**Web Service**

**What is Web Service?**

* Web Service is an application that is designed to interact directly with other applications over the internet. In simple sense, Web Services are means for interacting with objects over the Internet.
* Web Service is
  + Language Independent
  + Protocol Independent
  + Platform Independent
  + It assumes stateless service architecture.

**Example of Web Service**

* **Weather Reporting:** You can use Weather Reporting web service to display weather information in your personal website.
* **Stock Quote:** You can display latest update of Share market with Stock Quote on your web site.
* **News Headline:** You can display latest news update by using News Headline Web Service in your website.
* In summary you can any use any web service which is available to use. You can make your own web service and let others use it. Example you can make Free SMS Sending Service with footer with your companies advertisement, so whosoever use this service indirectly advertise your company... You can apply your ideas in N no. of ways to take advantage of it.

Web Service Communication  
Web Services communicate by using standard web protocols and data formats, such as

* HTTP
* XML
* SOAP

Advantages of Web Service Communication  
Web Service messages are formatted as XML, a standard way for communication between two incompatible system. And this message is sent via HTTP, so that they can reach to any machine on the internet without being blocked by firewall.  
  
Terms which are frequently used with web services

* **What is SOAP?**
  + SOAP are remote function calls that invokes method and execute them on Remote machine and translate the object communication into XML format. In short, SOAP are way by which method calls are translate into XML format and sent via HTTP.
* **What is WSDL?**
  + WSDL stands for Web Service Description Language, a standard by which a web service can tell clients what messages it accepts and which results it will return.
  + WSDL contains every details regarding using web service
    - Method and Properties provided by web service
    - URLs from which those method can be accessed.
    - Data Types used.
    - Communication Protocol used.
* **What is UDDI?**
  + UDDI allows you to find web services by connecting to a directory.
* **What is Discovery or .Disco Files?**
  + .Disco File (static)
    - .Disco File contains
      * URL for the WSDL
      * URL for the documentation
      * URL to which SOAP messages should be sent.
    - A static discovery file is an [XML document](http://dotnetguts.blogspot.in/2007/09/all-about-web-service-in-net.html) that contains links to other resources that describe web services.
  + .VsDisco File (dynamic)
    - A dynamic discovery files are dynamic discovery document that are automatically generated by VS.Net during the development phase of a web service.
* **What is difference between Disco and UDDI?**
  + Disco is Microsoft's Standard format for discovery documents which contains information about Web Services, while UDDI is a multi-vendor standard for discovery documents which contains information about Web Services.

**Steps for Creation of webserive**

* Craete a web site with suitable name
* Right click on solution explorer and selection add new item
* From pop window select web service and give suitable name and click on add button
* Web service created with default method called “hello world” you can also define your method here

**Consumption or Usage:**

* For adding web service in you application
* Rig click on solution explorer select add web reference
* Pop window open
* Give URL of your web service location and click on go
* The web service will available with available method and then click on add reference button web service will create

For using in your web page

* Imports webserive.
* Create a object of web serive where you want to use.
* By using object pass parameter in web service methods