1. **What is Asp.net Web API?**

ASP.NET Web API is a framework that makes it easy to build HTTP services that reach a broad range of clients, including browsers and mobile devices. **ASP.NET Web API is an ideal platform for building RESTful applications on the .NET Framework.**

1. Restful (Representational State Transfer) VS SOAP (Simple Object Access Protocol)

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| Restful | SOAP |
| REST is easy to understand: it uses HTTP and basic CRUD operations, so it is simple to write and document. This ease of use also makes it easy for other developers to understand and write services against. | One of the most important characteristics of SOAP is that it uses XML rather than HTTP to define the content of the message |
| RESTs sweet spot is when you are exposing a public API over the internet to handle CRUD operations on data. REST is focused on accessing named resources through a single consistent interface. | SOAP brings it’s own protocol and focuses on exposing pieces of application logic (not data) as services. SOAP exposes operations. SOAP is focused on accessing named operations, each implement some business logic through different interfaces.    SOAP has very little if anything to do with the Web. REST provides true “Web services” based on URIs and HTTP. |
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**Why use Restful?**

REST permits many different data formats where as SOAP only permits XML. JSON usually is a better fit for data and parses much faster. REST allows better support for browser clients due to it’s support for JSON.

REST has better performance and scalability. REST reads can be cached, SOAP based reads cannot be cached.

**Why use SOAP?**

SOAP is good for applications that require *formal contracts* between the API and consumer since it can enforce the use of formal contracts by using WSDL (Web Services Description Language)

Additionally, SOAP has built in WS-Reliable messaging to increase security in asynchronous execution and processing.

1. Delegate & Event

**Delegate**: It is a type that holds reference of a Method/Function. Simply they can be called as Function Pointers. In order to create a delegate for a method, both Method and Delegate should have same return type and same set of parameters.

**Events:** Events provide a wrapper on delegates thus providing abstraction / encapsulation. Now Listeners will not have full control of action yet listen to it.

1. Get Vs Post

* **GET** - Requests data from a specified resource
* **POST** - Submits data to be processed to a specified resource

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| Get | Post |
| query string (name/value pairs) is sent in the **URL** of a GET request  Machine generated alternative text: / test/ demo_form. php ?  **have length restrictions**  (**maximum URL length is 2048 characters**) | the query string (name/value pairs) is sent in the HTTP message **body** of a POST request:  Machine generated alternative text: POST / test/demo_form.php HTTP/I.I  Host: w3sch001s.com  namel=va1ue1&name2=va1ue2 |
| Machine generated alternative text: GET requests can be cached  GET requests remain in the browser history  GET requests can be bookmarked  GET requests should never be used when dealing with sensitive data  GET requests have length restrictions  GET requests should be used only to retrieve data | Machine generated alternative text: POST requests are never cached  POST requests do not remain in the browser history  POST requests cannot be bookmarked  POST requests have no restrictions on data length |
| GET is less secure compared to POST **because** data sent is part of the URL    Never use GET when sending passwords or other sensitive information! | POST is a little safer than GET because the parameters are not stored in browser history or in web server logs |

Machine generated alternative text:
Other HTTP Request Methods 
The following table lists some other HITP request methods: 
Method 
HEAD 
PUT 
DELETE 
OPTIONS 
CONNECT 
Description 
Same as GET but returns only HTTP headers and no document body 
Uploads a representation of the specified URI 
Deletes the specified resource 
Returns the HTTP methods that the server supports 
Converts the request connection to a transparent TCP/IP tunnel 