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?
<?xml version = "1.0"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">

<!-- Fig. 7.3: welcome3.html -->
<!-- Printing Multiple Lines -->

<html xmlns = "http://www.w3.org/1999/xhtml">
<head><title>Printing Multiple Lines</title>
<script type = "text/javascript">
<!--

document.writeln("<h1>Welcome to<br />JavaScript" +
    "<br />Programming!" +
    ");

// -->
</script>
</head><body>
</html>
<!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>Printing Multiple Lines in a Dialog Box</title>
    <script type="text/javascript">
      <!--
      window.alert( "Welcome to \nJavaScript \nProgramming!" );
      // -->
    </script>
  </head>
  <body>
    <p>Click Refresh (or Reload) to run this script again.</p>
  </body>
</html>

Welcome to JavaScript Programming!
Java vs. JavaScript

Object-oriented?

Add methods/properties to objects at run-time?

Variable typing?

C-like expressions, control?
Addition / Strings Example – Part 1

**Explorer User Prompt**

Script Prompt:
Enter first integer

45

**Explorer User Prompt**

Script Prompt:
Enter second integer

72

**An Addition Program - Microsoft Internet Explorer**

The sum is 117

Click Refresh (or Reload) to run the script again
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">
      <!--
      var firstNumber, secondNumber, number1, number2, sum;

      // 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

Good Afternoon, the date is: Tue Sep 20 14:19:39 EDT 2005

Click Refresh (or Reload) to run this script again.
Objects and Control Flow – Part 2

Click Refresh (or Reload) to run this script again.
# 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>multiplicative</td>
</tr>
<tr>
<td>/</td>
<td>left to right</td>
<td>additive</td>
</tr>
<tr>
<td>%</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></td>
<td></td>
</tr>
<tr>
<td>&lt;</td>
<td>left to right</td>
<td></td>
</tr>
<tr>
<td>&lt;=</td>
<td>left to right</td>
<td></td>
</tr>
<tr>
<td>&gt;</td>
<td>left to right</td>
<td></td>
</tr>
<tr>
<td>&gt;=</td>
<td>left to right</td>
<td></td>
</tr>
<tr>
<td>==</td>
<td>left to right</td>
<td></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.*
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>");
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.