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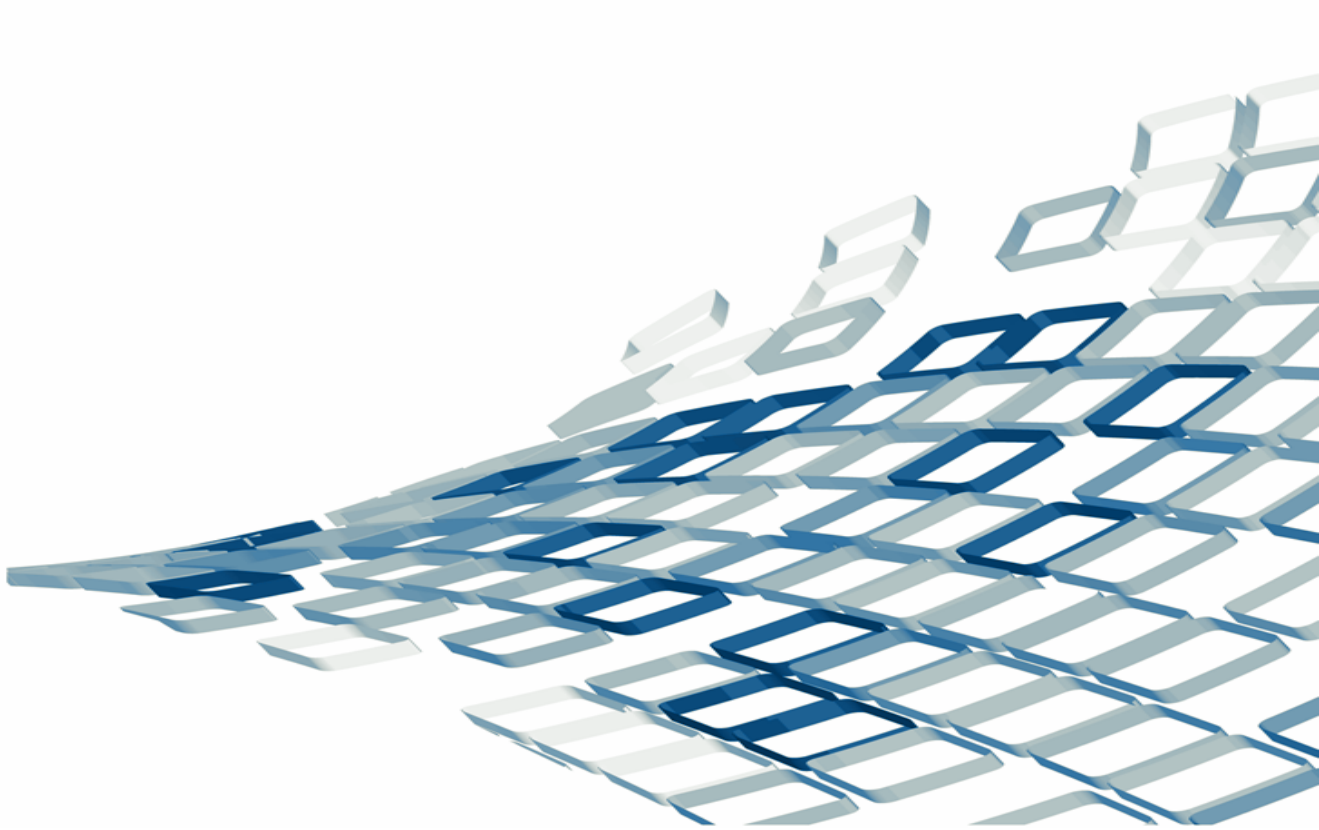

Lesson 9:
Custom JavaScript Objects

Objectives

- Create a custom JavaScript object
- Define properties and methods of custom objects
- Create new object instances
- Create client-side arrays using custom objects
- Create functions and methods for manipulating client-side arrays
- Use the *prototype* property

Creating Custom Objects

- Array objects, custom objects and databases
- Advantages of custom objects
- Custom object demonstration

Creating a JavaScript Object: The Constructor

- Constructor
  - A special function that enables you to create instances of custom objects
  - Defines the properties and methods of your object

Creating an Instance of a Custom Object

- To instantiate and then populate the properties of each new instance with actual data, you must declare variables
- The *prototype* property
  - Used to add new properties or methods to JavaScript objects

Creating Object Methods

- You can create as many methods for your object as you need (or as many as memory allows)
- You can make them as simple or as sophisticated as you like

Creating Functions for Your Objects

- The *findItem()* function
- The *showAll()* function
- Full source code for this client-side array
- Complex custom objects

Summary

- ✓Create a custom JavaScript object
- ✓Define properties and methods of custom objects
- ✓Create new object instances
- ✓Create client-side arrays using custom objects
- ✓Create functions and methods for manipulating client-side arrays
- ✓Use the *prototype* property

Lesson 9 Quiz

1. What is a constructor?

a. A new instance of a custom object

b. A method that defines the properties of a custom object

c. A predefined object to which you add methods and properties

d. A function that defines methods and properties of a custom object used as a template for instances of the custom object

Lesson 9 Quiz

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Lesson 9 Quiz

2. How do you instantiate new instances of an object?

a. With the new keyword, the function name, and a list of values

b. With the new keyword and the object name

c. With the this keyword and the object name

d. With the this keyword, the function name, and a list of parameters

Lesson 9 Quiz

2. How do you instantiate new instances of an object?

a. With the new keyword, the function name, and a list of values

b. With the new keyword and the object name

c. With the this keyword and the object name

d. With the this keyword, the function name, and a list of parameters

Lesson 9 Quiz

3. How do you access the properties and methods of a newly instantiated object?

a. With the this keyword

b. By declaring variables

c. Using dot notation

d. With the new keyword

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4. Define a constructor function for a custom object named empObject. Add three properties: name, age and department. Add one method: showOne

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```
function empObject(name, age, department) {
        this.name = name;
        this.age = age;
        this.department = department;
        this.showOne = showOne;
}
```

Lesson 9 Quiz

5. Using the empObject() constructor function from the previous question, instantiate two new employees in an array named employees.

Lesson 9 Quiz

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```
var employees = new Array();
employees[0] = new empObject("Jane Doe", 25, "Management");
employees[1] = new empObject("Jose Ruiz", 35, "Sales");
```

Lesson 9 Quiz

6. Using the first employee instantiated in the previous question, how would a program access the name and age properties for that object? Output the data to two separate lines on an XHTML page.

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```
document.write("Name: " + employees[0].name + "<br />");
document.write("Age: " + employees[0].age + "<br />");
```

Lesson 9 Quiz

7. Using the employees array, write a script block that would output each employee's name while making each name a link to the showOne() method. You will define the showOne() method in the next question.

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7. Using the employees array, write a script block that would output each employee's name while making each name a link to the showOne() method. You will define the showOne() method in the next question.

One way to write this code is as follows:

```
var x = employees.length;
for (var j = 0; j < x; j++) {
        document.write("<a href='javascript:void(employees[" + j + "].showOne())'>");
        document.write(employees[j].name + "</a><br />");
}
```