I am still not sure how to know what functions/methods to choose to put in the code...

1. Figure out what you are trying to do (ie finding elements, get/set content, effects/animation, event listeners)
2. Look at methods for that category

What is a var?

var means variable

I'm still a little confused about forms

INPUT AND BUTTON ELEMENTS

TEXT INPUT ELEMENT

```
<input type="text" placeholder="Enter your name">
```

Enter your name

BUTTON ELEMENT

```
<button type="button">Sign me up!</button>
```

Sign me up!

BOOLEANS

Get/change content of elements, attributes, text nodes (part 2!)

METHODS	GOAL	EXAMPLES
`.val()`	Get value from input	`$('input').val();`
	Change value in input	`$('input').val('New Value');`

What goes in the parentheses?

The **html or content you want to add/change**

FINAL PROJECTS

AGENDA

- Review
- Functions — What are functions?
- Functions — Syntax
- Functions — Scope
- Functions — Return Values
- Lab Time — Temperature Converter

LEARNING OBJECTIVES

- Define a function with one or more parameters
- Execute a function within a program
- Given a function and a set of arguments, predict the output of a function

REVIEW

JAVASCRIPT — VARIABLES

Declaring a variable → `var age;` ← Semicolon!

Assigning a variable → `age = 29;` ← Semicolon!

Both in one step → `var age = 29;` ← Semicolon!

JAVASCRIPT — VARIABLES

```
var champion = “Sarah”;
champion = “Christine”;
```

WHAT CAN BE STORED IN VARIABLES?

DATA TYPES:

STRINGS

```
"Today is Monday"
```

Letters and other characters enclosed in quotes

NUMBERS

```
10
22.75
```

- Positive numbers
- Negative numbers
- Decimals

BOOLEANS

```
true
false
```

Can have one of two values:

- True
- False

* Note: we'll meet some more data types later on down the road, too!

JAVASCRIPT — COMPARISON OPERATORS

`>=`	Greater than or equal to	Equal to	`===`
`<=`	Less than or equal to	Not equal to	`!==`
`>`	Greater than		
`<`	Less than		

ASSIGNMENT VS. COMPARISON — DON'T GET THEM CONFUSED!

ASSIGNMENT

=

```
var number = 7;
```

COMPARISON

===

or

==

```
if (number === 8) {
  // Do something
}
```

JAVASCRIPT — IF/ELSE IF/ELSE

```
if (answer === 38) {
    // Do something if first condition is true
} else if (answer === 30) {
    // Do something second condition is true
} else {
    // Do something if all above conditions are false
}
```

