Array Methods

Getting more out of arrays

Objectives

Arrays come with a few built-in methods that make our life easier. We're going to cover:

- push/pop
- shift/unshift
- indexOf
- slice

Push and Pop

Use push to add to the end of an array:

```
var colors = ["red", "orange", "yellow"];
colors.push("green");
//["red", "orange", "yellow", "green"]
```

Use pop to remove the last item in an array

```
var colors = ["red", "orange", "yellow"];
colors.pop();
//["red", "orange"]

//pop() returns the removed element
var col = colors.pop();  //orange
```

Shift and Unshift

Use unshift to add to the front of an array:

```
var colors = ["red", "orange", "yellow"];
colors.unshift("infrared")
//["infrared", "red", "orange", "yellow"]
```

Use shift to remove the first item in an array

```
var colors = ["red", "orange", "yellow"];
colors.shift();
//["orange", "yellow"]

//shift() also returns the removed element
var col = colors.shift();  //orange
```

IndexOf

Use indexOf() to find the index of an item in an array

```
var friends = ["Charlie", "Liz", "David", "Mattias", "Liz"];

//returns the first index at which a given element can be found
friends.indexOf("David"); //2
friends.indexOf("Liz"); //1, not 4

//returns -1 if the element is not present.
friends.indexOf("Hagrid"); //-1
```

Slice

Use slice() to copy parts of an array

```
var fruits = ['Banana', 'Orange', 'Lemon', 'Apple', 'Mango'];
//use slice to copy the 2nd and 3d fruits
//specify index where the new array starts(1) and ends(3)
var citrus = fruits.slice(1, 3);

//this does not alter the original fruits array
//citrus contains ['Orange','Lemon']
//fruits contains ['Banana', 'Orange', 'Lemon', 'Apple', 'Mango'];

//you can also use slice() to copy an entire array
var nums = [1,2,3];
var otherNums = nums.slice();
//both arrays are [1,2,3]
```

Splice

Use splice to remove

```javascript
var fruits = ['Banana', 'Orange', 'Lemon', 'Apple', 'Mango'];
//use splice to remove 'Orange' from the array
//specify index of the element to be removed and
//how many elements should be removed from that index
fruits.splice(1, 1);
// returns: ["Orange"]
console.log(fruits);
// prints: ["Banana", "Lemon", "Apple", "Mango"]
```

Array Methods

Exercise 1

```javascript
var fruits = ['Banana', 'Orange', 'Lemon', 'Apple', 'Mango'];
//use slice to copy the 2nd and 3d fruits
//specify index where the new array starts(1) and ends(3)
var citrus = fruits.slice(1, 3);

//this does not alter the original fruits array
//citrus contains ['Orange','Lemon']
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//you can also use slice() to copy an entire array
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```