

Lesson11

Javascript Basics

Javascript

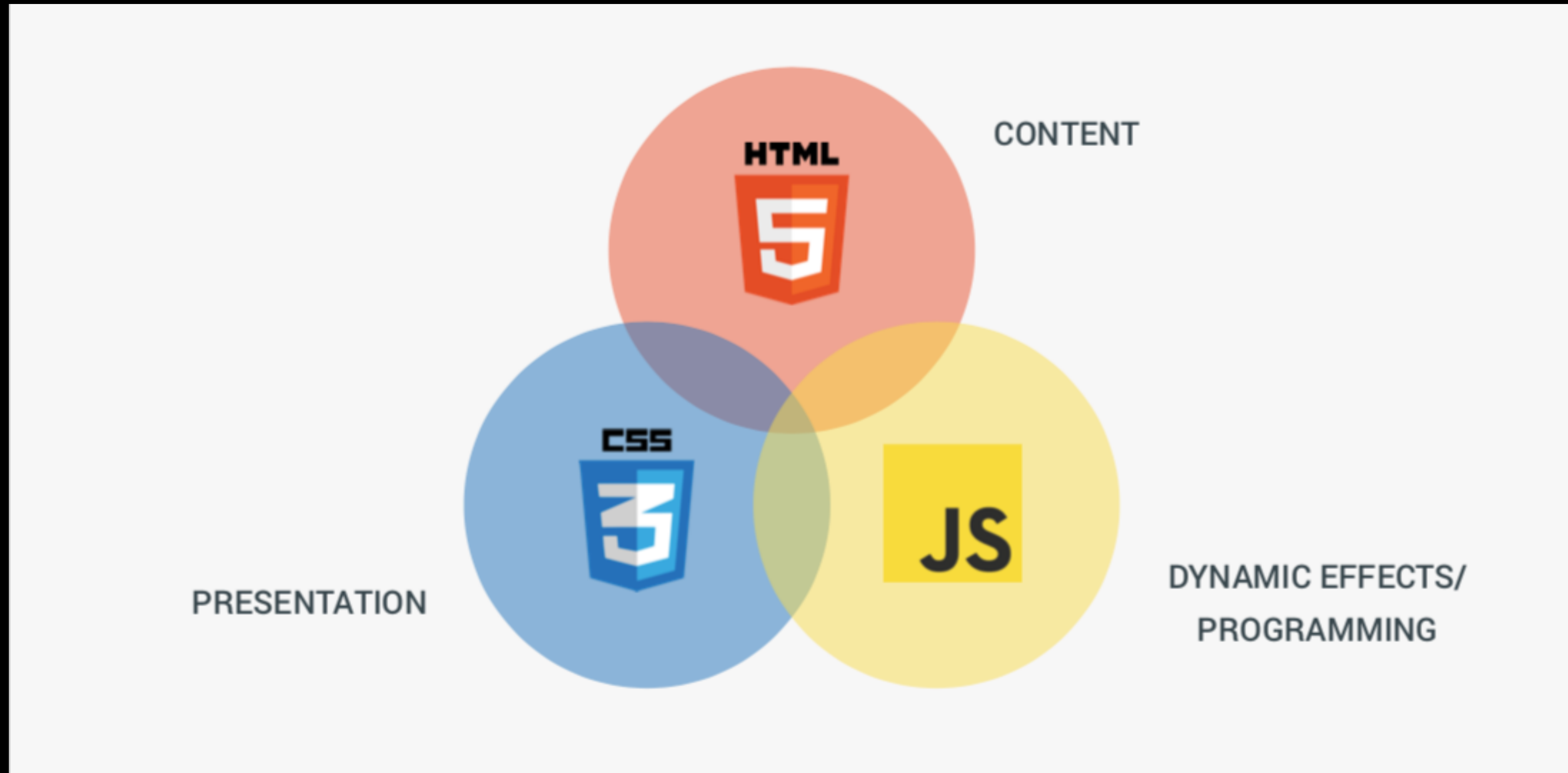
What is javascript?



- Javascript is a lightweight, cross-platform, object-oriented computer programming language
- Javascript is one of the three core technologies of web development
 - Client-side: Javascript was traditionally only used in the browser
 - Server-side: Thanks to node.js, we can use Javascript on the server side as well
- Javascript is what made modern web development possible
 - Dynamic effects and interactivity
 - Modern web applications that we can interact with
- Frameworks/Libraries like VueJS, React, Angular are 100% based on Javascript: you need to master JavaScript in order to use them!

The role of javascript

In web development



Javascript

Nouns, Adjectives and Verbs



CONTENT

NOUNS

```
<p></p>
```

means "paragraph"



PRESENTATION

ADJECTIVES

```
p {color: red;}
```

means "the paragraph
text is red"



DYNAMIC EFFECTS/
PROGRAMMING

VERBS

```
p.hide();
```

means "hide the
paragraph"

Javascript Demo

- Javascript Todo app
- Javascript Shopping chart
- Javascript simple app

HTML DOM

- DOM: Document Object Model
- Structured representation of an HTML document
- The DOM is used to connect webpages to scripts like Javascript
- For each HTML box, there is an object in the Dom that we can access and interact with

Dom

```
<body>  
  <section>  
  
    <p> A paragraph with a  
<a>link</a>. </p>  
  
    <p> Another second  
paragraph</a>  
  
  </section>  
</body>
```

