Working with JSON

Lesson 03

Lesson Objectives

- JSON Introduction
- JSON Types
- Working with JSON Object
- Using JSON in jQuery

3.1. JSON Introduction
JSON Introduction

- Java Script Object Notation
- JSON is a lightweight format for exchanging data between the client and server.
- JSON is a syntax for passing around objects that contain name/value pairs, arrays and other objects.
- It is often used in AJAX applications because of its simplicity and its format is based on JavaScript object literals.
- JSON is language independent and text based. It is easy to parse and generate.
- Supported by most of the languages.

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AJAX application:

AJAX stands for **A**synchronous **Ja**vaScript and **X**ML. AJAX is a new technique for creating better, faster, and more interactive web applications with the help of XML, HTML, CSS, and Java Script.

Ajax uses XHTML for content, CSS for presentation, along with Document Object Model and JavaScript for dynamic content display.

Conventional web applications transmit information to and from the server using synchronous requests. It means you fill out a form, hit submit, and get directed to a new page with new information from the server.

With AJAX, when you hit submit, JavaScript will make a request to the server, interpret the results, and update the current screen. In the purest sense, the user would never know that anything was even transmitted to the server.

XML is commonly used as the format for receiving server data, although any format, including plain text, can be used.

AJAX is a web browser technology independent of web server software.

A user can continue to use the application while the client program requests information from the server in the background.

Intuitive and natural user interaction. Clicking is not required, mouse movement is a sufficient event trigger.

3.2. JSON Types

JSON Types

- Number : integer, real or floating point
- String : double-quoted Unicode with backslashes
- Boolean : true and false
- Array : ordered sequence of comma-separated values enclosed in square brackets
- Object : collection of comma-separated "key":value pairs enclosed in curly braces
- null

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3.3. Working with JSON Object

JSON Object Notation

- A JSON object is an unordered set of name/value pairs
  - A JSON object begins with { (left brace) and ends with } (right brace)
  - Each name is followed by : (colon) and the name/value pairs are separated by , (comma) and enclosed with in quotes.
- var jsonObject = {"Name":"Karthik", "Company":"Capgemini"}
- It is very easy to parse JSON. In JavaScript, the parsing process is immediate: All we have to do is pass the JSON string to the JavaScript eval() function
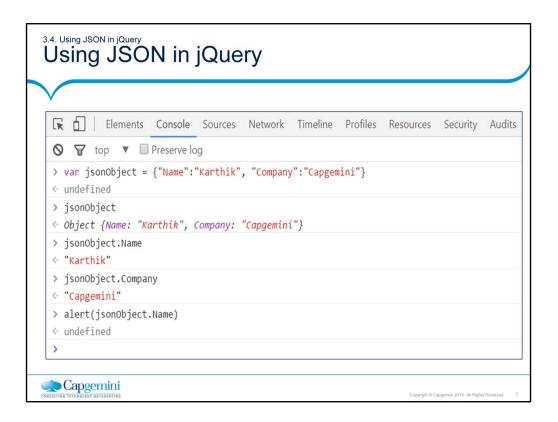 - var parsedJson = eval(jsonObject);

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3.4. Using JSON in jQuery
Using JSON in jQuery

- A JSON object can be passed as input into jQuery Methods, so that we can avoid method chaining.

- We can parse a JSON string in jQuery using the following syntax

    var obj = jQuery.parseJSON(jsonString);

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3.4. Using JSON in jQuery

Using JSON in jQuery

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>  var jsonObject = {"Name":"Karthik", "Company":"Capgemini"}
<  undefined
>  jsonObject
<  Object {Name: "Karthik", Company: "Capgemini"}
>  jsonObject.Name
<  "Karthik"
>  jsonObject.Company
<  "Capgemini"
>  alert(jsonObject.Name)
<  undefined
>
```

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3.4. Using JSON in jQuery
Demo

```
$(document).ready(function()
{
    var jsonString =      '{"company":"Capgemini"}';
    //Parsing a JSON string.
    var obj = jQuery.parseJSON(jsonString);
    alert('Company : '+obj.company );
});
```

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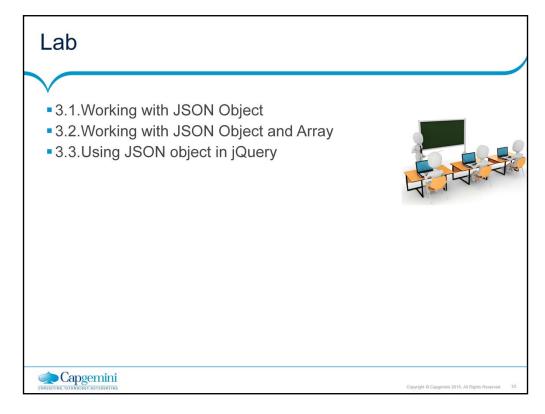CONSULTING.TECHNOLOGY.OUTSOURCING

Add the notes here.

Summary

- JSON is a lightweight format for exchanging data between the client and server.
- JSON objects are typed
- JSON is language independent and text based. It is easy to parse and generate
- It is often used in AJAX applications because of its simplicity

Summary

Add the notes here.

Lab

- 3.1.Working with JSON Object
- 3.2.Working with JSON Object and Array
- 3.3.Using JSON object in jQuery

Add the notes here.

Review Question

- Question 1 : JSON is language dependent?
  - A. True
  - B. False

- Question 2 : _____ is not a valid JSON type
  - A. Boolean
  - B. String
  - C. Date
  - D. Array

Add the notes here.