

## **Module 6 Theory**

1) **Http verbs** plays a very important role in the Restful Web API. The most common Http verbs are GET, PUT, POST and DELETE and these correspond to CRUD (Create, Read, Update and Delete) operations respectively.

The following Http Verbs exists:

- Get
- Post
- Put
- Delete
- Trace
- Options
- Connect
- Patch

**GET** : As the name specifies, this verb is used to retrieve the data or information. It does not have any other effect except getting data.

**POST** : This verb is used to generate or create the resource. For example, If we have to add some information to the database then we must define the method as a POST method. The most common form to submit the data into the POST method is to pass the data into any entity object.

**PUT** : This verb is used to update the existing resource. For example, If we have to update some information to the database then we can define the method as a PUT method. We can send the data in the form of object as well as in a parameter too.

**DELETE** : This verb is used to delete the existing resource. For example, If we have to delete some information to the database then we can define the method as a DELETE method. We can send the data in the form of object as well as in a parameter too.

[Reference :<https://www.c-sharpcorner.com/UploadFile/4b0136/restful-api-in-Asp-Net-introduction-of-rest-web-api/>  
<https://www.tutorialsteacher.com/webapi/web-api-tutorials>]

2) **JSON** (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. It is based on a subset of the JavaScript Programming Language, Standard ECMA-262 3rd Edition – December 1999.

- JSON stands for JavaScript Object Notation
- JSON is a format to exchange & store data across platforms.

- JSON is the best alternative to XML
- JSON stores values in the key/value pair format.

With the introduction of JSON, many developers prefer to use JSON instead of XML due to following reasons :

- XML is expressed in more words than JSON. Hence, JSON is faster to write for programmers.
- JSON is lightweight and easy to write compared to XML.
- We can store values as key/value pair in JSON. Whereas, in XML, we have to store values between opening and closing tags.

JSON follows syntax based on JavaScript and it cannot be processed the same way by C#.In order to work with JSON in ASP.NET or C#, there are three methods :

- Using a free library, which would do all the complex work for you.
- Working with DataContracts that are built-in to the .NET framework.
- Writing your own “parser” for converting JSON into suitable format required.