<body>

<section>

<p>A paragraph with a <a>link.</p>

<p>Another second paragraph.</p>

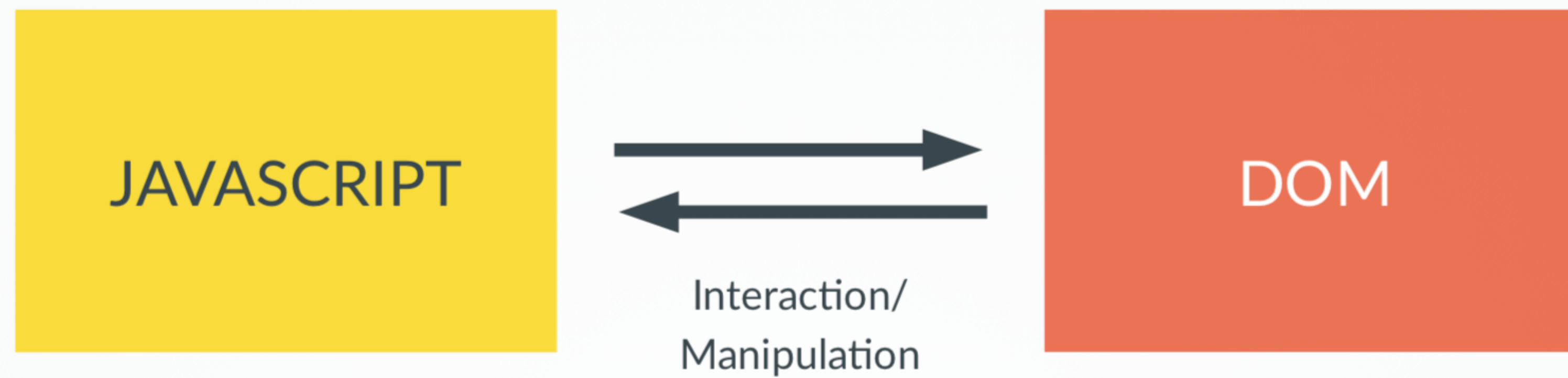
</section>

<section>

</section>

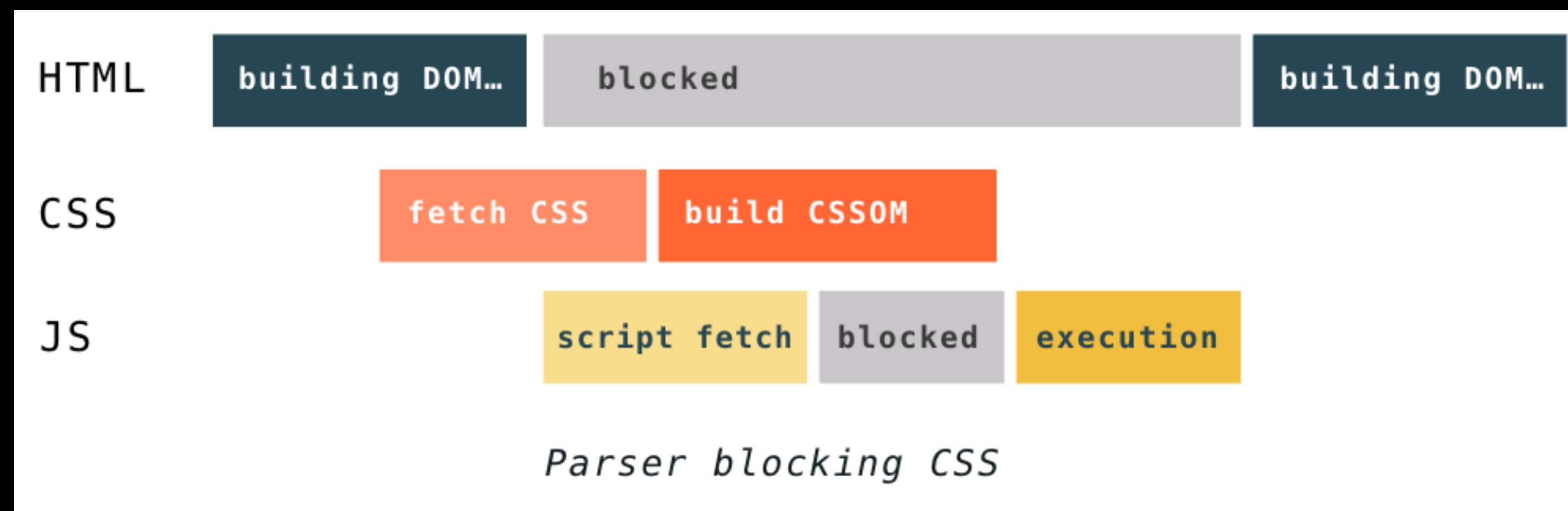
</body>

DOM API



Javascript basic syntax

- We can put in file and add to our html file as `<script src="js/app.js"></script>`
- We put javascript on page between `<script>` js code `</script>` section in our HEAD html section.
- We can put javascript before `</body>` closing tag in `<script></script>` tags, to make sure that everything on page is loaded.



Get html element from DOM

- `document.getElementsByClassName("class-name")` - takes all elements with class "class-name", so we have to specify which element we want like this:
`document.getElementsByClassName("class-name").item(Number);`
- `document.getElementById("id-of-element")` - takes one element with id #id-of-element, we don't need to specify item for this.
- `document.getElementsByTagName("tag")` takes all tags of certain type, so we have to specify which element we want like this:
`document.getElementsByTagName("h1").item(Number);`

Variables

What is variable?

- We can imagine variable like a food box:



Variable types

- Number: Floating point numbers, for decimals and integers
- String: Sequences of characters , used for text
- Boolean: Logical data type that can only be true or false
- Undefined: Data type of a variable that does not have a value yet
- Null: Also means 'non-existent'

Debugging and Login

Browser dev tools

- **Console** method `log()` outputs a message to the web console. The message may be a single string (with optional substitution values), or it may be any one or more JavaScript variables/objects.
- `console.log("text");`
- `console.log(variableName);`
- To see the info you need to open browser developer tools and open "Console" tab, and refresh the webpage.