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Top 50 Web Services Interview Questions

1) Define Web Service?

A web service is a kind of software that is accessible on the Internet. It makes use of the XML messaging system and offers an easy to understand, interface for the end users.

2) What is new in this field for past few years?

The initiation of XML in this field is the advancement that provides web service a single language to communicate in between the RPCs, web services and their directories.

3) Give me an example of real web service?

One example of web services is IBM Web Services browser. You can get it from IBM Alphaworks site. This browser shows various demos related to web services. Basically web services can be used with the help of SOAP, WSDL, and UDDI. All these, provide a plug-and-play interface for using web services such as stock-quote service, a traffic-report service, weather service etc.

4) How you define web service protocol stack?

It is basically set of various protocols that can be used to explore and execute web services. The entire stack has four layers i.e. Service Transport, XML Messaging, Service Description and Service Discovery.

5) Can you define each of these layers of protocol stack?

The Service Transport layer transfer messages between different applications, such as HTTP, SMTP, FTP, and Blocks Extensible Exchange Protocol (BEEP). The XML Messaging layer encodes messages in XML format so that messages can be understood at each end, such as XML-RPC and SOAP. The Service Description layer describes the user interface to a web service, such as WSDL. The Service Discovery layer centralizes services to a common registry and offer simple publish functionality, such as UDDI.

6) Define XML - RPC?

It is a protocol that makes use of XML messages to do Remote Procedure Calls.

7) Define SOAP?

SOAP is an XML based protocol to transfer between computers.

8) Define WSDL?

It means Web Services Description Language. It is basically the service description layer in the web service protocol stock. The Service Description layer describes the user interface to a web service.

9) What kind of security is needed for web services?

The security level for web services should be more than that of what we say Secure Socket Layer (SSL). This level of security can be only achieved from Entrust Secure Transaction Platform. Web services need this level of security to ensure reliable transactions and secure confidential information .

10) Do you have any idea about foundation security services?

As implies from its name, these services are the foundation or basics of integration, authorization, digital signatures and encryption processes.

11) Define Entrust Identification Service?

Entrust Identification Service comes from the Entrust Security Transaction Platform. This platform allows companies to control the identities that are trusted to perform transactions for Web services transactions.

12) What UDDI means?

UDDI stands for Universal, Description, Discovery, and Integration. It is the discovery layer in the web services protocol stack.

13) Define Entrust Entitlements Service?

This service verifies entities that attempt to access a web service. For Example, the authentication service, the Entitlements Service ensures security in business operations.

14) Define Entrust Privacy Service?

As its name implies, it deals with security and confidentiality. This service encrypts data to ensure that only concerned parties can access the data.

15) What do you mean by PKI?

It means Public-Key Infrastructure.

16) What tools are used to test a web service?

I have used SoapUI for SOAP WS and Firefox poster plugin for RESTFul Services.

17) Differentiate between a SOA and a Web service?

SOA is a design and architecture to implement other services. SOA can be easily implemented using various protocols such as HTTP, HTTPS, JMS, SMTP, RMI, IIOP, RPC etc. While Web service, itself is an implemented technology. In fact one can implement SOA using the web service.

18) Discuss various approaches to develop SOAP based web service?

We can develop SOAP based web service with two different types of approaches such as contract-first and contract-last. In the first approach, the contract is defined first and then the classes are derived from the contract while in the later one, the classes are defined first and then the contract is derived from these classes.

19) If you have to choose one approach, then what will be your choice?

In my point of view, the first approach that is the contract-first approach is more feasible as compared to the second one but still it depends on other factors too.

20) Is there any special application required to access web service?

No, you don't need to install any special application to access web service. You can access web service from any application that supports XML based object request and response.

21) Can you name few free and commercial implementations for web services?

The implementations I know are Apache SOAP, JAX-WS Reference Implementation, JAX-RS Reference Implementation, Metro, Apache CXF, MS.NET and Java 6.

22) Name browser that allows access to web service?

JavaScript XmlHttpRequest object is required to access web service via browsers. The browsers that support this object are Internet Explorer, Safari and Mozilla-based browsers like FireFox.

23) What is REST?

REST stands for Representational State Transfer. REST itself is not a standard, while it uses

various standards such as HTTP, URL, XML/HTML/GIF/JPEG (Resource Representations) and text/xml, text/html, image/gif, image/jpeg, etc (MIME Types).

24) How one can provide API to users?

To provide an API to the users, one can easily do this with an "open table". All you need to do is to write open table which is basically an XML schema that point to a web service.

25) Name the various communication channels in web service?

Web service is integrated with three protocols such as HTTP/POST, HTTP/GET, and SOAP. It provides three different communication channels to clients. Client can choose any communication method as per requirements.

26) How can you document web service?

Web services are contemplated as self-documenting because they provide entire information regarding the available methods and parameters used for XML based standard, known as WSDL. One can also provide more information to explain web services via their own WebService and WebMethod attributes.

