

## Chapter 3

# How to work with objects, functions, and events

# **Section 3-10**

## **JavaScript Objects**

# Methods of the **window** object

A method that confirms an action

```
confirm(string)
```

Two methods for working with numbers

```
parseInt(string)
```

```
parseFloat(string)
```

## Examples

```
confirm("Are you sure you want to delete it?");
```

```
var entryA =  
    prompt("Enter any value", 12345.6789);  
entryA = parseInt(entryA);          // entryA = 12345
```

```
var entryB =  
    prompt("Enter any value", 12345.6789);  
entryB = parseFloat(entryB);       // entryB = 12345.6789
```

# Three methods of the document object

`getElementById(id)`

`write(string)`

`writeln(string)`

## Examples

```
// returns the object for the HTML element  
var rateBox = document.getElementById("rate");
```

```
// writes a line into the document  
document.writeln("Today is " + today.toDateString());
```

# Members of the **Textbox** object

( aka a single-line text box, element object)

## One method

`focus ()`

## Two properties

`value`

`disabled`

# One method of the **Number** object

`toFixed(digits)`

[http://www.w3schools.com/jsref/jsref\\_obj\\_number.asp](http://www.w3schools.com/jsref/jsref_obj_number.asp)

# How to get a string value from a text box

## HTML tags that define two text boxes

```
<input type="text" id="first_name">  
<input type="text" id="sales_amount">
```

## JavaScript without chaining

```
var firstName = document.getElementById("first_name");  
firstName = firstName.value;
```

## JavaScript with chaining

```
var firstName =  
    document.getElementById("first_name").value;
```

# How to get a number value from a text box

## Without chaining

```
var salesAmount = document.getElementById("sales_amount");  
salesAmount = salesAmount.value;  
salesAmount = parseFloat(salesAmount);
```

## With chaining

```
var salesAmount =  
    parseFloat(document.getElementById("sales_amount").value);
```



## Other examples of chaining

```
var salesAmount =  
    parseFloat(document.getElementById(  
        "sales_amount").value).toFixed(2);  
  
//Perhaps the line above is a bit too much!!
```

```
document.getElementById("first_name").value = "";
```

```
document.getElementById("first_name").focus();
```

# How to create a JavaScript object

The syntax for creating an object

```
new ObjectType() ;
```

A statement that creates a Date object

```
var today = new Date() ;
```

## A few methods of a Date object

```
toDateString()  
getFullYear()  
getDate()  
getMonth()
```

[http://www.w3schools.com/jsref/jsref\\_obj\\_date.asp](http://www.w3schools.com/jsref/jsref_obj_date.asp)

## Examples that use a Date object

```
var today = new Date();  
alert ( today.toDateString() );  
alert ( today.getFullYear() );  
alert ( today.getDate() );  
alert ( today.getMonth() );
```

# Properties and methods of a **String** object

## One property

`length`

## Four of the many methods

`indexOf(search, position)`

`substr(start, length)`

`toLowerCase()`

`toUpperCase()`

[http://www.w3schools.com/jsref/jsref\\_obj\\_string.asp](http://www.w3schools.com/jsref/jsref_obj_string.asp)

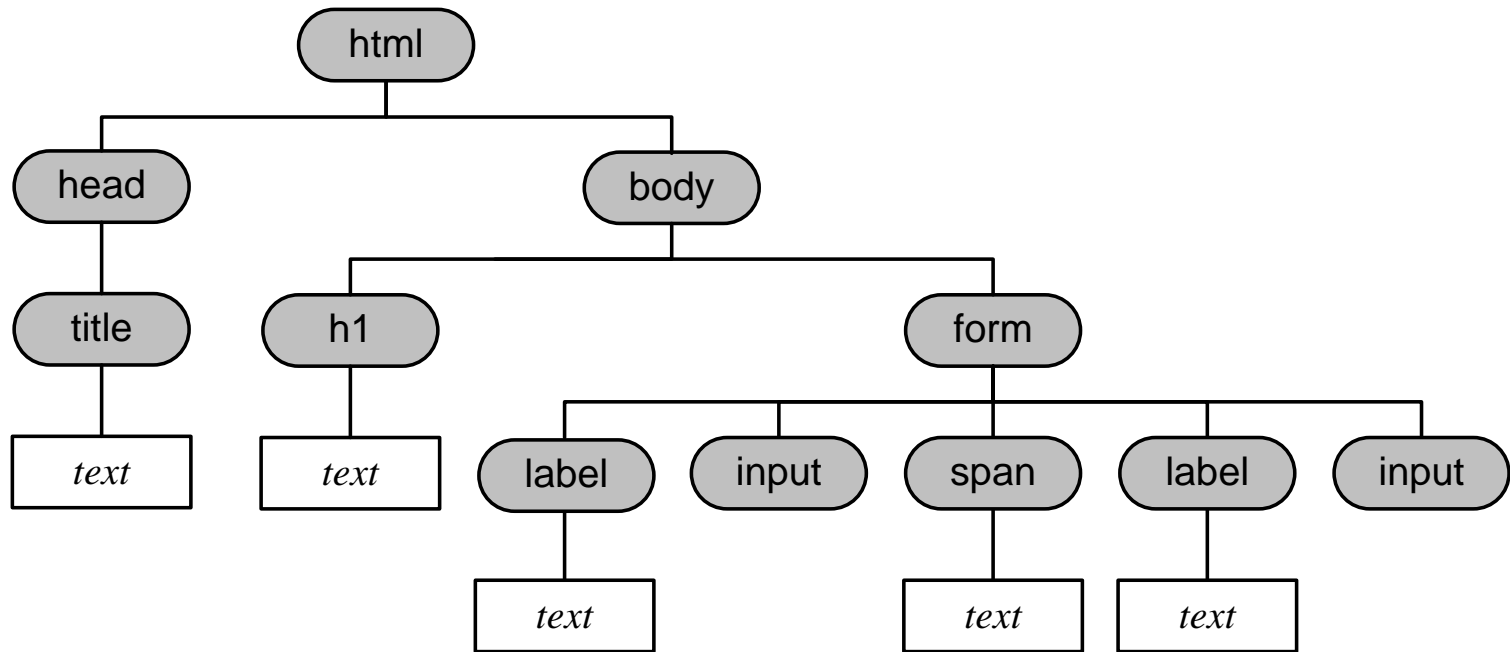
## Examples that use a **String** object

```
var name = "Ray Harris";  
var nameUpper = name.toUpperCase();  
var nameLength = name.length;    // nameLength = 10  
var index = name.indexOf(" ");    // index = 3  
var firstName = name.substr(0, index);
```

# The code for a web page

```
<!DOCTYPE html>
<html>
<head>
  <title>Join Email List</title>
</head>
<body>
  <h1>Please join our email list</h1>
  <form id="email_form" name="email_form"
    action="join.html" method="get">
    <label for="email_address">Email Address:</label>
    <input type="text" id="email_address">
    <span id="email_address_error">*</span><br>
    <label>&nbsp;</label>
    <input type="button" id="join_list"
      value="Join our List">
  </form>
</body>
</html>
```

# The DOM for the web page



# The syntax for changing a text node

```
elementObject.firstChild.nodeValue =  
    "The text for the element";
```

## An example that puts a message in the span element

```
document.getElementById(  
    "email_address_error").firstChild.nodeValue =  
    "This entry is required";
```

**\*\* innerHTML is a non-W3C standard approach**

# Exercise 3-1

- Do the exercises for this section  
(shown to the right for the link to this presentation)