".Same value is displayed at the client side as shown in figure below.

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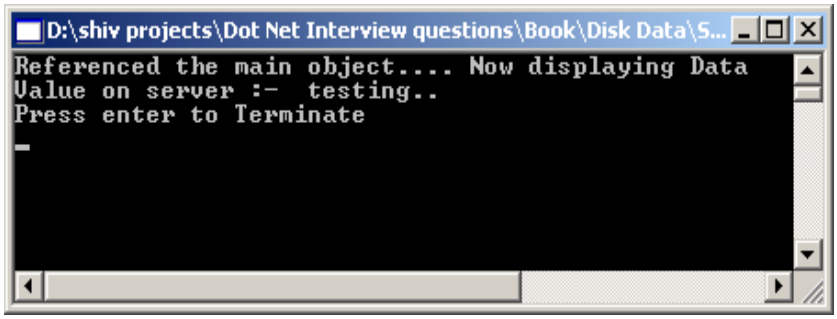

Figure :- 4.5 Client Program output of Remoting

(A) What are the situations you will use singleton architecture in remoting ?

If all remoting clients have to share the same data singleton architecture will be used.

(A) What is fundamental of published or precreated objects in Remoting ?

In scenarios of singleton or single call the objects are created dynamically.But in situations where you want to precreate object and publish it you will use published object scenarios.

```
Dim obj as new objRemote
obj.Initvalue = 100
RemotingServices.Marshal(obj,"RemoteObject")
```

As shown in above sample following changes will be needed on server side.RemotingConfiguration.RegisterWellKnownServiceType is replaced by RemotingServices.Marshal(obj,"RemoteObject") where "obj" is the precreated objected on the server whose value is initialized to 100.

(A) What are the ways client can create object on server in CAO model ?

There are two ways by which you can create Client objects on remoting server :-

- √ Activator.CreateInstance().

√ By Keyword “New”.

(A) Are CAO stateful in nature ?

Yes.In CAO remoting model client creates a instance on server and instance variable set by client on server can be retrieved again with correct value.

(A) In CAO model when we want client objects to be created by “NEW” keyword is there any precautions to be taken ?

Remoting Clients and Remoting Server can communicate because they share a common contract by implementing Shared Interface or Base Class (As seen in previous examples). But according to OOP’s concept we can not create a object of interface or Base Classes (Abstract Class). Shipping the server object to client is not a good design practice.In CAO model we can use SOAPSUDS utility to generate Metadata DLL from server which can be shipped to client , clients can then use this DLL for creating object on server.Run the SOAPSUDS utility from visual studio command prompt for syntax see below :-

soapsuds -ia:RemotingServer -nowp -oa:ClientMetaData.dll

Where RemotingServer is your server class name.

ClientMetaData.dll is the DLL name by which you will want to create the metadll.

Server code will change as follows :-

```
ChannelServices.RegisterChannel(objHttpChannel)
RemotingConfiguration.ApplicationName = “RemoteObject”
RemotingConfiguration.RegisterActivatedServiceType(GetType(InterFaceRemoting.InterFaceRemoting))
```

Note :- We have to provide applicationname and register the object as ActivatedServiceType.

On client side we have to reference the generated ClientMetaData.dll from SOAPSUDS utility.Below are changes which are needed to be incorporated at the Remoting Client :-

RemotingConfiguration.RegisterActivatedClientType(typeof(RemoteObject),“http://localhost:1234/MyServer”)

Dim objRemoteObject as new RemoteObject().

RemoteObject is class which is obtained from ClientMetaData.dll which we created using SOAPSUDS utility.Now you can reference the object as normal object.

(I) Is it a good design practice to distribute the implementation to Remoting Client ?

It's never advisable to distribute complete implementation at client , due to following reasons :-

- √ Any one can use ILDASM and decrypt your logic.
- √ It's a bad architecture move to have full implementation as client side as any changes in implementation on server side you have to redistribute it again.

So the best way is to have a interface or SOAPSUDS generated meta-data DLL at client side rather than having full implementation.

(A) What is LeaseTime,SponsorshipTime ,RenewonCallTime and LeaseManagerPollTime?

This is a very important question from practical implementation point of view.Companies who have specific requirement for Remoting project's will expect this question to be answered.

In normal .NET environment objects lifetime is managed by garbage collector.But in remoting environment remote clients can access objects which is out of control of garbage collector.Garbage collector boundary is limited to a single PC on which framework is running , any remote client across physical PC is out of control of GC (Garbage Collector).

This constraint of garbage collector leads to a new way of handling lifetime for remoting objects , by using concept called as "LeaseTime".Every server side object is assigned by default a "LeaseTime" of five minutes.This leasetime is decreased at certain intervals.Again for every method call a default of two minutes is assigned.When i say method call means every call made from client.This is called as "RenewalOnCallTime".

Let's put the whole thing in equation to make the concept more clear.

Total Remoting object life time = LeaseTime + (Number of method calls) X (RenewalTime).

If we take NumberOfMethodCalls as one.

