Test Your Tech

A spreadsheet:
  A. Only happens on laundry day.
  B. Is covered with food during holiday meals.
  C. Helps answer “what-if” questions.

Announcements

• Quiz 7
  • Fluency chapters 13 (first half only), 14, and 15, and chapters 2 and 3 in QuickStart
    • Chapter 15 is new in the 3rd ed. of Fluency

JavaScript

Going deeper into Project 2B

Functions

• Declaration syntax
  
    function Name(parameter)
    {
        //statement body
        x = x * parameter; //example
    }

• Call syntax
  onclick="Name(argument)"

Passing Values to Functions

• Declaration syntax
  
    function Name(parameter)
    {
        //statement body
        x = x * parameter; //example
    }

• Call syntax
  onclick="Name(argument)"
Passing Values to Functions

• Declaration syntax
  function Name(parameter)
  {
    //statement body
    x = x * parameter; //example
  }
  • Call syntax
    onclick="Name(argument)"

Example

• Capitalize function
  * Strategy:
    1. Change whole string to lower case
    2. Grab the 1st letter of the word
       1. Save it
       2. Make it uppercase
    3. Grab the rest of the word and save it
    4. Add the 1st letter and the rest of the word back together and save that

function capitalize(word)
{
  var word = word.toLowerCase();
}

Example

```
function capitalize(word) {
    var word = word.toLowerCase();
    var firstLetter = word.charAt(0);
    return firstLetter.toUpperCase() + word.substring(1);
}
```

User entered:

A N N

Change to:

A a n n
function capitalize(word) {
    var word = word.toLowerCase();
    var firstLetter = word.charAt(0);
    firstLetter = firstLetter.toUpperCase();
    var wordLength = word.length - 1;
    var restOfWord = word.substring(1, wordLength);
}

Word is treated as an array with 3 elements:
• length = 3
• last index = 2, or length - 1
function capitalize(word) {
  var word = word.toLowerCase();
  var firstLetter = word.charAt(0);
  firstLetter = firstLetter.toUpperCase();
  var wordLength = word.length -1;
  var restOfWord = word.substr(1, wordLength);
  firstLetter;
  restOfWord:
  cappedWord:
}
Example

• That’s all well and good
  * But how and where do you call it?

Example

• Call the function where you need to run it:
  * Event handlers
    • In the input field or button or image tag:
      onclick="tellStory()";

Example

Capitalizing function

• Before:
  story += '<p>Once upon a time, there lived a
  <span class="replace">person + '</span> named ' + Name + '</p>;

• After:
  story += '<p>Once upon a time, there lived a
  <span class="replace">person + '</span> named ' + capitalize(Name) + '</p>;

Example

Calling the function

• Before:
  story += '<p>Once upon a time, there lived a
  <span class="replace">person + '</span> named ' + Name + '</p>;

• After:
  story += '<p>Once upon a time, there lived a
  <span class="replace">person + '</span> named ' + capitalize(Name) + '</p>;

Example

Calling the function

• Before:
  story += '<p>Once upon a time, there lived a
  <span class="replace">person + '</span> named ' + Name + '</p>;

• After:
  story += '<p>Once upon a time, there lived a
  <span class="replace">person + '</span> named ' + capitalize(Name) + '</p>;

Example

Declaring Multiple Functions

<script type="JavaScript">
  function tellStory() {
    // statements
  }
</script>
Declaring Multiple Functions

```javascript
<script type="JavaScript">
    function tellStory() {
        // statements
    }
    function capitalize(word) {
        // statements
    }
    function isVowel(word) {
        // statements
    }
</script>
```

isVowel function

```javascript
function isVowel(word) {
    // basic strategy: make character lower case,
    // then see if it's in a string that contains all
    // of the vowels
    var vowels = "aeiou";
    var c = word.charAt(0);
    if (vowels.indexOf(c.toLowerCase()) == -1) {
        // indexOf returns -1 if char. not found in string
        return "a";
    } else {
        return "an";
    }
}
```
function isVowel(word) {
    // basic strategy: make character lower case,
    // then see if it's in a string that contains all
    // of the vowels
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