Web Basics-JavaScript

Lesson 4: Working with arrays

December 20, 2015 | Proprietary and Confidential | - 1 -

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Lesson Objectives

➢ **In this lesson, you will learn about:**
   – Arrays object, its properties and methods
   – Methods to create and use arrays, add entries, delete entries in the array

December 20, 2015 | Proprietary and Confidential | - 2 -

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Concept of Array Objects

➢ **An array is the sole JavaScript data structure provided for storing and manipulating ordered collections of data**
➢ **For creating an array, you can use the following:**

```
var myArray = new Array()  //empty array
```

```
solarSys = new Array(2) //Array defined with size
solarSys[0] = "Mercury" // Assigning values to array
solarSys[1] = "Venus"
```

```
solarSys = new Array("Mercury", "Venus", ... ) condensed array
```

```
solarsys=["Mercury","Venus",....] // literal array
```

December 20, 2015   Proprietary and Confidential   - 3 -

Array Objects:

An **array** is a kind of variable that can hold more than one value at a time.

However, unlike some other programming languages, JavaScript's arrays are very forgiving as to the kind of data you store in each cell or entry of the array. This allows, for example, an array of arrays, providing the equivalent of multidimensional arrays customized to the kind of data your application needs.

You can see a few examples listed on the slide for creating an array. We see example of creating an empty array. To limit the size of array you can specify the optional integer value as seen in the second example.

Another way of defining an array is called as condensed array which allows you to combine the array and array elements definitions into one step.

Literal arrays are define by assigning the value in square brackets. To create an array with initial undefined values you can simple enter a comma. For eg
myarray=["Pune", , , "Mumbai]

5.4: Array Object Methods
Concept of Array Object Methods

➢ **JavaScript provides the following array object methods:**
  – arrayObject.length
  – arrayObject.reverse()
  – arrayObject.join(separatorString)

➢ **Example for length method**
  – myArray.length// result: 5

➢ **Code snippet for usage of join method**
  – In this, myArray contents will be joined and placed into arrayText by using the comma separator

```
var arrayText = myArray.join(",")
```

December 20, 2015 | Proprietary and Confidential | - 4 -

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Array Object Methods:

After you have information stored in an array, JavaScript provides several methods to help you manage that data.
arrayObject.join(separatorString)
It returns string of entries from the array delimited by the separatorString value.

```
var arrayText = myArray.join(",")
```

arrayObject.reverse()
It returns array of entries in the op.
The element that was last in the array becomes the 0 index item in the array. Note that when you do this, you are restructuring the original array, and not copying it.
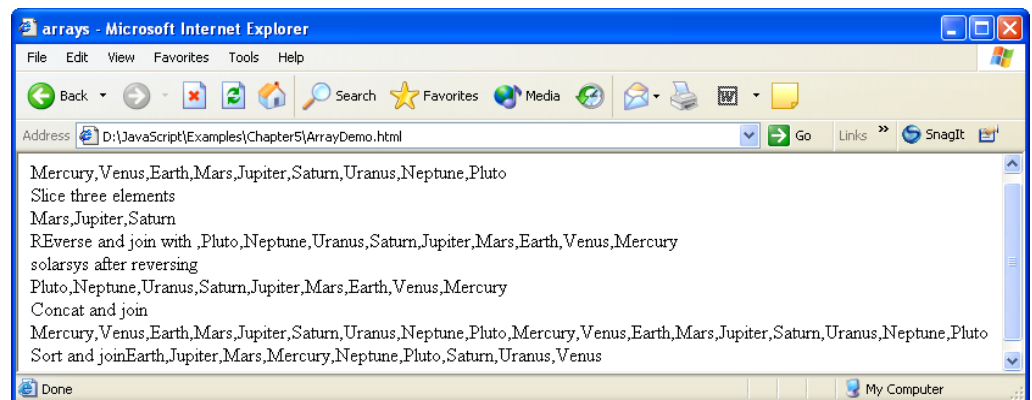
Demo

➢ **Arr_demo.html**

Demo of Array object (ArrayDemo.html) produces the output as shown below:

```
Mercury,Venus,Earth,Mars,Jupiter,Saturn,Uranus,Neptune,Pluto
Slice three elements
Mars,Jupiter,Saturn
REverse and join with ,Pluto,Neptune,Uranus,Saturn,Jupiter,Mars,Earth,Venus,Mercury
solarsys after reversing
Pluto,Neptune,Uranus,Saturn,Jupiter,Mars,Earth,Venus,Mercury
Concat and join
Mercury,Venus,Earth,Mars,Jupiter,Saturn,Uranus,Neptune,Pluto,Mercury,Venus,Earth,Mars,Jupiter,Saturn,Uranus,Neptune,Pluto
Sort and joinEarth,Jupiter,Mars,Mercury,Neptune,Pluto,Saturn,Uranus,Venus
```

Lab

➢ **Working with Arrays**

Hands On

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

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Summary

➢ **An array is a set of variables**
➢ **You can create an array object by using new operator and delete array element with delete operator**
➢ **Array Object properties are length, prototype**
➢ **Array Object Methods are concat, join, reverse, slice, and so on**

Review Question

➢ **Question 1: The ___ method allows you to join array contents and place it into a text**
  – Option 1: array.concat()
  – Option 2: array.join()

➢ **Question 2: An array object automatically has a size property.**
  – True/False

December 20, 2015   Proprietary and Confidential   - 8 -