Then default Remote Object Life Time = 5 + (1) X 2 = 10 minutes (Everything is in minutes)

When total object lifetime is reduced to zero , it queries the sponsor that should the object be destroyed.Sponsor is a object which decides should object Lifetime be renewed.So it queries any registered sponsors with the object , if does not find any then the object is marked for garbage collection.After this garbage collection has whole control on the object lifetime.If we do not foresee how long a object will be needed specify the "SponsorShipTimeOut" value. SponsorShipTimeOut is time unit a call to a sponsor is timed out.

"LeaseManagerPollTime" defines the time the sponsor has to return a leasetime extension.

(A) Which config file has all the supported channels/protocol ?

Machine.config file has all the supported channels and formatter supported by .NET remoting.Machine.config file can be found at "C:\WINDOWS\Microsoft.NET\Framework\vXXXXX\CONFIG" path.Find <system.runtime.remoting> element in the Machine.config file which has the channels and the formatters.Below is a figure shown which can give a clear idea of how the file looks like.

Note :- Interviewer will not ask you to name all channels and formatters in machine.config but will definitely like to know in which file are all the formatter and channels specified one sweet answer "Machine.config" can fetch you handsome job.

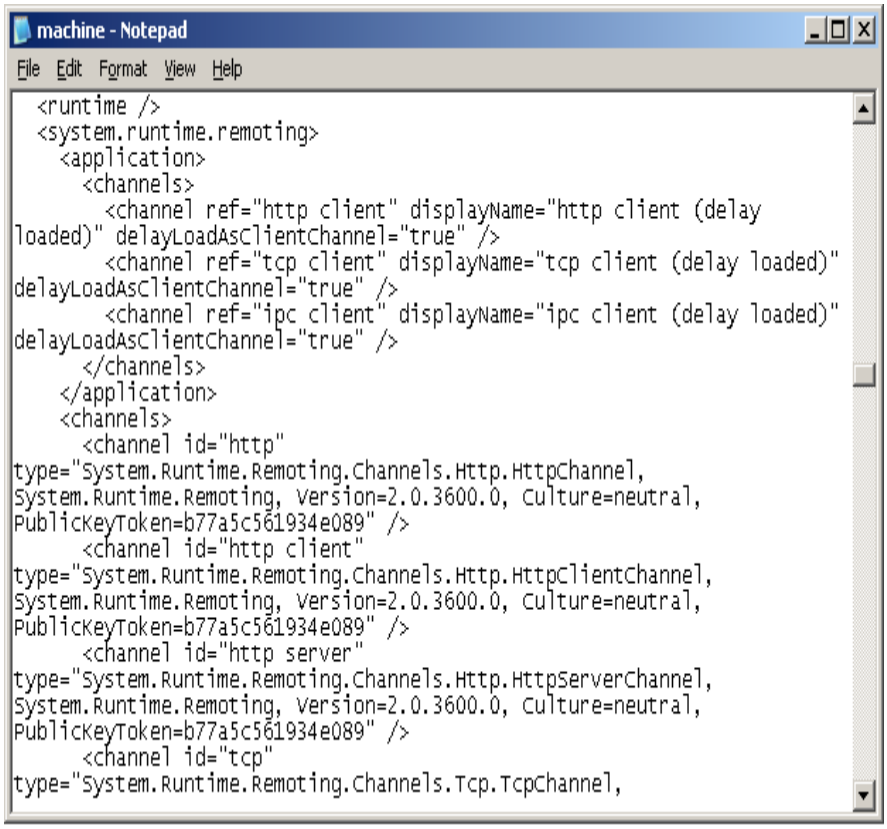

Figure :- 4.6 Channels and Formatter in machine.config file

(A) How can you specify remoting parameters using Config files ?

Both remoting server and remoting client parameters can be provided through config files.Below is a sample of server config file which provides all remoting parameter values which we where providing through code.

```
<configuration>
<system.runtime.remoting>
<application name=”Server”>
<service>
<wellknown
```

```
mode="SingleCall"
type="Server.ClsServer, Server"
objectUri="RemoteObject" />
</service>
<channels>
<channel ref="tcp server" port="9000" />
</channels>
</application>
</system.runtime.remoting>
</configuration>
```

Later this config file can be loaded using the following code.

RemotingConfiguration.Configure(AppDomain.CurrentDomain.SetupInformation.ApplicationBase & "Server.config")

Same way we also have client.config file for loading the client remoting parameters.

```
<configuration>
<system.runtime.remoting>
<application name="Client">
<client url="tcp://localhost:9000/RemoteObject">
<wellknown
type="CommonInterface.Icommon, Icommon"
url = "tcp://localhost:9000/Server/RemoteObject"/>
</client>
<channels>
<channel ref="tcp client" />
</channels>
</application>
</system.runtime.remoting>
</configuration>
```

client remoting can then load the configuration file by using :-

```
Dim IobjCommon As CommonInterFace.Icommon
Dim StrData As String
Dim objServiceEntries As WellKnownClientTypeEntry()

RemotingConfiguration.Configure(AppDomain.CurrentDomain.SetupInformation.ApplicationBase
& "Client.config")
      objServiceEntries =
RemotingConfiguration.GetRegisteredWellKnownClientTypes()
      IobjCommon = Activator.GetObject(GetType(Icommon),
objServiceEntries(0).ObjectUrl.ToString())
      StrData = IobjCommon.GetValue()
```

```
Console.WriteLine(“ Serve side Data is “ & StrData)
Console.ReadLine()
```

