Some more basics

We're moving right along in our exploration of JavaScript. Last week's "JavaScript basics" focussed on the most common variable types as well as type coercion. Before we dig deeper into the language it's worth looking at a few more nuts and bolts of working in-browser with JavaScript. Now that we know a little about objects I can show you the one big global (or "root") object that houses everything. Type `window` into your console like this:

```
window
► Window
```

In your console click the triangle next to the `Window` response and you'll see all of the variables that are visible from the global scope. There's a lot in there. And your scripts have access to all of it. (Later in the course we'll discuss name-spacing to keep things tidy and to prevent overwriting important variables.)

Inspecting variables

As you're writing more complex scripts you'll inevitably run across bugs—particularly if you go with the "cowboy style" of constant trial, error, and iteration. Here are three quick ways to inspect the value of variables that might be misbehaving. The first is to output to the console using the `console` object and its `log` method:

```
var luckyNumber = 7
undefined
console.log( 'My luckyNumber is '+ luckyNumber )
My luckyNumber is 7
undefined
```

The second way to get quick outputs is a bit more brash. The `alert` method will pop up a dialog box, preventing you from interacting with the page until you click the "Ok" button. **Warning**: Do not put an `alert` in a long or infinite loop. You will regret it.

```
var luckyNumber = 7
undefined
alert( 'My luckyNumber is '+ luckyNumber )
undefined
```

The third way is more subtle. Just as the browser’s window is represented by a `window` object, the HTML document running inside this window is represented by a `document` object. You can change its `title` property and thereby change what’s in the browser’s title bar.

```
var luckyNumber = 7
undefined
document.title = 'My luckyNumber is '+ luckyNumber
"My luckyNumber is 7"
```

Now, bonus points for whomever inspects the `document` object in the console and is confused by the console’s response. Where’s the `title` property? (Let’s discuss this for a few minutes.)

Style and comments

As part of the homework assigned last week you read the short essay Semicolons are Optional and also browsed the Kahn Academy JavaScript Styleguide. What’s your personal coding style guide? Is your source code neat or messy? How confident are you that a colleague could look through your source and make sense of it? Sure, these things are highly subjective and therefore there are no truly correct answers. But as always, bear in mind that programs should be written for people to read, and only incidentally for machines to execute.

Part of maintaining good source code is commenting. Comments in JavaScript are the same as in Java or most C-derived languages. There are single line comments that begin with a double-forward-slash and extend to the end of the line:

```
var x = 0// And this side text won’t get executed.
```

And there are multiline comments that begin with slash-star and end with a star-slash like so:

```
/*
Multiline comments
are best for temporarily
striking out blocks of code.
*/
```

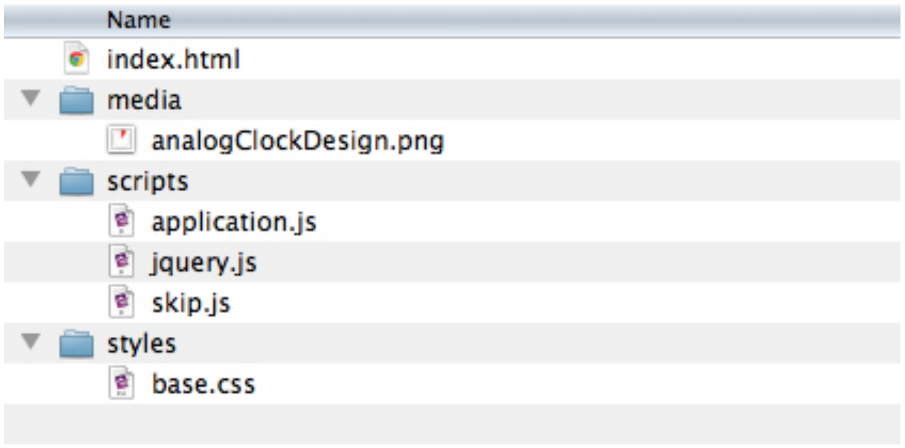
Running off the desktop

Your browser can run a static (no moving parts) website right off your desktop. No web server, domain name, or anything like that is required. After all, a simple static website really is just some text files and maybe a few bits of media like images or video if you want to get all fancy about it.

Here's a lightweight template for you to download which includes some HTML, CSS, and JavaScript to get you started:

webTemplate.zip

Open it up and you'll see a very simple folder structure for organizing your files. Within the `scripts` folder you'll find two libraries (jQuery and Skip) as well as an `application.js` file. This `application.js` is where you'll want to write your code. To see the results just drop the `index.html` file into your browser.



```
Name
index.html
▼ media
    analogClockDesign.png
▼ scripts
    application.js
    jquery.js
    skip.js
▼ styles
    base.css
```

After editing your source files just hit your browser's refresh button to see the results. If you run into cache problems (the files have been updated but the browser continues to render the old version) either hit refresh again or empty your browser’s cache entirely.

Don’t be afraid of constant trial, error, and iteration. Making rapid little edits and repeatedly refreshing the browser is a good working method. Instead of trying to design a whole architecture first and then attempt to construct it second, this rapid-edit style is more like intuitively mashing and pulling on a block of clay until the desired shape emerges.