



# JavaScript Juggernauts

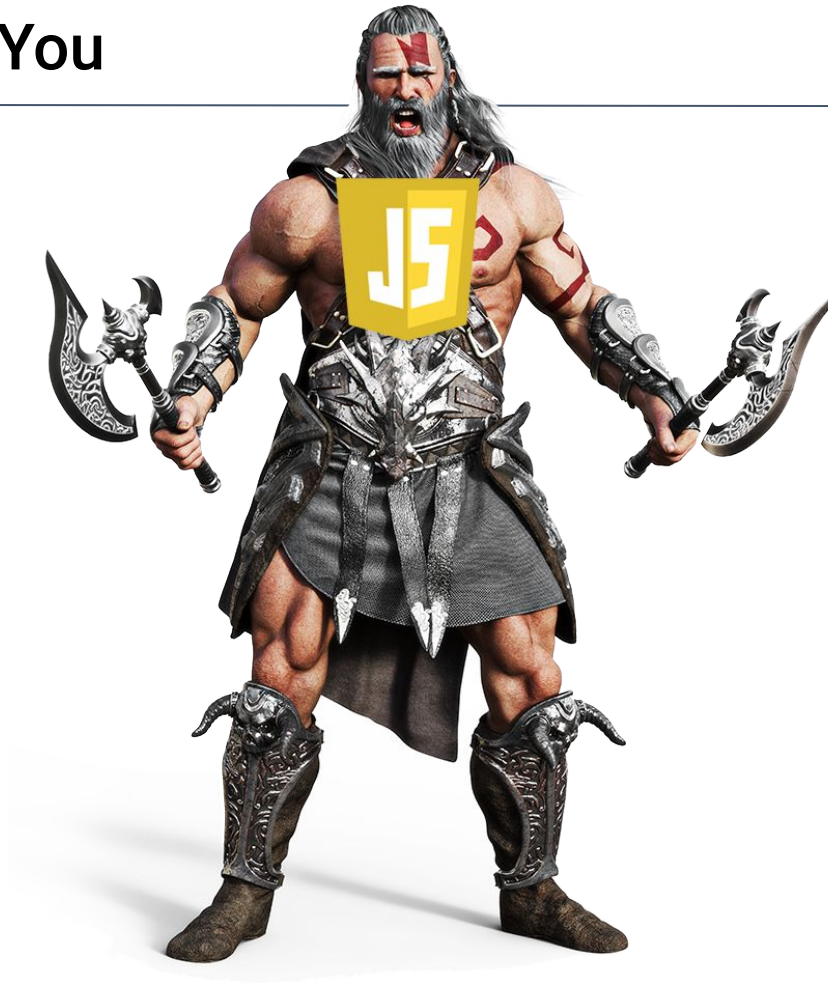
Web Development Boot Camp  
Lesson 3.3