Note :- Complete source is provided in CD in folder “RemotingObjectLifeTime”.If you run Server and Client following output can be seen.All source is compiled using VS2005 BETA1

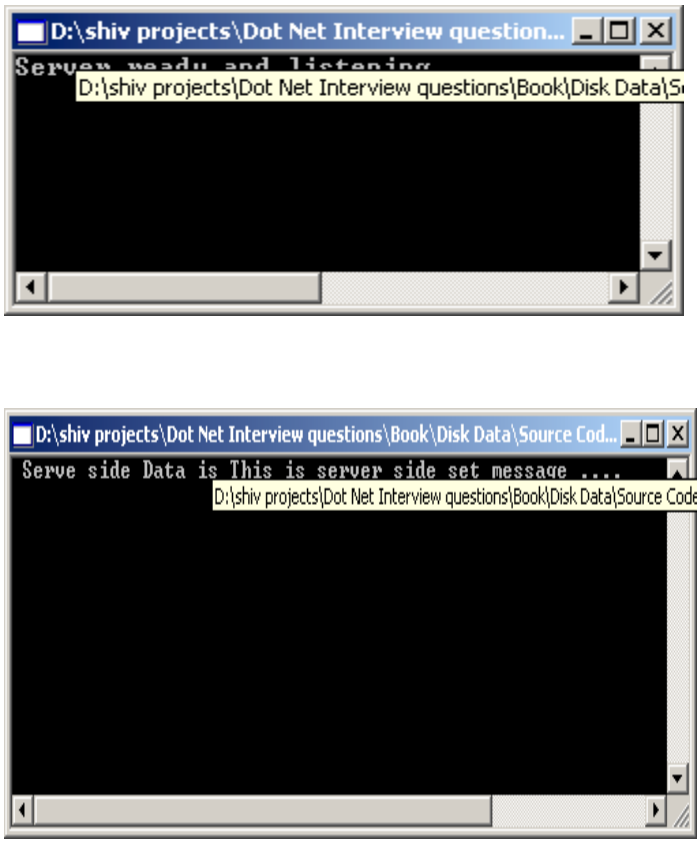

Figure : - 4.7 Output of Server and Client for RemotingObjectLifeTime project

(A) Can Non-Default constructors be used with Single Call SAO?

Twist :- What are the limitation of constructors for Single call SAO ?

Non-Default constructors can not be used with single call objects as object is created with every method call, there is no way to define Non-default constructors in method calls.

It's possible to use Non-Default constructor with Client activated objects as both methods :-

"NEW" keyword and "Activator.CreateInstance" provide a way to specify Non-Default constructors.

(I) How can we call methods in remoting Asynchronously ?

All previous examples are synchronous method calls , that means client has to wait until the method completes the process.By using Delegates we can make Asynchronous method calls.

(A) What is Asynchronous One-Way Calls ?

One-way calls are a different from asynchronous calls from execution angle that the .NET Framework does not guarantee their execution. In addition, the methods used in this kind of call cannot have return values or out parameters.One-way calls are defined by using [OneWay()] attribute in class.

(B) What is marshalling and what are different kinds of marshalling ?

Marshaling is used when an object is converted so that it can be sent across the network or across application domains.Unmarshaling creates an object from the marshaled data.There are two ways to do marshalling :-

- √ Marshal-by-value (MBV) :- In this the object is serialized into the channel, and a copy of the object is created on the other side of the network. The object to marshal is stored into a stream, and the stream is used to build a copy of the object on the other side with the unmarshalling sequence.
- √ Marshaling-by-reference (MBR):- Here it creates a proxy on the client that is used to communicate with the remote object. The marshaling sequence of a remote object creates an ObjRef instance that itself can be serialized across the network.

Objects that are derived from "MarshalByRefObject" are always marshaled by reference.All our previous samples have classes inherited from "MarshalByRefObject"

To marshal a remote object the static method RemotingServices.Marshal() is used.RemotingServices.Marshal() has following overloaded versions:-

public static ObjRef Marshal(MarshalByRefObject obj)

public static ObjRef Marshal(MarshalByRefObject obj, string objUri)

public static ObjRef Marshal(MarshalByRefObject obj, string objUri,Type requestedType)

The first argument obj specifies the object to marshal. The objUri is the path that is stored within the marshaled object reference; it can be used to access the remote object. The requestedType can be used to pass a different type of the object to the object reference. This is useful if the client using the remote object shouldn't use the object class but an interface that the remote object class implements instead. In this scenario the interface is the requestedType that should be used for marshaling.

(A) What is ObjRef object in remoting ?

All Marshal() methods return ObjRef object.The ObjRef is serializable because it implements the interface ISerializable, and can be marshaled by value. The ObjRef knows about :-

- √ location of the remote object
- √ host name
- √ port number
- √ object name.

(B) What is a WebService ?

