IT350 Web and Internet Programming

SlideSet #8: Intro to JavaScript

(from Chapter 6 of the text)

JavaScript Intro – Outline

• What is it good for?
• What does it look like?
• Is it Java?
• Example Usage
What's JavaScript good for?

- Client-side computation?

- Server-side computation?
Java vs. JavaScript

Object-oriented?

Add methods/properties to objects at run-time?

Variable typing?

C-like expressions, control?

Adapted from © 2004 Prentice Hall, Inc. All rights reserved.
Addition / Strings Example – Part 1

Addition / Strings Example – Part 2

```html
<?xml version = "1.0"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns = "http://www.w3.org/1999/xhtml">
<head>
<title>An Addition Program</title>
<script type = "text/javascript">
// read in first number from user as a string
firstNumber = window.prompt( "Enter first integer", "0" );

// read in second number from user as a string
secondNumber = window.prompt( "Enter second integer", "0" );

// convert numbers from strings to integers
number1 = parseInt( firstNumber );
number2 = parseInt( secondNumber );

// add the numbers
sum = number1 + number2;

// display the results
document.writeln( "<h1>The sum is " + sum + "</h1>" );
</script>
</head>
<body>
<p>Click Refresh (or Reload) to run the script again</p>
</body>
</html>
```
Objects and Control Flow – Part 1

Adapted from © 2004 Prentice Hall, Inc. All rights reserved.

Objects and Control Flow – Part 2

<html xmlns = "http://www.w3.org/1999/xhtml">
<head> <title>Using Relational Operators</title> <script type = "text/javascript">
 <!--
 var now = new Date(); // current date and time
 hour = now.getHours(); // current hour (0-23)

 // determine whether it is morning
 if ( hour < 12 )
   document.write( "<h1>Good Morning, " );

 // determine whether the time is PM
 if ( hour >= 12 )
   {
     // convert to a 12 hour clock
     hour = hour - 12;

     // determine whether it is before 6 PM
     if ( hour < 6 )
       document.write( "<h1>Good Afternoon, " );

     // determine whether it is after 6 PM
     if ( hour >= 6 )
       document.write( "<h1>Good Evening, " );
   }

 document.writeln( "the date is: " + now + "</h1>" );
 // -->
 </script> </head> <body>
<p>Click Refresh (or Reload) to run this script again.</p> </body> </html>
Operators and Precedence

<table>
<thead>
<tr>
<th>Operators</th>
<th>Associativity</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>left to right</td>
<td>additive</td>
</tr>
<tr>
<td>-</td>
<td>left to right</td>
<td>additive</td>
</tr>
<tr>
<td>*</td>
<td>left to right</td>
<td>multiplicative</td>
</tr>
<tr>
<td>/</td>
<td>left to right</td>
<td>multiplicative</td>
</tr>
<tr>
<td>%</td>
<td>left to right</td>
<td>multiplicative</td>
</tr>
<tr>
<td>&lt;=</td>
<td>left to right</td>
<td>relational</td>
</tr>
<tr>
<td>&gt;=</td>
<td>left to right</td>
<td>relational</td>
</tr>
<tr>
<td>&lt;</td>
<td>left to right</td>
<td>relational</td>
</tr>
<tr>
<td>==</td>
<td>left to right</td>
<td>equality</td>
</tr>
<tr>
<td>!=</td>
<td>left to right</td>
<td>equality</td>
</tr>
<tr>
<td>=</td>
<td>right to left</td>
<td>assignment</td>
</tr>
</tbody>
</table>

Fig. 7.17 Precedence and associativity of the operators discussed so far.

Exercise #1 -- What's the output?

```javascript
var a, b, c;

a = 1;
b = 2;
c = 3;

d = a + b * c;

window.alert("<h1>Begin</h1>");

if (d < 20)
    window.alert("d is okay: "+d);
else
    window.alert("d is too high!:"+ d);
    d = d - 3;

document.writeln("<h1>Done. Final d = "+d+"</h1>");
```

Adapted from © 2004 Prentice Hall, Inc. All rights reserved.
Exercise #2 -- What's the output?

```javascript
var x, y, z;

x = 7;
y = 9;
z = "abc";

window.alert(x+y+z);
window.alert(z+y+x);

if (x)
    window.alert("x true");
x = "seven";
window.alert(x+y+z);
```

Exercise #3

- Write a JavaScript snippet to read in a number from the user and output its absolute value.
Exercise #4

• Write a JavaScript snippet to read in three numbers x, y, z and output them in sorted order.