Web Basics-JavaScript

Lesson 6: Working With Document Object

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Lesson Objectives

➢ **To understand the following topics:**
  – Document Object and its properties, methods and events
  – Link ,Anchor & Cookies object

Objectives

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

6.1: Document Object
Working With Document Object

➢ **Container for all HTML HEAD and BODY objects associated within tags**
➢ **Provides access to page elements from your script**
  – This includes form, link, anchor, as well as global Document properties such as background and foreground colors

December 20, 2015 | Proprietary and Confidential | - 3 -   **Capgemini** CONSULTING.TECHNOLOGY.OUTSOURCING

Document object is part of the Window object. It is used to access all elements in a page. It provides access to the elements in an HTML page from within the script. This includes the properties of every form, link and anchor (and, where applicable, any sub-elements), as well as global document properties such as background and foreground colors.

6.1: Document Object
Document Object Properties & Methods

- ➤ **alinkColor, vlinkColor, bgColor, fgColor, linkColor**
- ➤ **anchors[]**
- ➤ **applets[]**
- ➤ **forms[]**
- ➤ **links[]**
- ➤ **title**
- ➤ **write(), writeln()**

December 20, 2015 | Proprietary and Confidential | - 4 -   Capgemini
                                                                            CONSULTING.TECHNOLOGY.OUTSOURCING

Property	Description
alinkColor vlinkColor bgColor fgColor linkColor	Get and set the properties of document – activated link, visited link, background color, foreground color (text) and hyperlink color.
anchors[], applets[], forms[], links[]	These properties retrieve array of values respectively as present in the document object
title	Gets the title of the document which occurs between the TITLE tags.
write("string1", …) writeln("string1", ..)	Both of these methods send text to a document for display in its window. The only difference between the two methods is that *document.writeln()* appends a carriage return to the end of the string it sends to the document (you must still write a to insert a line break).

6.2: Link Object
Link Object

➢ **Each page link is represented by a corresponding link object in JavaScript, with events and properties:**

Properties	Methods	Event Handlers
target	None	onClick
text		onDblClick
x		onMouseDown
y		onMouseOut
		onMouseOver
		onMouseUp

December 20, 2015 | Proprietary and Confidential | - 5 -

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Link Properties

JavaScript treats an HTML document link as a distinct object type. When a document loads, the browser creates and maintains an internal list (in an array) of all links defined in the document.

Property	Description
target	The primary property of the link object is the *target*. This value reflects the window name supplied to the TARGET attribute in the link's definition.
text	Between the start and end tags for a link goes the text (or image) that is highlighted in the distinguishing link color of the document. You can extract that text with the link.text property.
x, y	Retrieve the x and y coordinates of a link object

Refer to Appendix for details about EventHandlers

6.3: Anchor Object

Anchor Object

➤ **Defined in HTML with the tag <a name="name">, and represented in JavaScript via the Anchor object**

Properties	Methods	Event Handlers
name	None	None
text		
x		
y		

December 20, 2015 | Proprietary and Confidential | - 6 -

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Anchor Properties

As an HTML document loads into a JavaScript-enabled browser, the browser creates and maintains an internal list (as an array) of all the anchors defined in the document.

Property	Description
name	The *name* property of an anchor object is the string assigned to the NAME attribute of the anchor or link tag. This is a read-only property.
text	Between the start and end tags for an anchor goes the text (or image) that is associated with the position in the document. You can extract that text with the anchor.text property. This property is read-only.
x, y	Retrieve the x and y coordinates of a anchor object

Anchor object properties

6.4: Working with Cookies

Working with Cookies

➢ **Text files that Web sites place in your computer to help your browsers remember specific information**
➢ **Used to store user preferences for content or personalized pages**
➢ **Following function sets cookie values (expiration date is optional):**

```
function setCookie(name, value, expire) {
 document.cookie = name + "=" + escape(value)
 +((expire == null) ? "" : ("; expires=" + expire.toGMTString())) }
```

December 20, 2015 | Proprietary and Confidential | - 7 -

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Using Cookies

Cookies are a mechanism for storing persistent data on the client in a file called *cookies.txt*. Because HyperText Transport Protocol (HTTP) is a stateless protocol, cookies provide a way to maintain information between client requests. This section discusses basic uses of cookies and illustrates with a simple example.

Each cookie is a small item of information with an optional expiration date and is added to the cookie file in the following format:

name=value;expires=expDate;

Name is the name of the datum being stored, and value is its value. If *name* and *value* contain any semicolon, comma, or blank (space) characters, you must use the *escape* and *unescape* functions to encode and decode them respectively.

expDate is the expiration date, in GMT date format:

Wdy, DD-Mon-YY HH:MM:SS GMT

Although it is slightly different from this format, the date string returned by the *Date* method *toGMTString* can be used to set cookie expiration dates.

The expiration date is an optional parameter indicating how long to maintain the cookie. If *expDate* is not specified, the cookie expires when the user exits the current browser session. Browser maintains and retrieves a cookie only if its expiration date has not yet passed.

Limitations

Cookies have these limitations:

300 total cookies in the cookie file.

4 Kbytes per cookie, for the sum of both the cookie's name and value.

20 cookies per server or domain (completely specified hosts and domains are treated as separate entities and have a 20-cookie limitation for each, not combined).

Cookies can be associated with one or more directories. If your files are all in one directory, then you need not worry about this. If your files are in multiple directories, you may need to use an additional path parameter for each cookie.

Using Cookies with JavaScript

The *document.cookie* property is a string that contains all names and values of Navigator cookies. Use this property to work with cookies in JavaScript.

Demo

> **Link_Anchor_object.html**
> **Meta_information.html**

December 20, 2015   Proprietary and Confidential   - 9 -

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Lab

- ➢ **Lab Exercise 8 :**
  - – Working with Document & Cookie object.

Summary

- ➢ **JavaScript Document Object contains HTML elements contained in the <head> and <body> sections of a web page**
- ➢ **Cookies are small text files stored on the site visitor's computer by their browser**
- ➢ **Link object is used to get or capture a text or image link present in a document**
- ➢ **Anchor object, has an anchor array. All links are contained in link array**

December 20, 2015 | Proprietary and Confidential | – 11 –

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Summary
In this chapter, you understood:
- DOM structure
- How to work with Document Object
- How to work with cookies
- How to work with Link and Anchor object

Review Questions

➢ **Question 1: The _____ is the container for all HTML HEAD and BODY objects.**
  – Option 1: Document
  – Option 2: Object
  – Option 3: Container

➢ **Question 2: The applets property refers to Java applets defined in a document by the <APPLET> tag.**
  – True / False

➢ **Question 3: _____ Retrieve an indexed array of anchors in a document.**

December 20, 2015 | Proprietary and Confidential | – 12 –

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING