INTRODUCTION TO WEB DEVELOPMENT AND HTML

Lecture 14: Programming with JavaScript - Spring 2011

Outline

Programming with JavaScript

Programming with JavaScript

- ***Variable:*** *is used to store some information. (names, numbers, etc)*
- ***Operators****: They do "things" to variables:*
  - *Arithmetic: +, -, *, /*
  - *Comparison: Compare strings, numbers, etc. For Example: 4 is equal to 5?*
- ***Functions****: A group of steps that will perform a desired operation*
- *Control Structures:*
  - ***Conditional****: if / else / swtich*
  - ***Repeat****: to repeat a single action or set of actions. for / while / break / continue*

Variables

- var userName = "Will Smith"
- alert(userName);

- Variables are **Case sensitive!**
- Must begin with a letter or an underscore.
- Use descriptive names for your variables

Operators

- Arithmetic operators: + - * / % ++ --
  - 10 + 5 = 15
  - 4 – 3 = 1
  - 10 * 3 = 30
  - 4 / 2 = 2
  - 15 ++ = 16 (this increments by 1)
  - 8 -- = 7 (this decrements by 1)
  - 8 % 5 = 3 (division remainder)

- Assignment operators
- Comparison operators
- Logical operators

Assignment Operators (=, +=, -=, /=, %=)

- Assignment operators
  - profit = income – expenses

  - count = count + i ←SAME → count += i
  - count = count - i ←SAME → count -= i
  - count = count / i ←SAME → count /= i
  - count = count * i ←SAME → count *= i
  - count = count % i ←SAME → count %= i

Comparison Operators

- ==
  - 4 == 3 // returns **false**
- !=
  - 4 != 3 // returns true
- >
  - 4 > 3 // returns true
- <
  - 4 < 3 // returns false
- >=
  - 4 >= 3 // returns true
- <=
  - 4 <= 3 // returns false

Logical Operators (Cont'd)

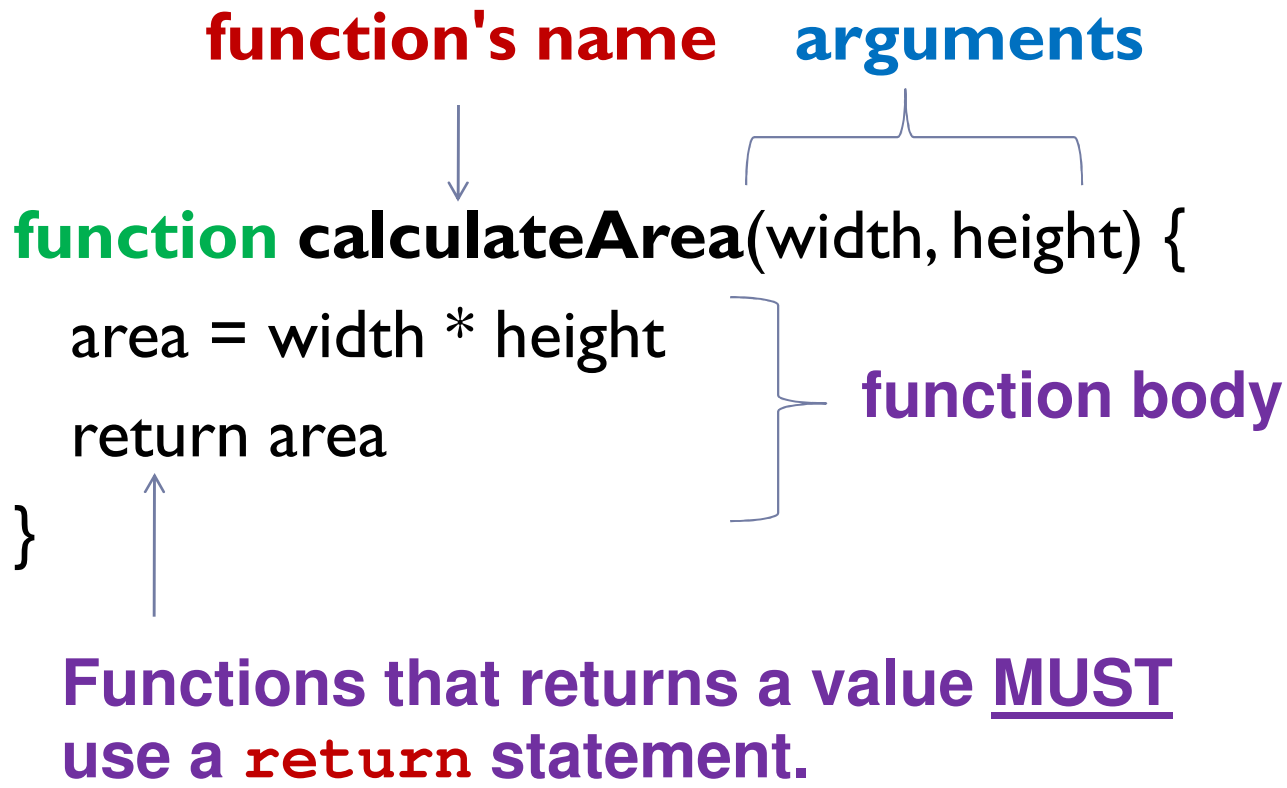
- && (AND Operator)
  - (3 < 2 && 3 > 1) // returns false
- ?? (OR Operator)
  - (3 < 2 ?? 3 > 1) //returns true
- ! (Not Operator)
  - ! (3 < 2) //returns true

String Operator

- You can add text to strings using the + operator.
- For example:
  - `firstName = "Bob"`
  - `lastName = "Stewart"`
  - `name = firstName + lastName`

Functions

- How to create a function in JavaScript?



Function (Cont'd)

- Great! Now, we have created our function. But, how do we call it? How do we use it?

```
<form name="frmArea" action="">
  Enter the width and height of your rectangle to calculate the
    size:<br/>
  Width:<input type="text" name="txtWidth" size="5" /><br/>
  Height:<input type="text" name="txtHeight" size="5" /><br/>
  <input type="button" value="Calculate area"
    onclick="alert(calculateArea(document.frmArea.txt
    Width.value, document.frmArea.txtHeight.value))"
    />
</form>
```

JS Framework: Dojo Toolkit

- http://dojotoolkit.org/

Get Dojo !

Builds

Cloud hosting via CDN

You can utilize the full Dojo Toolkit from the services by including a script tag in your page:

Google CDN Yandex CDN (Europe)

```
<script src="http://ajax.googleapis.com/ajax/libs/dojo/1.6/dojo/dojo.xd.js" type="text/javascript"></script>
```

<script src="http://ajax.googleapis.com/ajax/libs/dojo/1.6/dojo/dojo.xd.js" type="text/javascript"></script>

Cool Examples with Dojo!!!

- See Examples in course site

Questions?