# This Will Soon Be You

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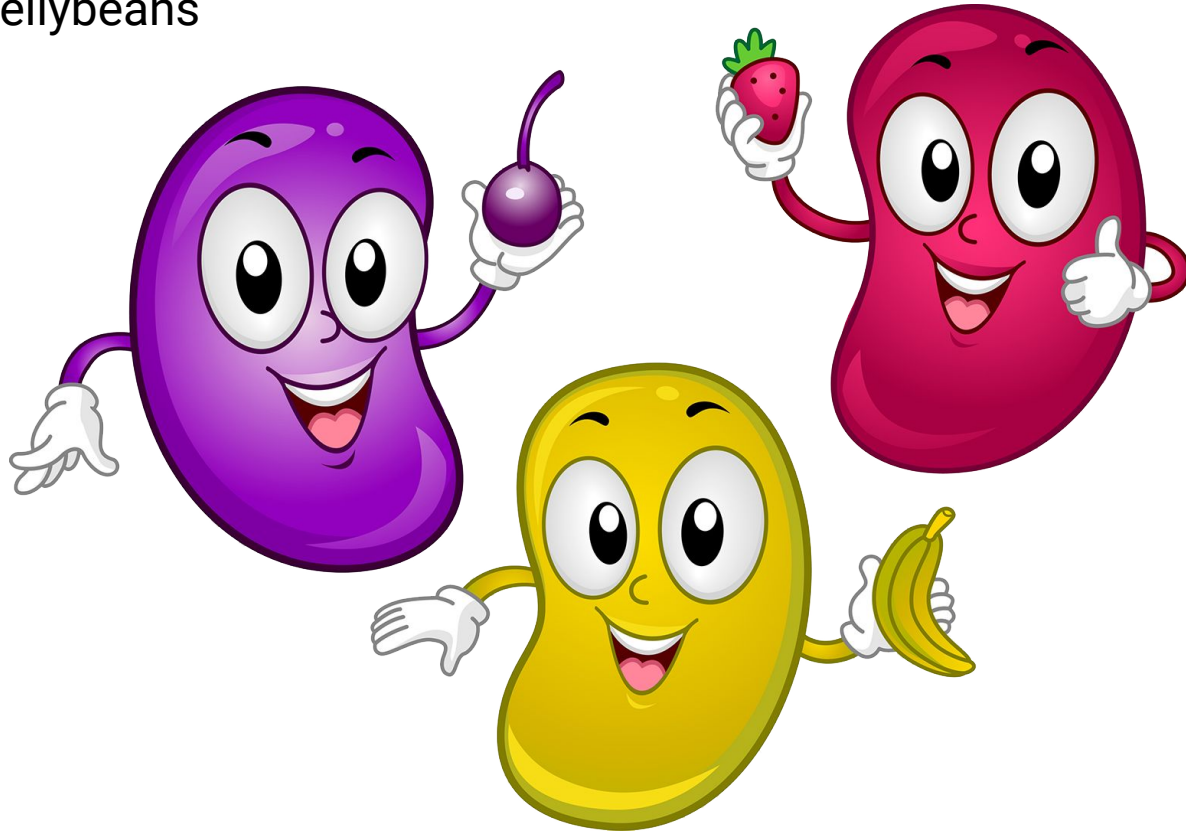
JavaScript Juggernauts



