Jumping for JS

The Coding Bootcamp

Today's Class

Objectives

In today's class we'll be covering:

- The Art of Pseudo-Coding
- Building Rock-Paper Scissors
- JavaScript Functions

Basics Recap

What is JavaScript?

(And what is it used for?)

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JavaScript Definitions

- **JavaScript** is the third of the three fundamental programming languages of the modern web (along with HTML, CSS)

- JavaScript allows developers to create **dynamic** web applications capable of taking in user inputs, changing what's displayed to users, animating elements, and much more.

What is a Variable?

(And how do we declare one?)

Basic Variables

- Variables are the nouns of programming.
- They are “things” (Numbers, Strings, Booleans, etc.)
- They are composed of variable names and values

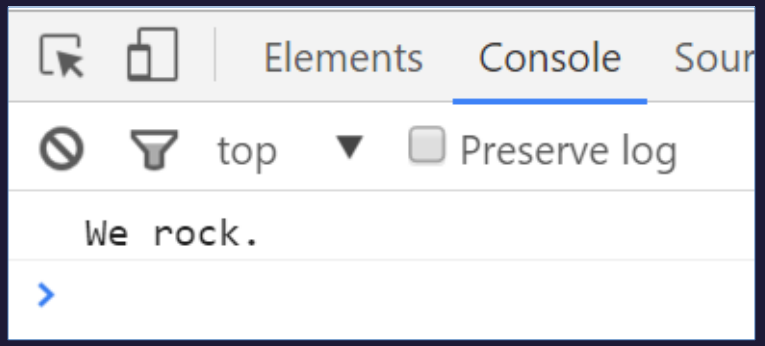
```
var name = "Snow White";
var dwarfCount = 7;
var isSleeping = true;
```

*What is meant by **console.log**?*

(And how does it differ from an alert, prompt, or conf rm?)

Basic Variables

```
console.log("We rock.");
```




```
alert("We Rock.");
```

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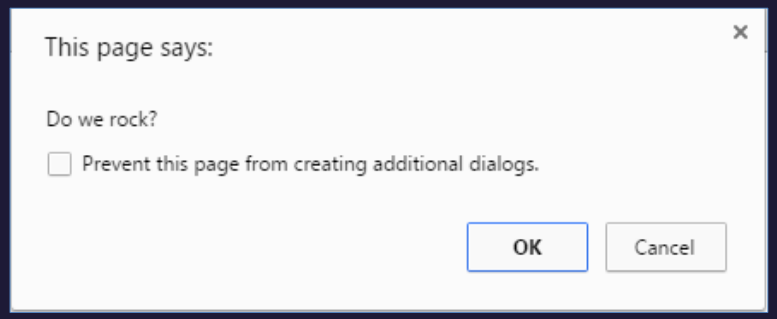
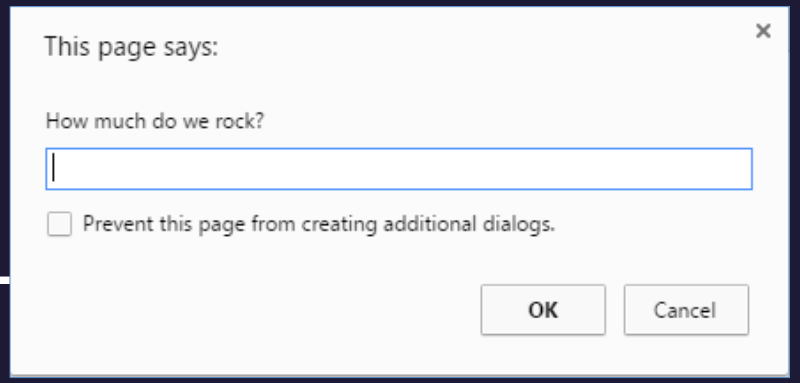
- **Console.log** displays discreetly to the debugger.
- **Alert** displays a pop-up message to the user.

Basic Variables

```
confirm("Do we rock?");
```




```
prompt("How much do we rock?");
```



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- **Conf irm** displays a True/False popup.
- **Alert** displays a prompt with a text-box input.

How do we “write” text to the HTML itself?

