

Microsoft WebServices are typically deployed using the facilities of Microsoft IIS Web server. It is a technology for distributed objects.

The object “donaldDuck.asmx” is referred to by its URL – eg “http://www.mcduck.com/donaldDuck.asmx”.

By convention, direct access to the URL returns a conventional web page describing the different methods of the object, parameters, etc, thus enabling programmers to use them.

Access to the URL with a “?wsdl” appended –
eg “http://www.mcduck.com/donaldDuck.asmx?wsdl” –
returns an XML description of the different methods of the objects, their parameters, etc, thus enabling a programs to use them. Microsoft also provides a command line tool for retrieving these descriptions and automatically generates proxy classes for use by your clients accessing the WebService object and its methods.

```
C:\>wsdl /language:C# /out:DuckProxyClass.cs  
http://www.mcduck.com/donaldDuck.asmx?wsdl
```

1. Client access to a WebService

Assume an object with two methods: “int GetValue(int aaaa, int bbbb)”, and “void setVale(int cccc)”.

1.1 POST metod

```
<html>  
  
<body>  
<form action="http://www.mcduck.com/donaldDuck.asmx/GetValue" method="POST">  
  
    <input name="aaaa"></input>  
    <input name="bbbb"></input>  
  
    <input type="submit" value="Enter"></input>  
</form>  
  
</body>  
</html>
```

1.2 GET method

1.2.1 Using forms

```
<html>  
  
<body>  
<form action="http://www.mcduck.com/donaldDuck.asmx/GetValue" method="GET">  
  
    <input name="aaaa"></input>  
    <input name="bbbb"></input>  
  
    <input type="submit" value="Enter"></input>  
</form>  
  
</body>  
</html>
```

1.2.2 Using URL directly

<http://www.mcduck.com/donaldDuck.asmx/GetValue?aaaa=17+bbbb=18>

1.3 SOAP method (ie POST + SOAP)

The following is a sample SOAP request and response. The **placeholders** shown need to be replaced with actual values.

```
POST /donaldDuck.asmx/GetValue HTTP/1.1
Host: ws.microsoft.com
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "http://www.microsoft.com/GetValue"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetValue xmlns="http://www.microsoft.com" />
  </soap:Body>
</soap:Envelope>

HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetValueResponse xmlns="http://www.microsoft.com">
      <GetValueResult>string</GetValueResult>
    </GetValueResponse>
  </soap:Body>
</soap:Envelope>
```