

THE INTRODUCTION TO

ARRAYS

DEFINITION

An array is a list or a value that stores multiple values

SYNTAX

- ▶ We have a sequence of values separated by commas (like arguments when invoking a function) encapsulated by square brackets

```
['hello', 1, false, undefined]
```

- ▶ Similar to strings, it is indexed at 0.
- ▶ So in this example undefined (the fourth element), it's index is at 3

BRACKET NOTATION

- ▶ To access individual elements, like strings we can use square brackets with the index in-between them
- ▶ We can even assign values to positions in the array

```
var firstArray = ['hello', 1, false, undefined];  
  
console.log(firstArray[2]); // ==> false  
  
firstArray[2] = true;  
  
console.log(firstArray[2]); // ==> true
```

ARRAY METHODS:

- ▶ Arrays have access to many methods (functions)
- ▶ A lot of the methods can manipulate the array

```
var myFristArray = [];  
console.log(myFristArray[0]); // ==> undefined  
  
myFristArray.push('the first element')  
console.log(myFristArray[0]) // ==> the first element
```

POP, PUSH, SHIFT, UNSHIFT

- ▶ push adds one or more elements to the end of an array and returns the new length of the array

```
var array = [1, 2, 3, 4, 5, 6];  
var lengthOfArray = array.length;  
console.log(lengthOfArray) // ==> 6  
  
lengthOfArray = array.push(7);  
console.log(lengthOfArray) // ==> 7  
console.log(array) // ==> [1, 2, 3, 4, 5, 6, 7]
```

POP, PUSH, SHIFT, UNSHIFT

- ▶ Pop removes the last element of an array and returns that element
- ▶ Shift will add elements to the front of an array and return the length of the array
- ▶ Unshift will remove the first element of the array and return that element

LOOPIN OVER AN ARRAY

- ▶ The combination of loops and arrays are extremely powerful
- ▶ We can now tier

```
var array = [1, 2, 3, 4];  
  
for(var i = 0; i < array.length; i++) {  
  | console.log(array[i]);  
}
```