27) What are the situations, when we need ASP.NET web services?

ASP.NET web services are used when one need to implement three tier architecture in a web service. It allows handy ways to use middle tier components through internet. The main advantage of .NET Web services is that they are capable enough to communicate across firewalls because they use SOAP as transport protocol.

28) What are distributed technologies?

The increasing ratio of distributed applications has raised demand for distributed technologies. It allows segmenting of application units and transferring them to different computers on different networks.

29) Differentiate between web services, CORBA and DCOM?

Web services transfer/receive messages to/from application respectively, via HTTP protocol. It uses XML to encode data.

CORBA and DCOM transfer/receive messages to/from application respectively, via non-standard protocols such as IIOP and RPC.

30) Can you tell few benefits of web services?

The biggest advantage of web service is that is supported by wide variety of platforms. Moreover, in near future, web services may spread its boundary and enhance new methods that

will provide ease to clients. The enhancement will not affect the clients, even if they offer old methods and parameters.

31) Can you name some standards used in web services?

The standards used in web services are WSDL (used to create interface definition), SOAP (used to structure data), HTTP (communication channels), DISCO (used to create discovery documents) and UDDI (used to create business registries).

32) Explain in brief, what DISCO is?

DISCO means discovery. It groups the list of interrelated web services. The organization that provides web services, issues a DISCO file on its server and that file contains the links of all the provided web services. This standard is good when client knows the company already. Also it can be used within a local network as well.

33) Explain in brief, what UDDI is?

UDDI (Universal Description, Discovery, and Integration) provides consolidated directory for web services on the internet. Clients use UDDI to find web services as per their business needs. It basically hosts the web services from various companies. In order to share web services, you need to publish it in UDDI.

34) Explain the .NET web services supported data types?

.Net web services uses XML-based standards to transfer/receive information. Thus, .NET web services can only works with data types known by XML schema standard. Like FileSteam, Eventlog etc. are not recognized by the XML schema standards and hence, not supported in web services.

35) How a .NET web service is tested?

ASP.NET uses a test page routinely, when one calls for the URL of .asmx file in any browser. This page shows complete information regarding web services.

36) How a .NET web service is consumed?

Since we know that web services are constructed on XML standards. Therefore, clients need to have complete understanding of XML-based messages to interchange messages. Clients can communicate with web services through .NET framework that offers proxy mechanisms. These proxy mechanisms have detailed information regarding data sharing within web services that can be easily used by the clients.

37) Can you name the two Microsoft solutions for distributed applications?

The two Microsoft solutions for distributed applications are .NET Web Services and .NET

Remoting.

38) Differentiate between .NET Web Services and .NET Remoting?

As far as protocol is concerned, .NET Web Service uses HTTP, while, .NET Remoting uses any protocol i.e. TCP/HTTP/SMTP. When it comes to performance, .NET Remoting is comparatively, faster than.NET Web Service. Also, as .NET Web Services are hosted via IIS, therefore, it is far more reliable than the .NET Remoting.

39) Name the components to be published while deploying a Web Service?

The components that need to be published during a web service deployment are Web Application Directory, Webservice.asmx File, Webservice.Disco File, Web.Config File and Bin Directory.

40) What are the steps performed by the client to access a web service?

First of all a web reference to the web service is created by the client in his application. Then a proxy class is generated. After that an object of the proxy class is created and at last, the web service is accessed via that proxy object.

41) How web services are implemented in .NET?

To implement web services in .NET, HTTP handlers are used that interrupt requests to .asmx files.

42) Explain few disadvantages of Response Caching?

Response Caching is useless or incompetent when method accepts extensive amount of values because caching means to store lot of information. Also, if the method depends on external source of information, and that are not provided within the parameters then such methods are bypassed.

43) What is the alternate solution to Response Caching?

One can use Data Caching (System. Web. Caching. Cach) instead of Response Caching.

44) Brief few drawbacks of using GET and POST methods to communicate with the web service?

These methods are less secure and inhibit users to pass structures and objects as arguments. Also, it doesn't allow users to pass ByRef arguments.

45) How can one access a class as a web service?

To access a class as a web service, one should inherit the class from the

System.Web.Services.WebService class and qualify the class with the WebService attribute.

46) How can one access the web service class method via internet?

To access web service class method via internet, one should qualify a method with the WebMethod attribute.

47) How a SOAP message is structured?

A SOAP message is consists of SOAP Envelope, SOAP Headers, and SOAP Body.

48) Can you name different kinds of web services?

There are two types of web services in total i.e. SOAP based web service and RESTful web service.

This question is already mentioned earlier.

49) What's different in RESTful web services?

The RESTful web services contains no contract or WSDL file.

50) Give me few reasons to use RESTful web service?

The RESTFul web services are simple to implement and test. It supports various data formats such as XML, JSON etc.

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