Web Services are business logic components which provide functionality via the Internet using standard protocols such as HTTP.

Web Services uses Simple Object Access Protocol (SOAP) in order to expose the business functionality.SOAP defines a standardized format in XML which can be exchanged between two entities over standard protocols such as HTTP.SOAP is platform independent so the consumer of a Web Service is therefore completely shielded from any implementation details about the platform exposing the Web Service.For the consumer it is simply a black box of send and receive XML over HTTP.So any webservice hosted on windows can also be consumed by UNIX and LINUX platform.

(B) What is UDDI ?

Full form of UDDI is Universal Description,Discovery and Integration.It is a directory that can be used to publish and discover public Web Services.If you want to see more details you can visit the http://www.UDDI.org .

(B) What is DISCO ?

Abbreviation of DISCO is Discovery.It is basically used to club or group common services together on a server and provide links to the schema documents of the services it describes may require.

(B) What is WSDL?

Web Service Description Language (WSDL)is a W3C specification which defines XML grammar for describing Web Services.XML grammar describes details such as:-

- √ Where we can find the Web Service (its URI)
- √ What methods and properties that service supports
- √ Data type support.
- √ Supported protocols

In short its a bible of what the webservice can do.Clients can consume this WSDL and build proxy objects that clients use to communicate with the Web Services. Full WSDL specification is available at http://www.w3.org/TR/wsdl.

(A) What the different phase/steps of acquiring a proxy object in Webservice ?

The following are the different steps needed to get a proxy object of a webservice at the client side :-

- √ Client communicates to UDI node for WebService either through browser or UDDI's public web service.
- √ UDII responds with a list of webservice.
- √ Every service listed by webservice has a URI pointing to DISCO or WSDL document.

- √ After parsing the DISCO document, we follow the URI for the WSDL document related to the webservice which we need.
- √ Client then parses the WSDL document and builds a proxy object which can communicate with Webservice.

(B) What is file extension of Webservices ?

.ASMX is extension for Webservices.

Note :- After this we are going to deal with a sample of webservice.In VS2005 webproject is created from the menu itself as compared to 2003 where it was present in the explorer.

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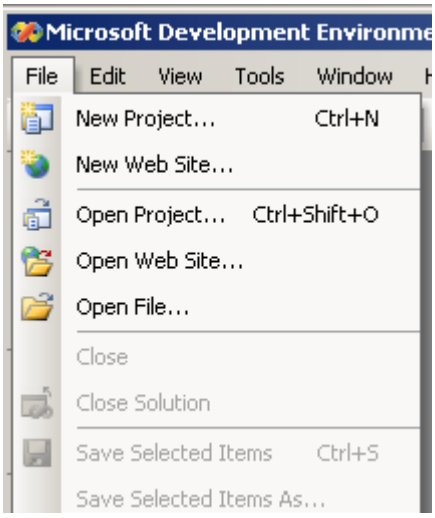

Figure :- 4.8 Create Web project menu in VS2005

(B)Which attribute is used in order that the method can be used as WebService ?

WebMethod attribute has to be specified in order that the method and property can be treated as WebService.

(A) What are the steps to create a webservice and consume it ?

Note :- For this question this book will make a attempt by creating a simple webservice and explaining steps to acheive it.A simple webservice will be created which takes two number and gives addition result of the two number.In CD sample webservice project with folder name "MathsWebService" is provided and same will be explained below. Definitely the

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interviewer will not expect such a detail answer but this book will explain you in detail so that you are on right track during interview.

This webservice will add two numbers and give to the calling client.All the below steps are according to VS2005 beta editor :-

√ First create a website by clicking on File -- New WebSite.

√ From "Visual Studio Installed Templates" click on "Asp.NET Web Service".See figure below.Name the figure as "Maths Web Service".

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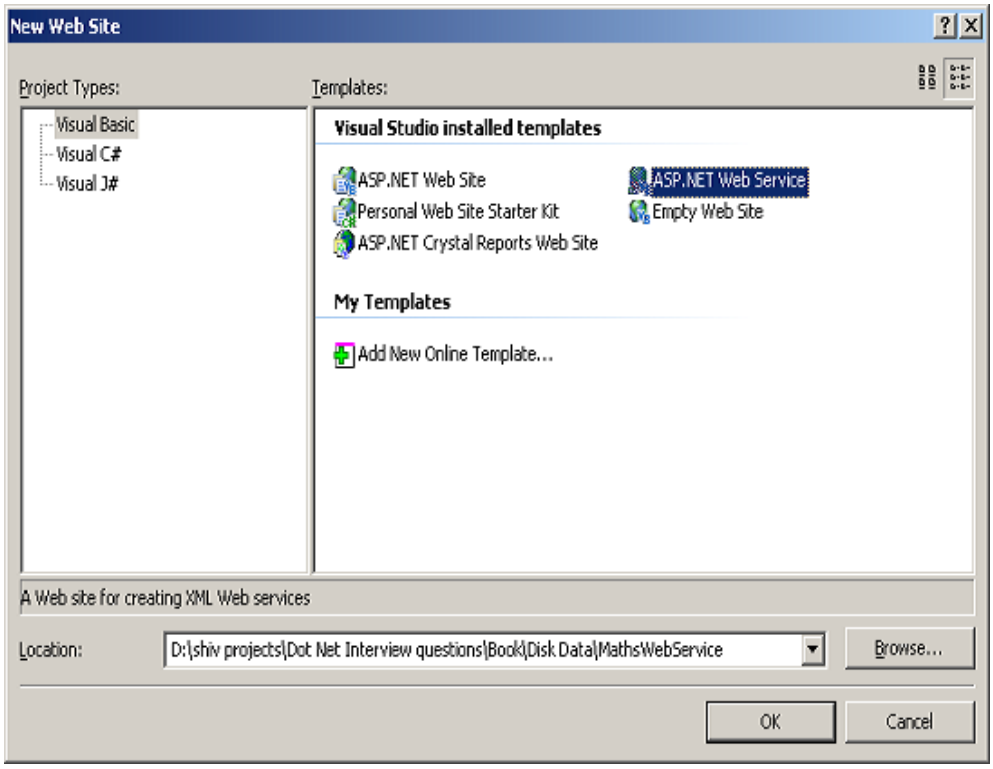

