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# Week 6: Web Development

## 1. Revision and Quiz





## WHAT'S THE DIFFERENCE?



**HTML**  
Hypertext Markup Language

### Create the structure

- Controls the layout of the content
- Provides structure for the web page design
- The fundamental building block of any web page



**CSS**  
Cascading Style Sheet

### Stylize the website

- Applies style to the web page elements
- Targets various screen sizes to make web pages responsive
- Primarily handles the «look and feel» of a web page



**Javascript**

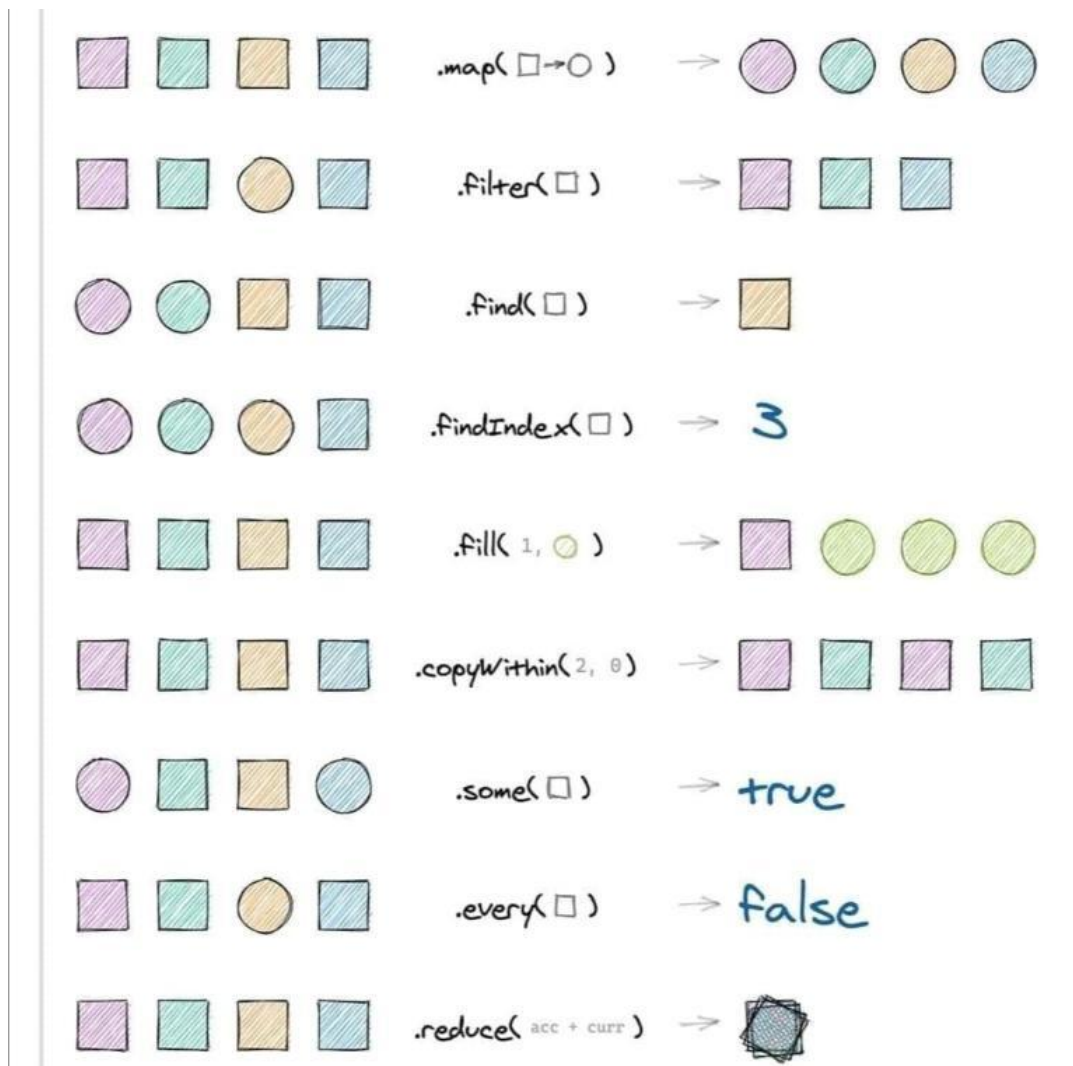
### Increase interactivity

- Adds interactivity to a web page
- Handles complex functions and features
- Programmatic code which enhances functionality



## 2. Iterators

- Map
- Reduce
- Filter
- Some
- Every
- Sort



### 3. Creating Custom High order functions

```
// Define a custom map function
function customMap(array, callback) {
  var newArray = []; // Create a new array to store the mapped values
  for (var i = 0; i < array.length; i++) {
    // Call the callback function for each element and push the result to the new array
    newArray.push(callback(array[i], i, array));
  }
  return newArray; // Return the new array
}
```

```
// Example usage:
var numbers = [1, 2, 3, 4, 5];
```

```
// Using the custom map function
var doubledNumbers = customMap(numbers, function(num) {
  return num * 2;
});
```

```
console.log(doubledNumbers); // Output: [2, 4, 6, 8, 10]
```

`Array.prototype.customMap = customMap;`

create custom filter, reduce

## 4. DOM

- Introduction to the DOM
- Accessing DOM Elements

`document.getElementById(id);`

- Manipulating DOM Element

`appendChild`: Appends a node as the last child of a specified parent node.

`insertBefore`: Inserts a node before a specified child node in the parent node's child node list.

`removeChild`: Removes a specified child node from its parent node.

`createElement`: Creates a new element node with the specified tag name.

`createTextNode`: Creates a new text node with the specified text content.

`setAttribute`: Sets the value of an attribute on the specified element.

`getAttribute`: Gets the value of an attribute on the specified element.

## - Class Tasks

- Create a game, where when you click on the button then ball is added to container
- Create a clone for this  
<https://coolors.co/b6d094-e1aa7d-be8a60-6a2e35-2e2836>

## Lab Tasks

- Create a Todo list to add task
- Create a Number Guessing Game