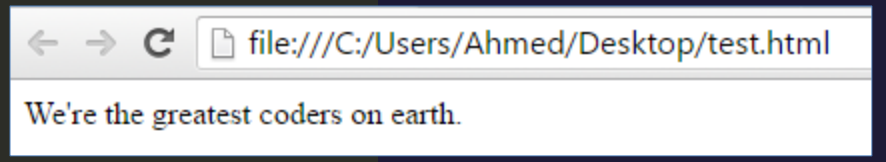
Writing to HTML

- We can use JavaScript to directly write to the HTML page itself using **document.write( ).**

- Later we will go over *much* more advanced approaches for writing HTML using JavaScript and jQuery.

```
1  <!DOCTYPE html>
2  <html lang="en-us">
3    <head>
4      <meta charset="UTF-8">
5      <title>Document Write</title>
6    </head>
7    <body>
8
9      <script type="text/javascript">
10
11       document.write("We're the greatest coders on earth.");
12
13     </script>
14
15   </body>
16 </html>
```

Test.html (chro



Test.html (sublime)

How do we check conditions?

If/Else Statements

- If/Else statements are critical.

- Each statement is composed of an if, else-if, or else (keyword), a condition, and the resulting code in { } curly brackets.

```
// If the user likes sushi (confirmSushi === true), we run the following block of code.
if (confirmSushi) {
  alert("You like " + sushiType + "!");
}
// If the user likes ginger tea (confirmGingerTea === true), we run the following block of code.
else if (confirmGingerTea) {
  alert("You like ginger tea!!");
}
// If neither of the previous condition were true, we run the following block of code.
else {
  document.write("You don't like sushi or ginger tea.");
}
```

What is an array?

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Basic Arrays

- Arrays are a type of variable that are collections.
- These collections can be made up of strings, numbers, booleans, other arrays, objects, anything.
- Each element of the array is marked by an index. Indexes always start with 0.

```
var nickCharacters = ["Tommy", "Doug", "Oblina"];

var diceNumbers = [1, 2, 3, 4, 5, 6];

var mixedArray = ["Zoo", 12, "Carrot", 3];
```

PAUSE

Functions

Code Dissection: Array Building

- Run the program sent to you via slack.
- Then, with a partner, f ll in the missing comments for each line of code.
- Make sure both of you can fully explain what each line means.
- Be prepared to share with the class.

Demo Time

Instructor: Demo

(SuperHeroLogging_NoFunctions.html | 26-SuperHeroLogging)

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Mondo Repetitive…

```
// For Loop for Brands
for (var i = 0; i < brands.length; i++) {
  console.log(brands[i]);
}
console.log("---------");

// For Loop for Heroes
for (var i = 0; i < heroes.length; i++) {
  console.log(heroes[i]);
}
console.log("---------");

// For Loop for booksOnMyShelf
for (var i = 0; i < booksOnMyShelf.length; i++) {
  console.log(booksOnMyShelf[i]);
}
console.log("---------");

// For Loop for thingsInFrontOfMe
for (var i = 0; i < thingsInFrontOfMe.length; i++) {
  console.log(thingsInFrontOfMe[i]);
}
console.log("---------");

// For Loop for howIFeel
for (var i = 0; i < howIFeel.length; i++) {
  console.log(howIFeel[i]);
}
console.log("---------");
```

Who wants to maintain this??

Hint: No one.

Demo Time

Instructor: Demo

(SuperHeroLogging_withFunctions.html | 26-SuperHeroLogging)

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Much Better with Functions!

```
// Here we create a "Function" that allows us to "call" (run) the loop for any array we wish.
// We pass in an array as an "argument".
function consoleInside(arr) {

  // We then loop through the selected array.
  for (var i = 0; i < arr.length; i++) {

    // Each time we print the value inside the array.
    console.log(arr[i]);
  }
  console.log("---------");
}
```

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Squeaky Clean Code.

Minimal repetition

> YOUR TURN!!

Activity: *27*-MyFirstFunctions **| Suggested Time:** 20 min

Code Creation: Function Building

- Working in pairs and using the starter f le sent to you via slack–f ll in the missing **functions** and **function calls.**

- Note: Try to f nish all four functions if you can, but don’t be distressed if you only get 1 or 2. The important thing is that you get at least one function fully done.

- **HINT:** Look back to the previous example if you need help.

Recap Activity

Time Permitting

Questions