# But Right Now You Feel Like

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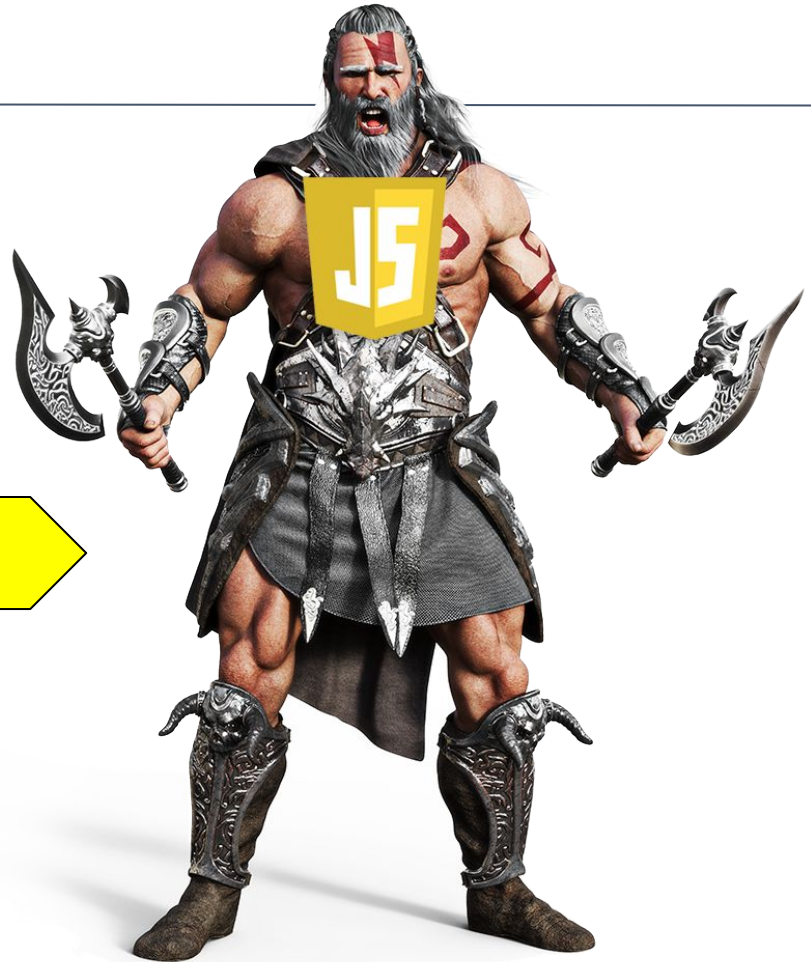
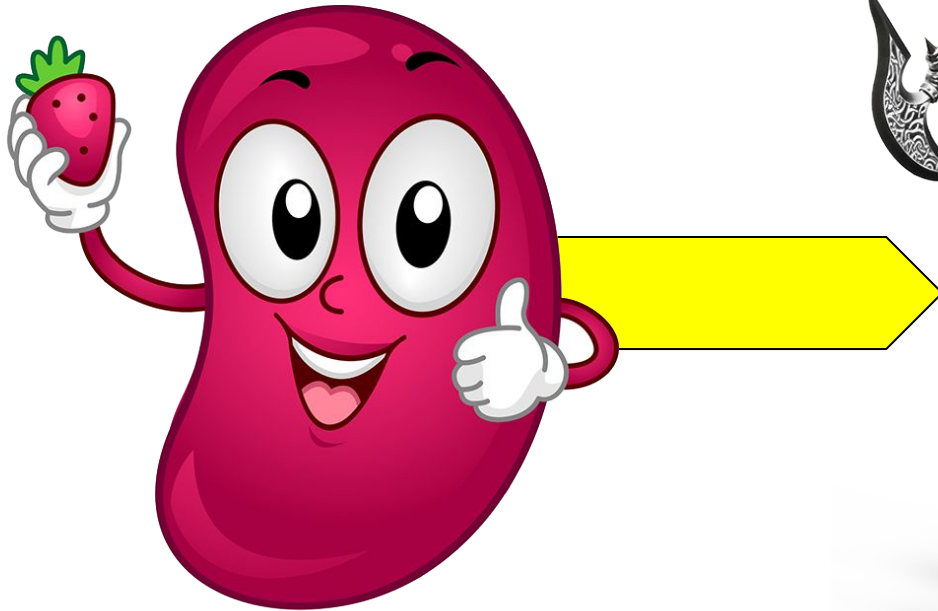
JavaScript Jellybeans



# Transformation to Come!

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HANG IN THERE!



# Today's Class

# Objectives

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In today's class, we'll cover:



