JSON

JSON

◉ JSON stands for JavaScript Object Notation

◉ JSON is a lightweight data-interchange format

◉ JSON is language independent

◉ JSON is "self-describing" and easy to understand

◉ JSON is used to store information in an organized, easy to access manner

◉ For AJAX, JSON is faster and easier than XML

Uses of JSON

◉ It is used while writing JavaScript based applications that includes browser extensions and websites.

◉ JSON format is used for serializing and transmitting structured data over network connection.

◉ It is primarily used to transmit data between a server and web applications.

◉ Web services and APIs use JSON format to provide public data.

◉ It can be used with modern programming languages.

- Data is in name/value pairs

- Data is separated by commas

- Curly braces hold objects

- Square brackets hold arrays

JSON Datatypes

◉ JSON data is written as name/value pairs.

- Ex: "name":"Joe"

- JSON values can be:

  ★ A number (integer or floating point)

  ★ A string (in double quotes)

  ★ A Boolean (true or false)

  ★ An array (in square brackets)

  ★ An object (in curly braces)

  ★ Null

◉ JSON values **<u>cannot</u>** be one of the following data types:

- ✓ a function

- ✓ a date

- ✓ undefined

JSON Syntax

◉ Properties are declared using name:value pairs

◉ To access information, use the name of the property

```
var data ={
        "name": "Abhishek"
        "Regno" : "BIT0001"
        "course":"webtech"
        };
document.write("NAME:",data.name)
```

Multiple objects can be stored using arrays

```
var  data =[{
      "name": "Abhishek"
      "Regno" : "BIT0001"
      "course":"webtech"
       },
        {"name": "Arushi"
      "Regno" : "BIT0002"
      "course":"webtech"
       }];
document.write("NAME:",data[0].name)
document.write("REGNO:",data[1].Regno)
document.write("REGNO:",data[1].["Regno"])
```

To Modify Data

```
data[0].programme = "M.Tech"
data[1]["branch"]="CSE"
```

Converting JSON to JS Object

```
var datastr= '{ "school": "SCOPE",
"programme":[ "B.Tech", "M.Tech", "M.SC"]}';

JS  function  JSON.parse(text)  used  to
 convert JSON text to JS object

var dataobj= JSON.parse(datastr)
document.write(dataobj.school)
```

Converting JS Object to JSON

```
var dataobj= '{ school: "SCOPE",
  programme:[ "B.Tech", "M.Tech", "M.SC"],
  venue:"SJT"}';

JS function JSON.stringify(object) used to
 convert JS object to JSON string

var datastr= JSON.stringify(dataobj)
document.write(datastr)
```