Figure :- 4.9 Create WebService Project

√ By default the .NET editor has made a default webservice method called as "HelloWord" which returns a string datatype.Let's rename "Service.vb" to "Maths.vb" and "Service.asmx" to "Maths.asmx".Let's replace the "HelloWorld" with following code below :-

```
<WebMethod()> _
  Public Function AddTwoNumbers(ByVal Number1 As Integer, ByVal
    Number2 As Integer) As Integer
      Return Number1 + Number2
```

```
End Function
```

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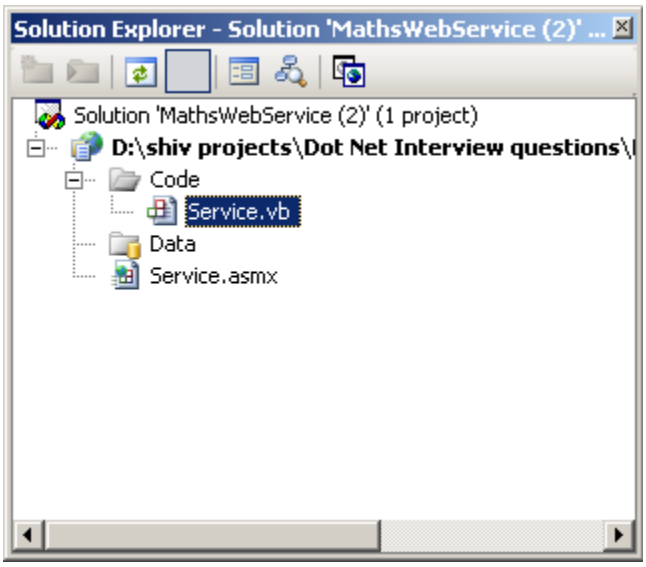

Figure :- 4.10 Rename all your default "Service" to "Maths"

√ After the webservice is done click on add Webreference.Normally for components we do a "Add Reference" and for Webservices we do "Add Web Reference".

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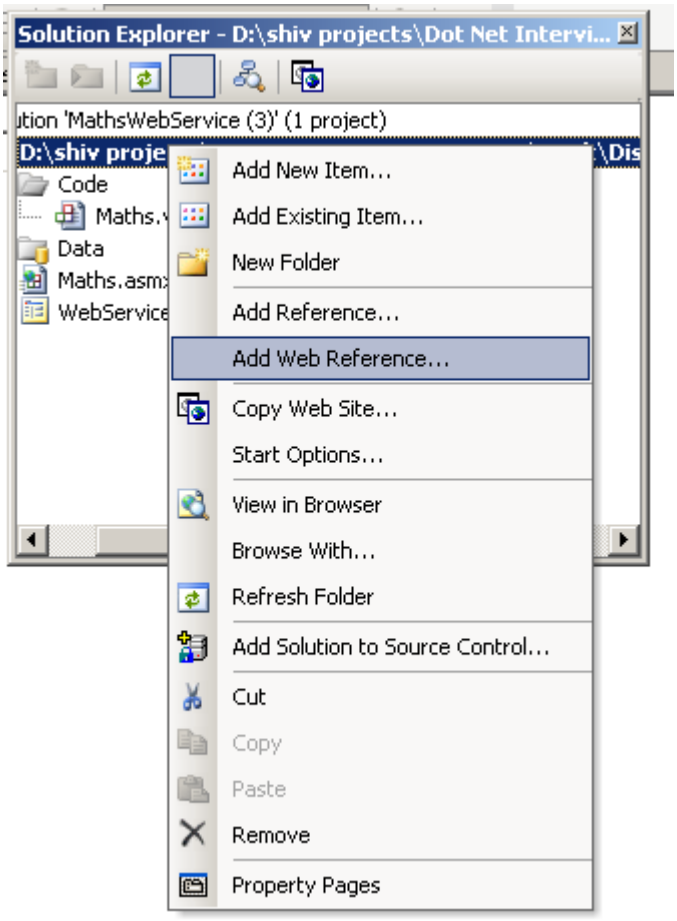

Figure :- 4.11 Click on Add Web Reference

√ You will be shown with a list of webservices which are known to the solutions.As we are looking for our "Maths" webservice which exist in the same

solution , we click “Webservices in this solution”.