JavaScript Functions

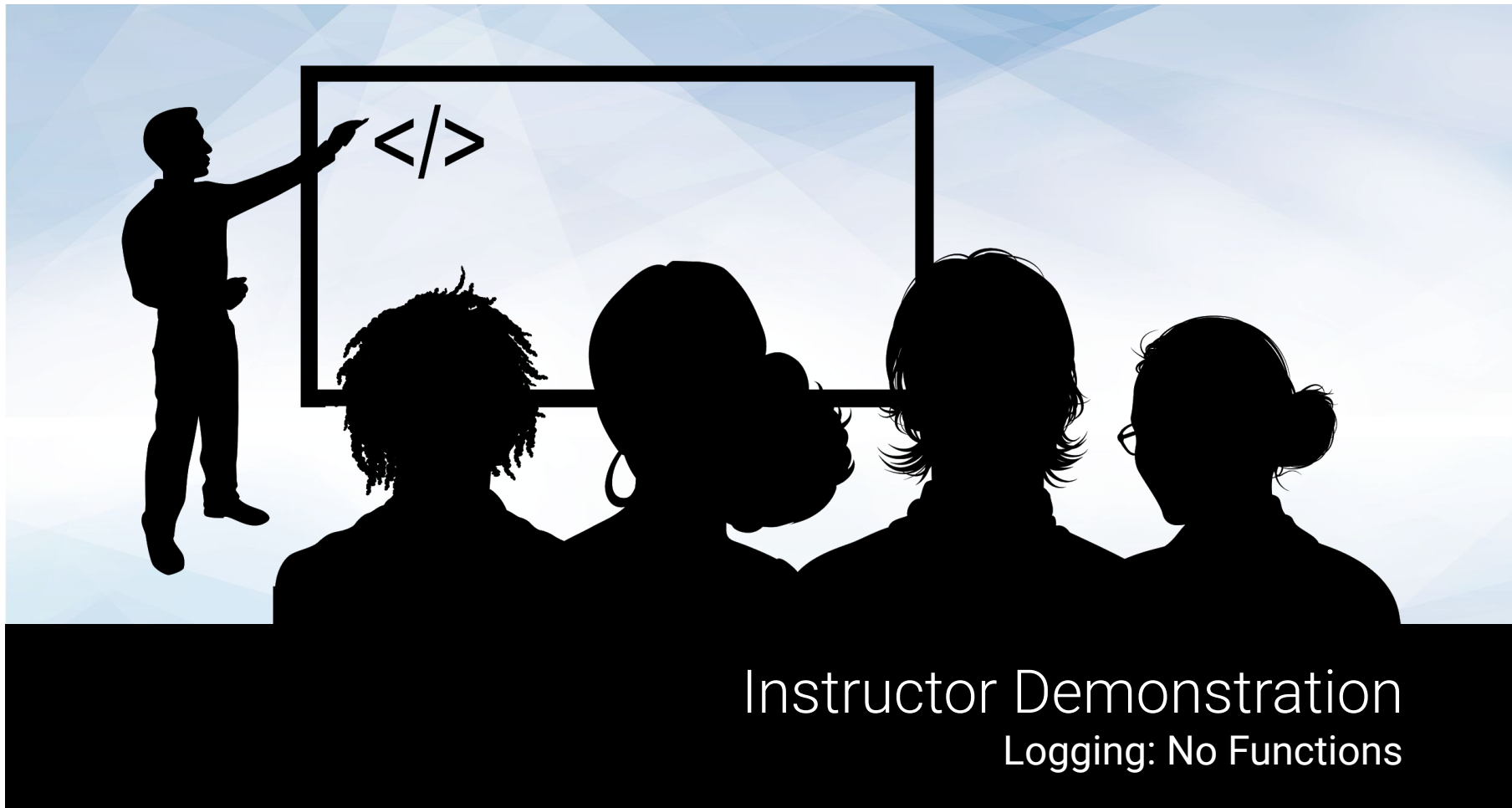


JavaScript Objects



Building Simple JavaScript Applications

# JavaScript Functions



# Instructor Demonstration

## Logging: No Functions



# Mondo Repetitive

Who wants to maintain this?



**Hint:** No one.



```
// 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("-----");
```



# Instructor Demonstration

## Logging: With Functions

# Much Better with Functions!

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Squeaky clean code. Minimal repetition.

```
// 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("-----");  
}
```



# Partner Activity:

## My First Functions

**Suggested Time:**  
20 minutes



# Partner Activity: My First Functions

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Working in pairs and using the starter file sent to you via Slack, fill in the missing functions and function calls.