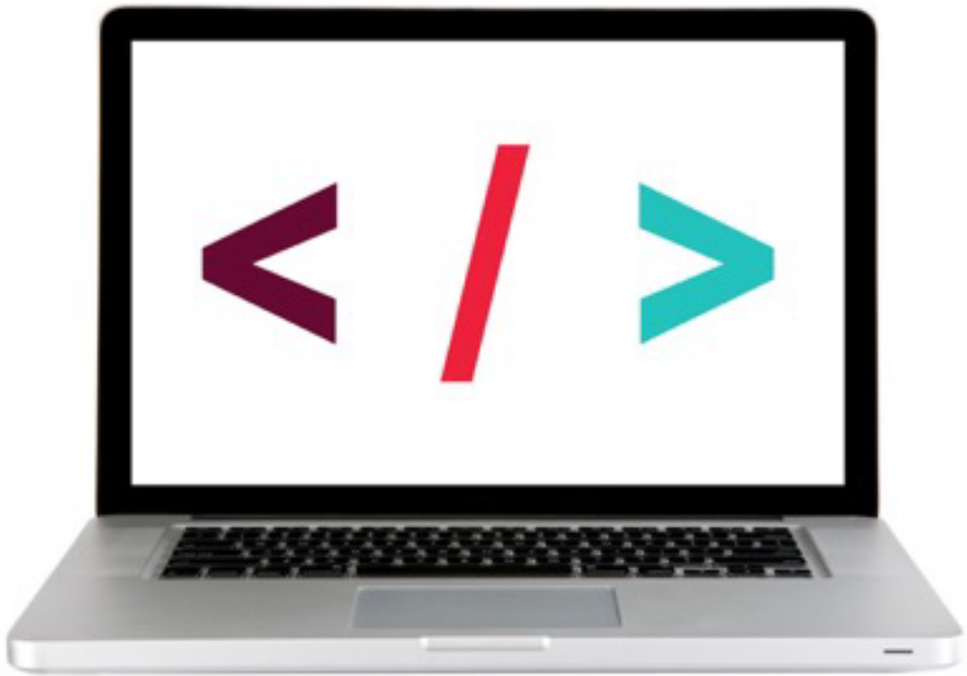
JAVASCRIPT — LOGICAL OPERATORS

&& and

|| or

! not

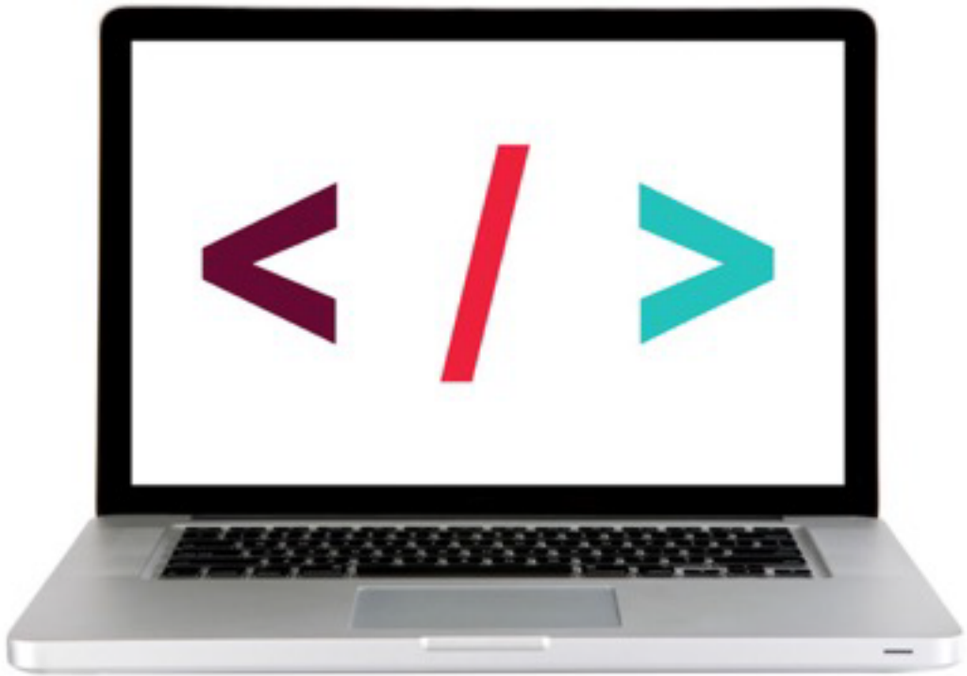
CLOSER LOOK



starter_code_lesson_10 > compare_two_numbers

CASH REGISTER PT. 1

CLOSER LOOK



Cash Register

FUNCTIONS

WHAT ARE FUNCTIONS?


