University of Washington, CSE 190 M, Spring 2009
Section 5: Order-It (Tuesday, April 28)
Basic JavaScript

section idea/code by Sylvia Tashev and Stefanie Hatcher

This section is about using JavaScript to create an interactive UI.

Buggy JavaScript Code:

The following pages have mistakes that cause their JavaScript code not to work properly. Look at the pages, find the bug(s), and correct the problems.

1. buggy page #1 (JavaScript)
2. buggy page #2 (JavaScript)
3. buggy page #3 (JavaScript)
4. buggy page #4 (JavaScript)

The following links may help you in the debugging process:

- Firebug
- W3C Validators: XHTML, CSS
- JSLint
- Bonus Lecture Slides - Debugging JavaScript

Order-It:

Today we'll write a page that lets us perform various manipulations on the text in a text area. Here is the page (click the image to run our sample solution, written by TAs Sylvia Tashev and Stefanie Hatcher): (solution JS code `orderit.js`)

Order-It!

```
Sample Item 1
Sample Item 2
Sample Item 3
Sample Item 4

Sample Item 5
Sample Item 6


Sample Item 7
```

| Clear All | Capitalize | Sort | Reverse | Add Numbers | Strip Blank | Shuffle |

The HTML and CSS are already written, but we must add JavaScript code to make the UI respond when the user clicks the buttons. Start from the following skeleton:

- orderit.html

Add the following behavior to the buttons:

- **Clear All:** Deletes all text from the text area.

- **Capitalize:** Converts the text to upper case.

- **Sort:** Rearranges the lines into sorted alphabetical order.

- **Reverse:** Reverses the order of the lines.

- **Add Line Numbers:** Places a number in front of each line, such as "1. " (Don't worry about the possibility that the lines might already have numbers in front of them.)

- **Strip Blank Lines:** Removes any blank/empty lines from the text area.

- **Shuffle:** Rearranges the lines into a random order. JavaScript doesn't have a `shuffle` method for arrays, but you can write one using the following algorithm:

```
for each index i:
      randomly choose an index j >= i.
      swap lines i and j.
```

Recall that you can retrieve the JavaScript "DOM" object for a given HTML element with the `document.getElementById` function. Recall that an array has a [length](#) field and methods such as: [concat](#), [join](#), [pop](#), [push](#), [reverse](#), [shift](#), [slice](#), [sort](#), [splice](#), [unshift](#)

If you finish all of that behavior, consider adding a button to change the capitalization of lines, such as capitalizing/lowercasing entire lines or converting lines to AlTeRnAtInG cAsE.