



Day 3 - Arrays

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Outline

In this session, you are going to learn about these topics:

- Arrays
- Indexes
- Basic array methods and properties
- Multidimensional Arrays

Arrays

An array is a data structure which has the purpose of containing multiple values. You can think of an array as a bookshelf. The bookshelf itself is just one big container, and it can hold different books in different shelves. An array is just like that, it can contain multiple values in its “shelves”. An array’s shelf is called an *index*.

Here is an example of how to create an array.

```
const myFriends = ["ross", "phoebe", "rachel", "monica", "chandler", "joey"]
```

You can also create an array with different data types inside it!

```
const myCollection = ["books", false, 1, 3, "programming", true]
```

Note that each value is separated by a comma.

Indexes

As we've mentioned before, the “shelves” in an array are called *indexes*. An index can hold a single value and is separated by commas. We can use these indexes to access the values in our array and also manipulate it. One thing to note is that when counting/ordering indexes, we start with 0 (zero), not 1 (one).

Accessing Indexes

We can access the values in an index by calling our array and providing the index number that we want inside a bracket `[]`.

```
const myFriends = ["ross", "phoebe", "rachel", "monica", "chandler", "joey"]

// access index 0
myFriends[0] // returns "ross"
```

Manipulating Arrays using Indexes

Aside from accessing its values, we can also use indexes to manipulate the values in an array.

```
const myFriends = ["ross", "phoebe", "rachel", "monica", "chandler", "joey"]

// access index 3
myFriends[3] // returns "monica"

// access index 3 and modify it
myFriends[3] = "janice"

// access index 3
myFriends[3] // returns "janice"
```

Basic Array Methods and Properties

Here are some methods and properties that are often used when working with arrays.

.length

Returns the length of the array

```
const myFriends = ["ross", "phoebe", "rachel", "monica", "chandler", "joey"]  
  
myFriends.length // returns 6
```

.push()

Push is used to insert items at the end of an array.

```
const myFriends = ["ross", "phoebe", "rachel", "monica", "chandler", "joey"]  
  
myFriends.push("john")  
  
console.log(myFriends)  
// returns ["ross", "phoebe", "rachel", "monica", "chandler", "joey", "john"]
```

.pop()

Pop is used to delete items at the end of an array.

```
const myFriends = ["ross", "phoebe", "rachel", "monica", "chandler", "joey"]  
  
myFriends.pop()  
  
console.log(myFriends)  
// returns ["ross", "phoebe", "rachel", "monica", "chandler"]
```