CHRIS
NBA ALL-STAR
CODED IN COLLEGE
0:00 / 1:37

FUNCTIONS

GROUP STEPS

Allow us to group a series of statements together to perform a specific task

REUSABLE

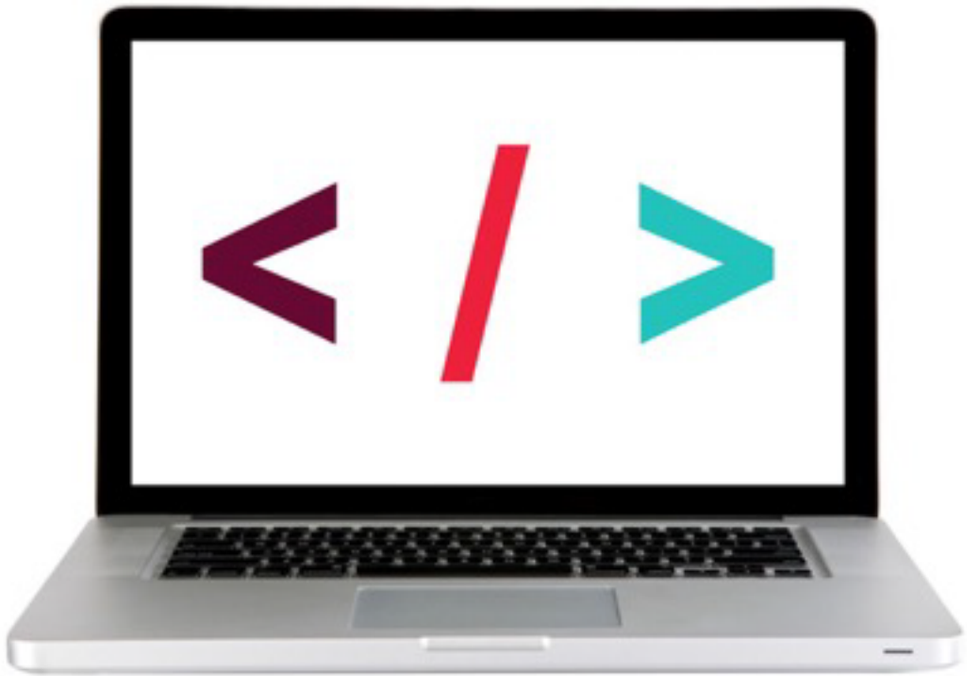
We can use the same function multiple times

STORE STEPS

Not always executed when a page loads. Provide us with a way to 'store' the steps needed to achieve a task.

DRY — DON'T REPEAT YOURSELF

CLOSER LOOK



[jQuery Traffic Light]

SYNTAX

SYNTAX — DECLARING A FUNCTION

Keyword

Name

```
function pickADescriptiveName() {
    // Series of statements to execute
}
```

Code block

SYNTAX — CALLING A FUNCTION

- To run the code in a function, we 'call' the function by using the function name followed by parenthesis.

```
pickADescriptiveName();
```

Function name

FUNCTIONS — TAKING ATTENDANCE

```
function takeAttendance () {
  // Count the number of students in the classroom
  // Write the number of students on the board
}
```

FUNCTIONS — TAKING ATTENDANCE

```
takeAttendance();
```

CODE ALONG — FUNCTIONS

Let's code! lesson10_starter_code > functions (part 1)

SYNTAX — DECLARING A FUNCTION (WITH PARAMETERS)

Parameters

```
function multiply(param1, param2) {
  var result = param1 * param2;
  $('h1').html(result);
}
```