**Note:** Try to finish 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.

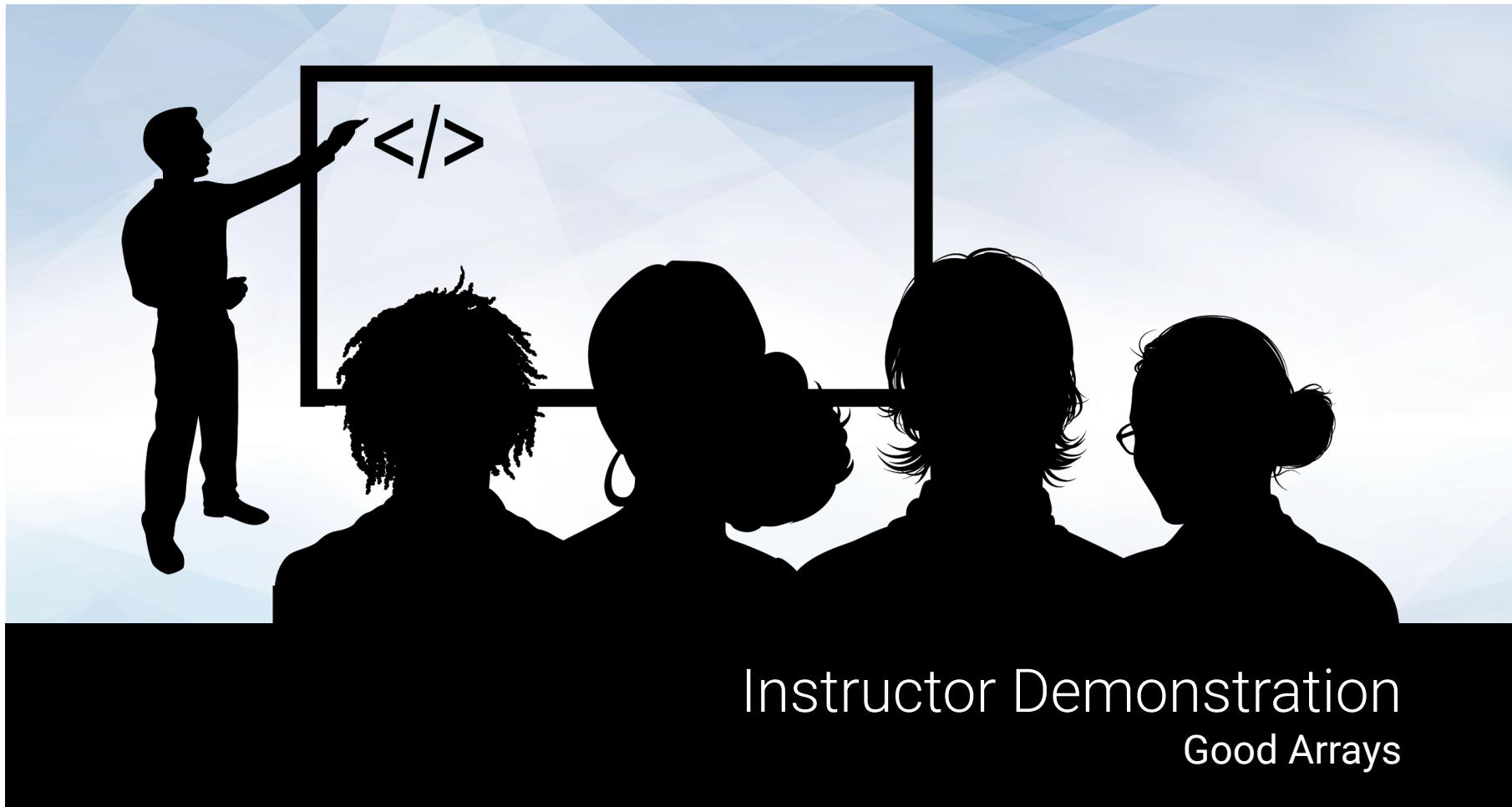


**HINT:** Look back to the previous example if you need help.

**Suggested Time:** 20 minutes



# JavaScript Objects



# Instructor Demonstration

## Good Arrays



# Instructor Demonstration

## Joan of Arc (Bad Arrays)



# Associated Data ==/= Arrays

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Relating two separate arrays is not fun.

```
var joanOfArcInfoParts = ["Real Name", "Grew Up Where", "Known For", "Scars", "Symbolism"];

var joanOfArcInfoValues = ["Jehanne la Pucelle.", "Domremy, a village in northeastern France.",
    "Peasant girl, daughter of a farmer, who rose to become Commander of the French army.",
    "Took an arrow to the shoulder and a crossbow bolt to the thigh while trying to liberate Paris.",
    "Stands for French unity and nationalism."];
```



# Instructor Demonstration

## Gandalf the Grey Objects

# Gandalf: The Object

Gandalf's **properties** and **values** are associated in object form, making it easy to recall specific data.

```
11  var gandalf = {  
12      "real name": "Gandalf",  
13      "age (est)": 11000,  
14      "race": "Maia",  
15      "haveRetirementPlan": true,  
16      "aliases": [  
17          "Greyhame",  
