Functions

Review Variables

- Scope – function or global
- avoid "hoisting" by defining at the top
- think of the file as a unified JavaScript application, instead of a bunch of one-off actions

Reading Quiz

What are some rules for naming variables?

- Can't start with a number.
  - OK to contain a number, but not start with
- Can't conflict with keywords.

Functions

Defining a function:
```
function sayHello() {
    alert("Hello");
}
```
Calling a function:
```
sayHello();
```

Passing Arguments

Defining a function with arguments:

```
function say(message) {
    alert(message);
}
```

Calling a function:

```
var myMessage = "Hello World"
say(myMessage);
```

Returning Values

Functions can return only one thing

But that one thing can be:

- A single value
- An array that holds multiple values
- An object that holds multiple values

Function Return

Defining a function:

```
function getMessage() {
    return("This is a message.");
}
```

Calling a function:

```
message = getMessage();
alert(message);
```

Anonymous Functions

- Have no name (anonymous)
- Generally they either:
  - run immediately (IIFE)
  - are connected to events
  - are methods in an object

Object methods

Functions in an object

```
var cat = {
    name: "Bart",
    meow: function() {
        alert("Meow");
    }
}
```

Calling a method

Can't just type in the method name like for a function, you need to refer to the object first.

```
cat.meow();    // not just meow()
```

Triple Equals?! ===

- A double equal sign allows for some type conversion – i.e. false = 0 & true = 1
- Most people agree the rules for this are strangely inconsistent & just say avoid
- A triple equal sign does not convert types; it must be an exact match.

Notes on Loops

Be careful about what you do inside a loop.

- Define variables that don't change outside the loop.
- Don't do anything "extra" inside the loop that doesn't need to be done to each item.

The more data you have to loop over, the bigger the performance impact of even one extra statement.

Pulling it Together

Address Book on page 120, listing 6.6

Review the code & make sure you understand what it is doing. You will make your own "mirror" application for homework.

Homework

On Git-Hub, first-app repository. Fork & clone, but you must add all files. More info in the Readme file.

Read chapters 7-8, we will apply to the first-app project next week.