Announcements

• If I still have your quiz, please come get it now
• Please bring laptops on Friday
• Project #3 due Thursday night
Arrays

Caution:

Arrays are very different in other languages!
In particular, Java arrays are very different from JavaScript arrays.
Arrays

**Collection:** One variable represents an object that can hold more than one piece of data

An *array* is a simple kind of collection.

```javascript
var a = ["Joe", 52, "Tom", 99.77];
```

```
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Joe&quot;</td>
<td>52</td>
<td>&quot;Tom&quot;</td>
<td>99.77</td>
</tr>
</tbody>
</table>
```
Arrays

var a = ["Joe", 52, "Tom", 99.77];

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>“Joe”</td>
<td>52</td>
<td>“Tom”</td>
<td>99.77</td>
</tr>
</tbody>
</table>

a[0] now represents the string “Joe”
a[1] now represents the number 52
Etc.

a.length represents the “length” of the array (in this case, 4)

Example: Arrays1.html
Arrays and For Loops

Common “idiom” for processing all elements in an array, `a`:

```javascript
for (var i = 0; i < a.length; i = i + 1) {
    ...a[i]...
}
```

Examples: Array2.html
          Array3.html

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Making an array bigger

```javascript
var a = [3.99, "Joe", 95];

a.unshift(777);

unshift -- adds element to front

a.push("Cat");
push -- adds element to back
```
Making an array smaller

```javascript
var a = [3.99, "Joe", 95];

shift -- removes element from front

var y = a.shift();

pop -- removes element from back

var x = a.pop();
```

Example: Arrays4.html