18          "Stormcrow",  
19          "Mithrandir",  
20          "Gandalf the Grey",  
21          "Gandalf the White"  
22      ]  
23  }  
24  
25  // Object properties can be accessed with "bracket notation"  
26  alert("My name is " + gandalf["real name"]);  
27  
28  // Or with "dot notation" if the property has no spaces  
29  if (gandalf.haveRetirementPlan) {  
30  
31      // Or with a variable that matches the name of the property  
32      var ageProperty = "age (est)";  
33      var years = gandalf[ageProperty];  
34      alert("My 401k has been gathering interest for " + years + " years!");  
35  }
```

# Objects Visualized

This is Gandalf. According to code, Gandalf is an **object**.

var gandalf	=	{
-------------	---	---



"real name"	:	"Gandalf"	,
-------------	---	-----------	---

"age (est)"	:	11000	,
-------------	---	-------	---

"race"	:	"Maia"
--------	---	--------

}
---

# Objects Visualized

These are Gandalf's **properties** (like descriptors).

var gandalf	=	{
-------------	---	---



"real name"	:	"Gandalf"	,
-------------	---	-----------	---

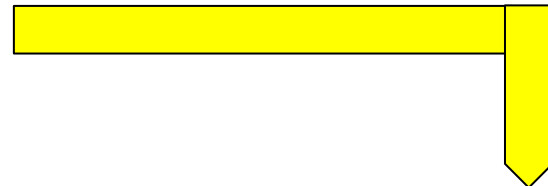
"age (est)"	:	11000	,
-------------	---	-------	---

"race"	:	"Maia"
--------	---	--------

}
---

# Objects Visualized

These are the **values** of Gandalf's properties.