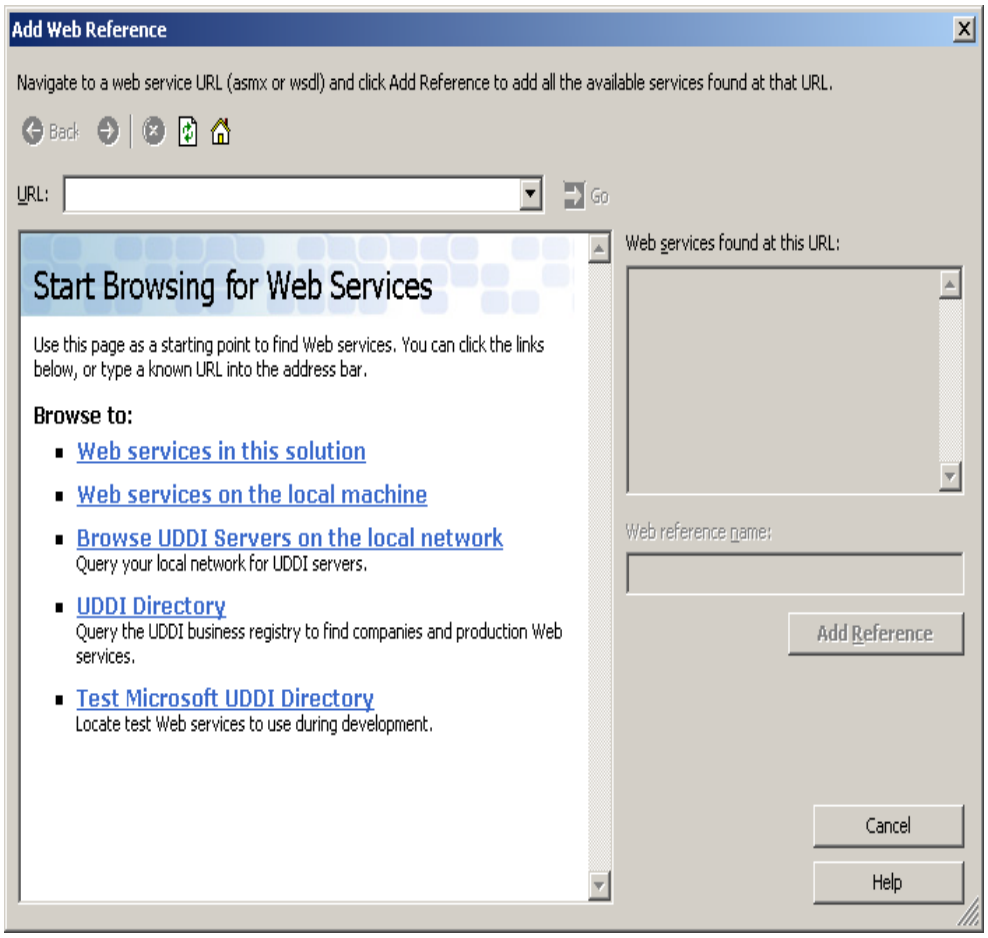

Figure :- 4.12 List of webservices for browsing

√ Your editor has located the “Maths” webservice.Select the webservice.

