

Session 5

Interacting with HTML Objects Using JavaScript

Objectives

By the end of this session, students will learn to:

- ▶ Describe data access in brief
- ▶ Describe how JavaScript events work with HTML objects
- ▶ Describe how HTML Document Object Model (DOM) elements work on JavaScript
- ▶ Explain how JavaScript is added in HTML DOM
- ▶ Define JSON and its uses

Introduction to Data Access

Data stored in a Web page is accessed by using different attributes associated with HTML objects. This helps to:

Perform form validation
on client-side

Provide a better user
experience

Deliver faster
response

Interacting with an HTML Object Using JavaScript 1-3

All the HTML elements are defined as objects in HTML Document Object Model (DOM).

To find HTML elements, use:

```
document.getElementById  
(id)
```

```
document.getElementsByTagName  
(name)
```

```
document.getElementsByClassName  
(name)
```

```
document.getElementsByName  
(name)
```

Interacting with an HTML Object Using JavaScript 2-3

To change the content of HTML elements, use:

```
element.innerHTML  
= new HTML content
```

```
element.attribute = new  
value
```

```
element.setAttribute(attri  
bute, value)
```

```
element.style.property =  
new style
```

Interacting with an HTML Object Using JavaScript 3-3

To add and delete HTML elements:

`document.createElement(element)`

`document.removeChild(element)`

`document.appendChild(element)`

`document.replaceChild(element)`

`document.write(text)`

Events with HTML Objects: DOM 1-2

The elements of an HTML page are accessed by calling the 'document' object. The document object calls HTML objects such as:

- ▶ Form elements
- ▶ Images
- ▶ Links
- ▶ Scripts
- ▶ Text fields
- ▶ Buttons
- ▶ Radio buttons
- ▶ Anchors

Events with HTML Objects: DOM 2-2

HTML element has attributes that are used to:

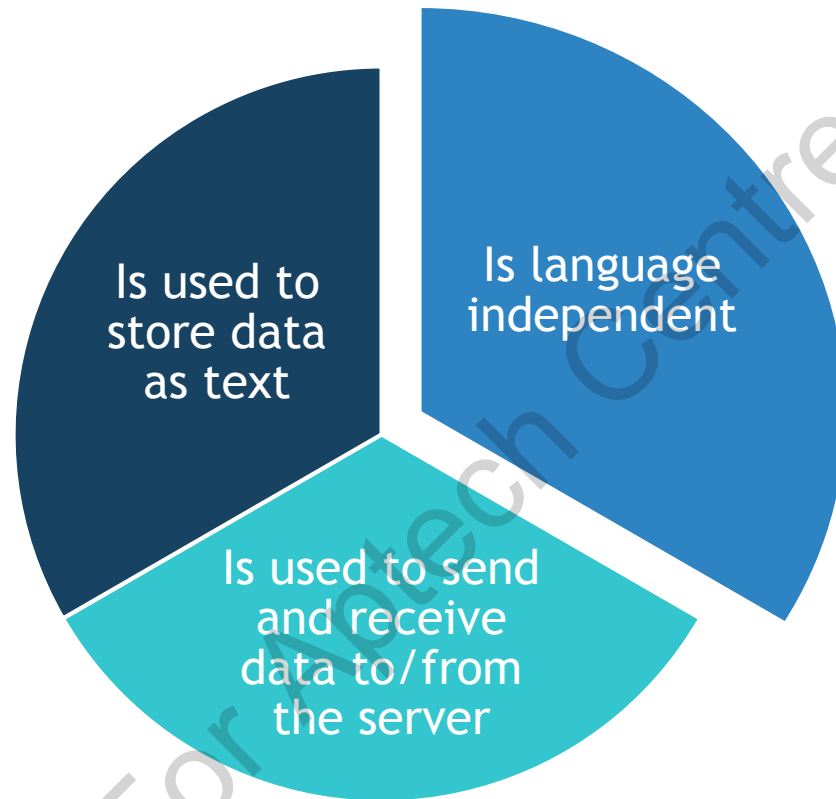
Capture events such as mouse click and mouse over

Page loading or image loading

HTML form being submitted

JSON File in JavaScript

JavaScript Object Notation (JSON) is a format that:



JSON.parse() Method

A JSON format script can be converted to a script by using JSON.parse() method.

Load JSON File
in JavaScript

- Used to convert a string sent from a server to a JavaScript object

Read and Write
JSON File in
JavaScript

- Used to convert a JavaScript object into a string

Session Summary

- ▶ JavaScript can access the data stored in the Web page by itself using the data attributes.
- ▶ The 'data-*' attribute was introduced in HTML 5. It is embedded in the HTML element and can be accessed using the 'getAttribute' method.
- ▶ The HTML Document Object Model (DOM) is created when the HTML page is loaded in the browser.
- ▶ All the elements of an HTML page can be accessed by calling the 'document' object.
- ▶ JavaScript Object Notation (JSON) is used to store the scripts as text. It is language independent and can be used to send and receive a script from the server.
- ▶ JSON.parse() method is used to convert a string to a JavaScript object.
- ▶ JSON.stringify() method can be used to convert a JavaScript object into a String.