var gandalf	=	{
-------------	---	---



"real name"	:	"Gandalf"	,
-------------	---	-----------	---

"age (est)"	:	11000	,
-------------	---	-------	---

"race"	:	"Maia"
--------	---	--------

}
---

# Objects Visualized

Thus: `gandalf["race"] = "Maia"`

`var gandalf`

`=`

`{`



`"real name"`

`:`

`"Gandalf"`

`,`

`"age (est)"`

`:`

`11000`

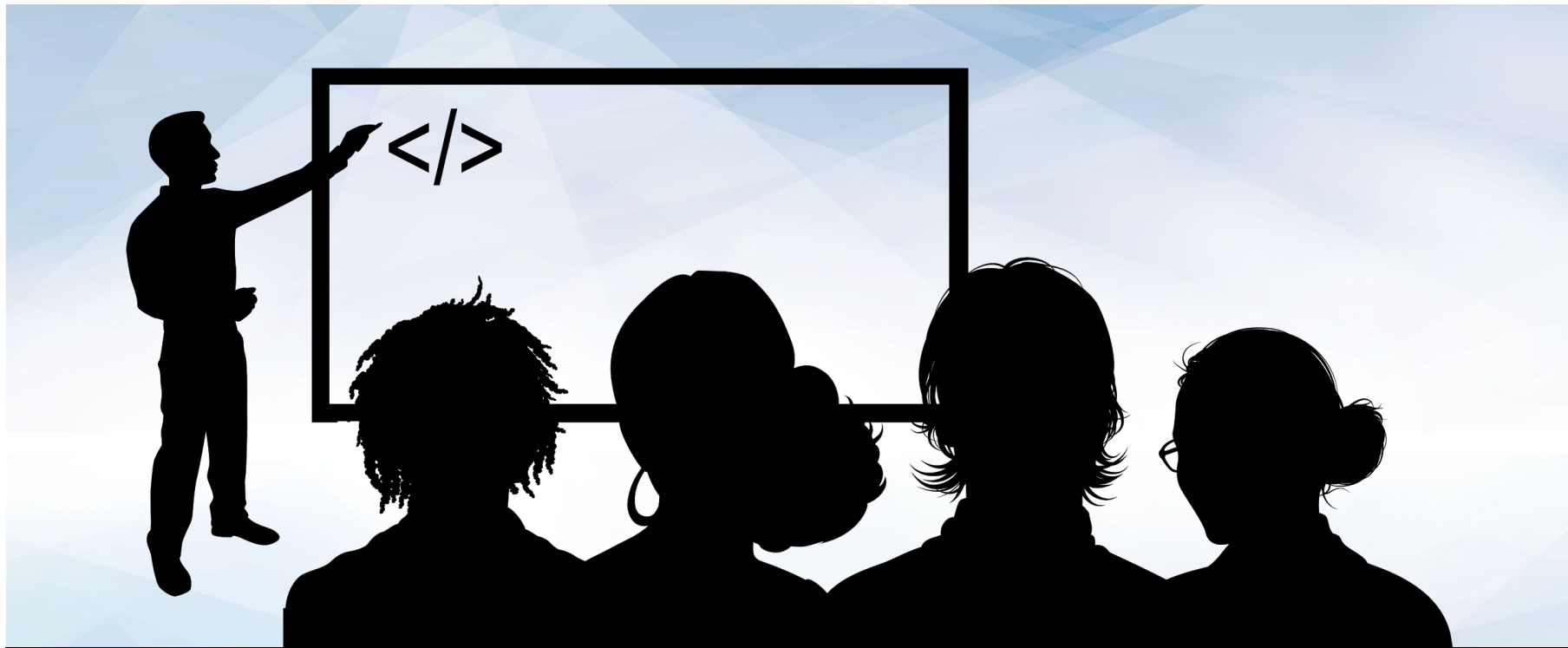
`,`

`"race"`

`:`

`"Maia"`

`}`



# Instructor Demonstration

## Gandalf: The Grey Objects (Repeat)





## **Group Activity** (2 people): Basic Objects

**Suggested Time:**  
15 minutes



# Group Activity: Basic Objects

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With a partner, spend the next few moments studying the code just slacked to you.



Then, write code below each comment to log the relevant information about the provided `car` object.



**Bonus:** If you finish early, create a brand new object of your own. Slack out a snippet of the code to the class when you are done. Be Creative!

Suggested Time: 15 minutes



# Take a Break!

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# Instructor Demonstration

## Run That Car!



## Challenge: Run That Car!

Suggested Time:  
15 minutes



# Challenge: Run That Car!

Using the code from the previous activity as a starting point, create a complete application such that:



Users can enter keyboard input (letters).



Each of the car's methods are assigned to a key.



When the user presses a key, it calls the appropriate function.



These letters also trigger a global function called `rewriteStats()` that logs the car's make, model, color, mileage, and `isWorking` status to the console.

Suggested Time: 15 minutes





# Questions?