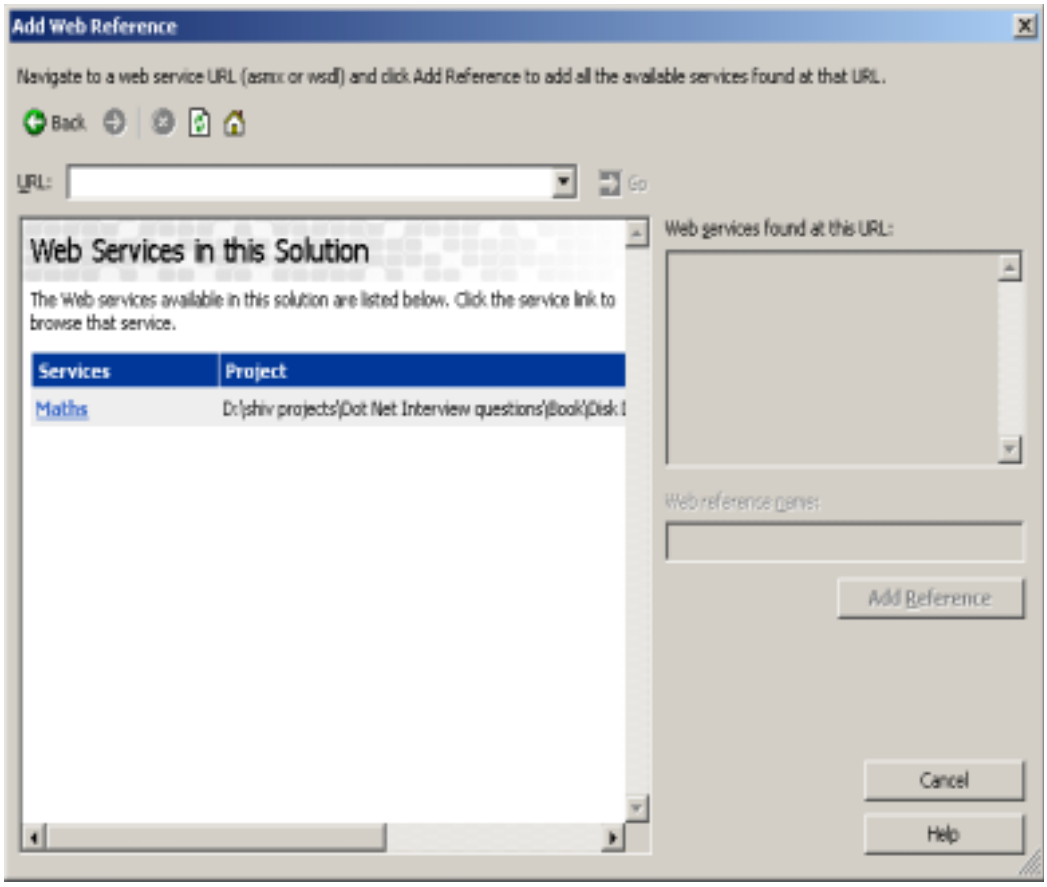

Figure :- 4.13 Solution showing the availability of Maths Webservice.

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√ After you have clicked on “Maths” webservice you will see a search progress bar as shown in figure below.This process will start the webservice , reference it and create a proxy for the client , so that using it client can absorb the webservice.

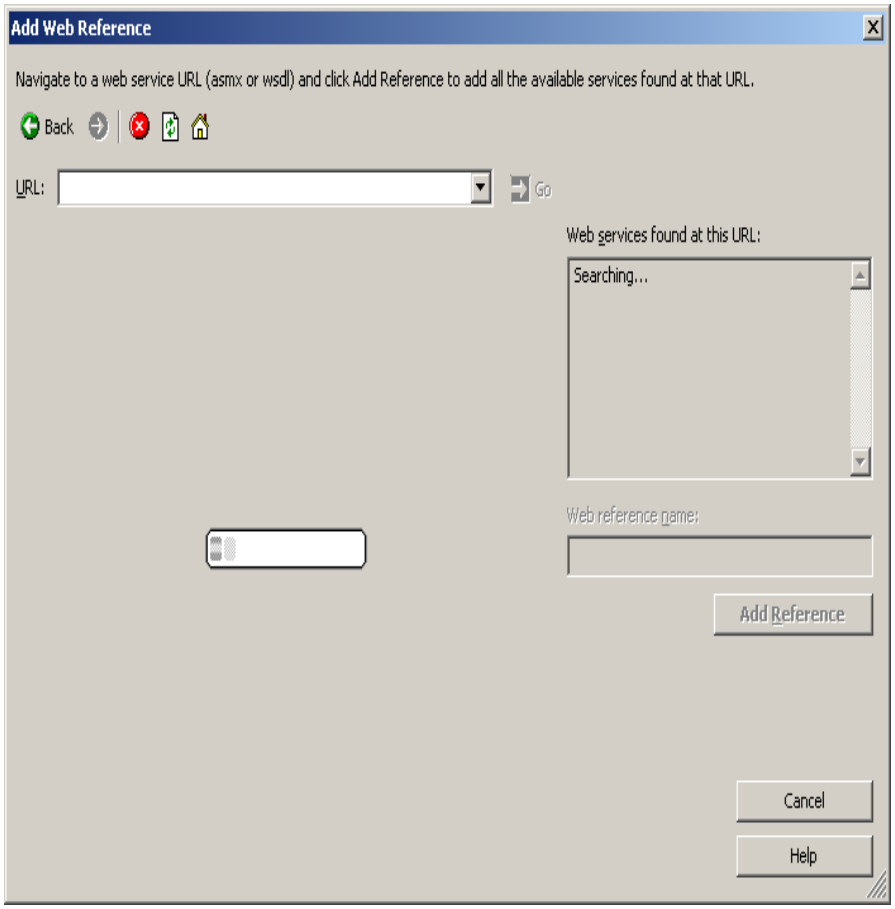

Figure :- 4.14 Starting the webservice and creating the proxy for your solution.

√ Finally you are able to see your webservice which is ready for use.Click on Add Reference and you will see a “Localhost” reference in your .NET solution.

