

CS50 Section. Week 10. 11/10/15.

Tuesdays 7:00-8:30pm, Science Center 309A. <https://github.com/hathix/cs50-section>.

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Get these handouts at <https://github.com/hathix/cs50-section/tree/master/handouts>.

JavaScript

Functions

```
// "function declaration" syntax
function add(a, b) {
    return a + b;
}

// "function literal" syntax
var subtract = function(a, b) {
    return a - b;
};
```

Functions are variables!

```
function call(myFunction, x, y) {
    return myFunction(x, y);
}

// prints 7
console.log(call(subtract, 9, 2));

// prints 12
console.log(call(function(a, b){
    return a * b;
}, 3, 4));
```

Callbacks

Functions that you pass to other functions are called *callbacks*.

```
// prints "Hi!"
function callback(){
    console.log("Hi!");
};
waitForABitThenRun(callback);
```

Arrays

```
// mixed types in arrays
var numbers = [1, 2, 3];
var stuff = ["Cherry", 43.5, ["a", "b", "c"]];

// prints 1, 2, 3
for (var i = 0; i < numbers.length; i++) {
    console.log(numbers[i]);
}

// prints [1, 2, 3, 4]
numbers.push(4);
console.log(numbers);
```

Objects

```
var movie = {
    title: "Moneyball",
    year: 2011,
    tags: ["baseball", "oakland"],
    synopsis: function() {
        // `this` gives access to the object's other fields
        console.log(this.title + ": " + this.year);
    }
};

// prints 2011
console.log(movie.year);

// prints "Harry Potter"
movie.title = "Harry Potter";
console.log(movie.title);

// prints "Harry Potter: 2011"
console.log(movie.synopsis());
```

Ajax

```
var arguments = {
  key: "value"
};
$.getJSON("api-endpoint.php", arguments)
.done(function(data, textStatus, jqXHR) {
  // success!
  // data is a JavaScript object; ignore the other 2 variables
  console.log(data);
})
.fail(function(jqXHR, textStatus, errorThrown) {
  // failure!
  // errorThrown provides error info; ignore the other 2 variables
  console.log(errorThrown.toString());
});
```

Templating

```
// prints "<a href='http://yale.edu' class='btn btn-danger'>Safety school</a>"
var templateFunction = _.template("<a href='<%- url %>' class='btn btn-<%- btnClass %>'><%- text %></a>");
var htmlString = templateFunction({
  url: "http://yale.edu",
  btnClass: "danger",
  text: "Safety school"
});
console.log(htmlString);
```

Challenge: Weather

We're going to make a simple weather app!

Weather for Cambridge, MA

47F and Mostly Cloudy

Give it a shot: http://is.gd/cs50_weather

Solution: <https://github.com/hathix/cs50-section/blob/master/code/10/weather-soln.js>

Challenge: Ignite

We're going to make a dating app where you can see people's bios and "swipe left" or "swipe right" on them. We're gonna be millionaires!



David Malan, 38

This is CS50.

Swipe left

Swipe right

Give it a shot: http://is.gd/cs50_ignite

Solution: <https://github.com/hathix/cs50-section/blob/master/code/10/igniter-soln.js>