



JavaScript Level Two

JavaScript Level Two



Django Bootcamp

- Welcome to Javascript Level Two.
- So far we've only learned the basics of Javascript, it is time to expand our understanding by learning about more advanced material!



Django Bootcamp

- In this section we will cover:
 - Functions
 - Arrays
 - Objects
- We will also have exercises for each of these topics for plenty of practice!



Let's get started!

JavaScript Level Two



Part 1 - Functions

JavaScript Level Two



Django Bootcamp

- Functions will be our main building blocks.
- They will allow us to easily reuse code more than once and not constantly repeat ourselves.



Django Bootcamp

- The general syntax for a JS function is:
 - `function name(parameter1, parameter2){
 //Code to be executed
}`



Django Bootcamp

- We use the function keyword to indicate that we have a function.
 - `function name(parameter1, parameter2){`
 `//Code to be executed`
 `}`



Django Bootcamp

- Then we have the option of passing in parameters (we could also not have any parameters).
 - ```
function name(parameter1, parameter2){
 //Code to be executed
}
```



# Django Bootcamp

- Someone using the function could pass in parameters required for the function to do something with.
  - `function name(parameter1, parameter2){`  
    `//Code to be executed`  
    `}`



# Django Bootcamp

- Let's go straight to the editor and our console to really show how to create and use functions in Javascript!
  - `function name(parameter1, parameter2){`  
    `//Code to be executed`  
    `}`



# Part 2 - Function Exercises

JavaScript Level Two



# Django Bootcamp

- Let's get some practice with functions, open up the file:
  - `Part2_Functions_Exercises.js`
- The problems gradually get harder.
- Let's take a quick look at the problems!



# **Part 2 - Function Exercises - Solutions**

JavaScript Level Two



# Part 3 - Arrays

JavaScript Level Two



# Django Bootcamp

- Arrays will allow us to store various basic data types in a sequence, so we can then later access them as needed.
- This is best explained through example code, so let's get started!





# Part 4 - Array Exercise

JavaScript Level Two



# Django Bootcamp

- It is time to practice using arrays in a more realistic situation.
- We will create a student roster app using the Javascript that we know so far.
- Let's check out:
  - `Part4_Array_Exercise.html`



# Part 4 - Array Exercise Solution

JavaScript Level Two



# Part 5 - Objects

JavaScript Level Two



# Django Bootcamp

- JS Objects are hash-tables, they store information in a key-value pair.
- In other languages this is sometimes also called a dictionary.
- Unlike an array a JS Object does NOT retain any ordering.



# Django Bootcamp

- The name “Object” can sometimes be confusing when coming from another language because it sounds so generic, so keep that in mind.



# Django Bootcamp

- The typical JS Object is in the form:
- `{ key1 : "value one", key2 : "value two", ... }`
- You then access values through their corresponding key
- Let's see some examples of this and learn more about JS Objects!



# Part 5 - Objects Continued

JavaScript Level Two





# Django Bootcamp

- Let's continue by discussing Object methods.
- Object methods are essentially functions that are inside of an Object.



# Django Bootcamp

- ```
var carInfo = {  
  make: "Toyota",  
  year: 1990 ,  
  model: "Camry" ,  
  carAlert: function(){  
    alert("We've got a car here!")  
  }  
};
```



Django Bootcamp

- More realistically you will want to use key value pairs from the object itself, in that case you use the special **this** keyword.
- The **this** keyword can be confusing for beginners at first, so don't worry if you don't immediately fully grasp it.



Django Bootcamp

- The **this** keyword acts differently depending on the situation.
- For a JS Object, the **this** is set to the object the method is called on.
- For example...



Django Bootcamp

- ```
var myObj = {
 prop: 37,
 reportProp: function() {
 return this.prop;
 }
};
console.log(myObj.reportProp()); // logs 37
```



# Django Bootcamp

- Good Link for More Details:
- <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Operators/this>
- Let's code out a few examples of Object Methods!



# Part 6 - Objects Exercise

JavaScript Level Two



# Django Bootcamp

- For this exercise check out the file:
  - `Part6_Objects_Exercise.js`
- It contains three objects along with tasks that involve you adding methods to each of the objects.
- Let's get a quick look!





# Part 6 - Objects Exercise Solutions

JavaScript Level Two