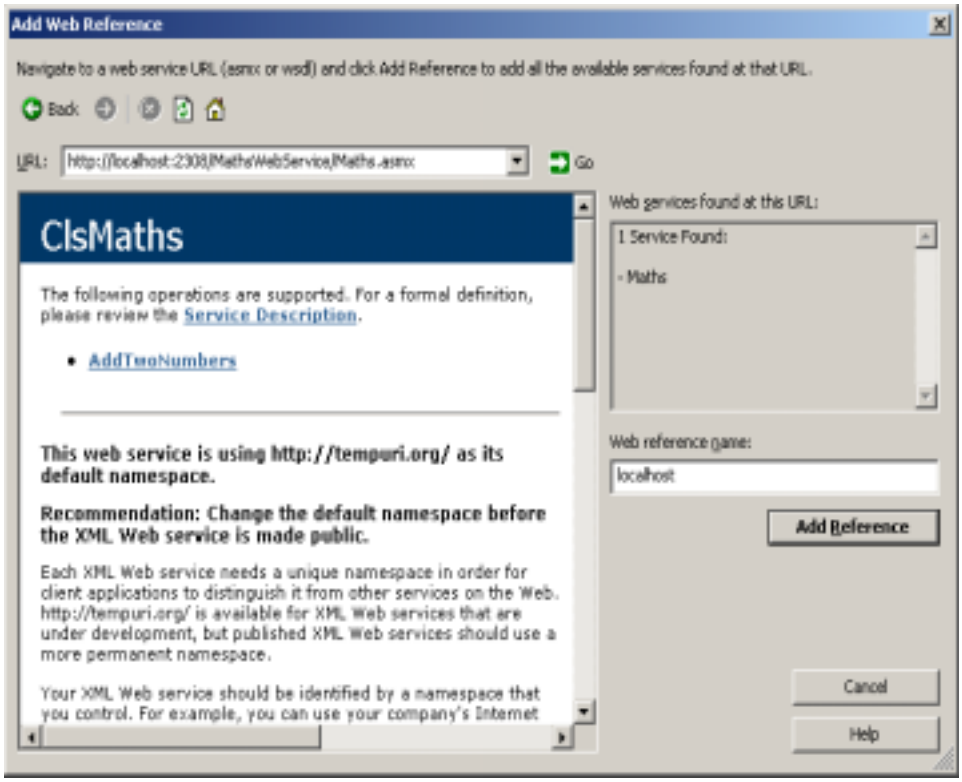

Figure :- 4.15 Starting the webservice and creating the proxy for your solution.

√ We need to make a client who will absorb this “Maths Webservice”.Add “WebserviceClient.aspx” and create a UI as shown below.In the button click put in the following code.”LocalHost.ClsMaths” is the proxy object by which you can make calls to the webservice.

```
Sub cmdCalculate_Click(ByVal sender As Object, ByVal e As
```

```
System.EventArgs)
        Dim pobjMaths As New localhost.ClsMaths
        lblResultDisplay.Text =
Convert.ToString(pobjMaths.AddTwoNumbers(Convert.ToInt16(txtNumber1.Text),
Convert.ToInt16(txtNumber2.Text)))
    End Sub
```

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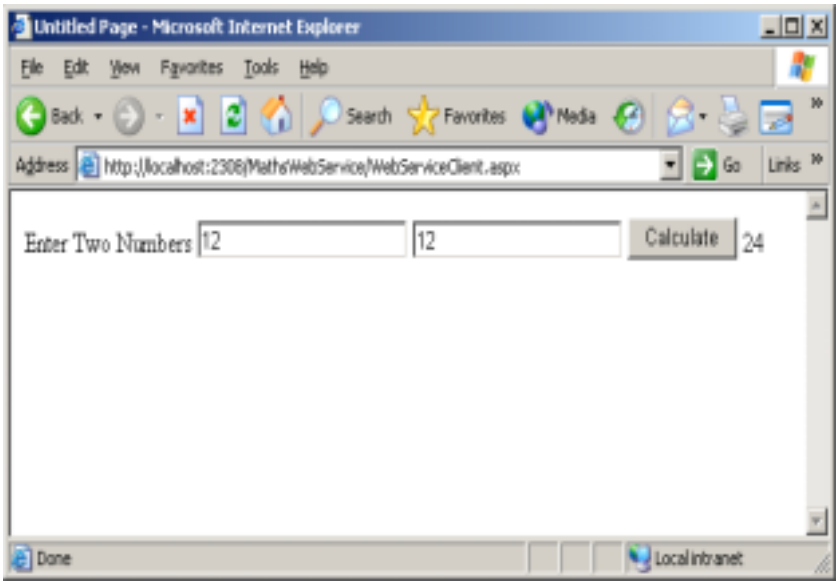

Figure :- 4.16 Complete Webservice in action.

Note :- The whole point of creating this "Maths Webservice" step by step was to have a understanding of practical angle of how webservices are created.It's very very rare that you will be asked to explain every step of how to write a webservice.But in case your interviewer is too bend down to also know what are the actual steps in creating a Webservice.

(A) Do webservice have state ?

Twist :- How can we maintain State in Webservices ?

Webservices as such do not have any mechanism by which they can maintain state.Webservices can access ASP.NET intrinsic objects like Session , application etc. if they inherit from “WebService” base class.

```
<%@ Webservice class="TestWebServiceClass" %>
Imports System.Web.Services
Public class TestWebServiceClass
    Inherits WebService

<WebMethod> Public Sub SetSession(value As String)
    session("Val") = Value
End Sub
end class
```

Above is a sample code which sets as session object calles as “val”. TestWebserviceClass is inheriting from WebService to access the session and application objects.