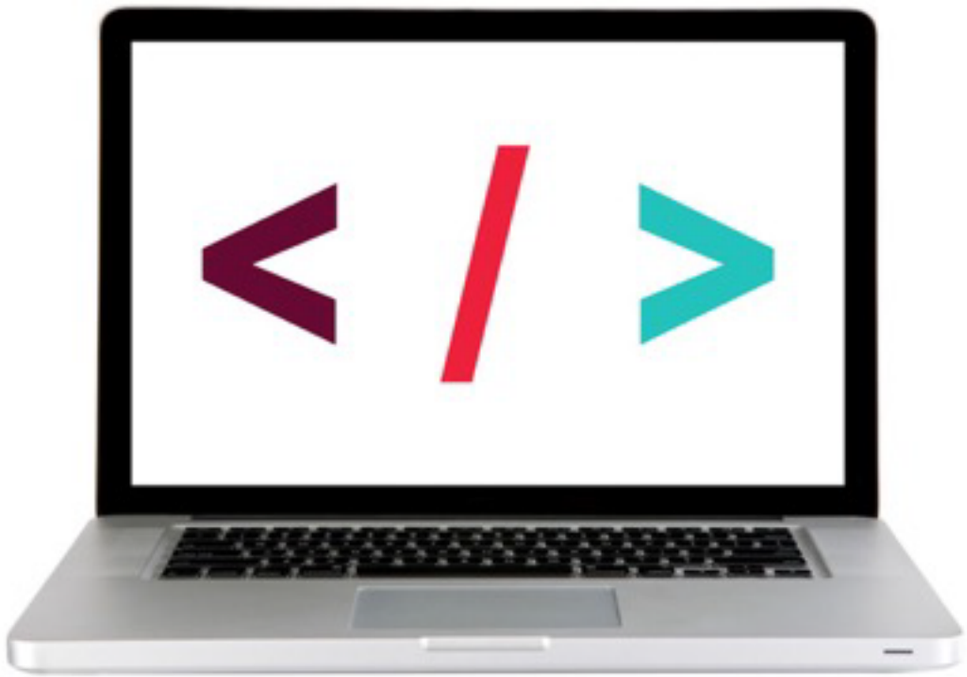
We can use these parameters like variables from within our function

SYNTAX — CALLING A FUNCTION (WITH ARGUMENTS)

Arguments

```
multiply(350, 140)
```

CLOSER LOOK



Multiply

FUNCTIONS — GREET

```
function greet (firstName) {
  console.log("Hello " + firstName);
}
```

FUNCTIONS — GREET

```
greet("Michelle");
```

CODE ALONG — FUNCTIONS

Let's code! lesson10_starter_code > functions (part 2)

RETURN VALUES

RETURNING VALUES FROM A FUNCTION

- To return a value from a function, we use the return keyword
- From within a function, the return keyword 'hands' a value back to the code that called the function
- We can then do something with that value, or store it in a variable for use later in the script

```
function convertToCurrency (entry) {
    // Cut number to two decimal point
    var currency = entry.toFixed(2);
    // Prepend the dollar sign
    currency = '$' + currency;

    return currency;
}
```

```
var amountInDollars = convertToCurrency(entry);
$('ul').append('<li>' + amountInDollars + '</li>');
```

SCOPE

FUNCTIONS — TAKING ATTENDANCE

LOCAL VARIABLES

- A **local** variable is a variable that is declared *inside* a function.
- It can **only be used in that function**, and cannot be accessed outside of that function

GLOBAL VARIABLES

- A **global** variable is a variable that is declared *outside* of a function.
- It can be used **anywhere in the script**.

LAB TIME!

LAB — TEMP CONVERTER — FORMULAS

Formula to convert fahrenheit to celsius: (fahrenheit - 32) / 1.8;

Formula to convert celsius to fahrenheit: 1.8 * celsius + 32;

JQUERY METHODS — EVENTS!

CREATE EVENT LISTENERS

The .on() method is used to handle all events.

Syntax: `$('selector').on('event', code_that_should_run);`

Example:

```
$('li').on('click', function() {
  // your code here
});
```

CODE ALONG — FUNCTIONS

Let's code! lesson9_starter_code > [2] temp_converter

FUNCTIONS — TEMP CONVERTER

EXERCISE

KEY OBJECTIVE

- Build an application using HTML/CSS and JS that converts a temperature from Fahrenheit to Celsius

EXECUTION

Until 8:50

1. Start with the functional temp converter
2. Create getCelsius() and getFahrenheit() functions
3. **Bonus #1**: Change the background-color depending on what temperature the user enters (example)
4. **Bonus #2**: Add error styles if the user doesn't enter a value in the form (example)

**For reference, see the Compare Two Numbers and Score Keeper

HOMEWORK

CASH REGISTER
& REFACTOR TEMP CONVERTER

EXIT TICKETS