



INTRODUCTION TO FRONT-END DEVELOPMENT

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FRONT END DEVELOPMENT

Focuses on the user experience and the interface components that allow them to interact with the website

User's browser makes request to the server, which gets data from an API or Database, and then the server processes that data, and sends it to the browser, who receives it and displays it to the user.

Back End: server-side logic and data management aspects of a website

FRONT END CONCEPTS

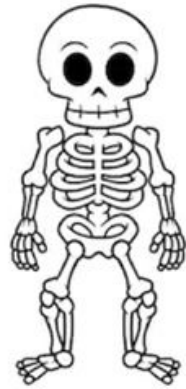
● ● ● **DOM Queries:**
DOM defines the nodes and the way an HTML document is accessed; query calls on the DOM to access and return element(s)

● ● ● **Asynchronous Function:**
function that executes simultaneously based on a call; not in the order it is written

● ● ● **Event Listeners:**
used to run some code when an event happens (i.e. mouse click, key press, etc.)

02

INTRO TO HTML, CSS, JAVASCRIPT



HTML



HTML + CSS



HTML+CSS+JavaScript

HTML (Hyper Text Markup Language)



`<p>` HTML provides the “skeleton” of the website `</p>`

Contains a head and body; `<head>` `</head>` contains information for the developer that is not shown on the site (location of CSS and JS files) and the title of the page as shown on the tab/window; `<body>` `</body>` contains all the elements that the user will see

`<p>` Use tags to create the components in the website `</p>`

The elements appear in the order you define the tags in. Some tags are block elements, meaning they start on a new line and take up the full width available.

```
<p>Welcome to my cool new website with pictures of cute baby  
animals!  
  
Check out pictures of the adorable creatures that made the top  
three below.</p>  
  
<p>Let's start with a <strong>piglet!</strong></p>
```

Welcome to my cool new website with pictures of cute baby animals!
Check out pictures of the adorable creatures that made the top three below.

Let's start with a **piglet!**



Common HTML Tags



Block Elements:

`<h1> </h1>` Main Heading of the page

`<h2> </h2>` ... `<h6> </h6>` Smaller, "less important" headings

`<p> </p>` Paragraph

`<div>` Division/Section, used as a container for styling in CSS

` ` Unordered List of elements which use ` ` tag

`<nav>` Navigation Bar

This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6

```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Common HTML Tags



Inline Elements:

`` Image, contains a src attribute for the file name

```

```

`<input>` Field for the user to enter information

`` Emphasize texts by italicizing them

`` Bold texts

`<button>` Clickable button

```
<button type="button">Click Me!</button>
```

More tags: <https://developer.mozilla.org/en-US/docs/Web/HTML/Element>



LET'S TRY IT!



CSS (Cascading Style Sheets)

Design the color, font, size, spacing, positions, etc. to be applied to HTML elements

CSS rule set code goes in its own file, typically named `style.css` or `styles.css`

```
<head>
  <title>My Cause</title>
  <meta charset="utf-8" />
  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <!-- import the webpage's stylesheets -->
  <link rel="stylesheet" href="style.css" />
  <!-- Add your Google fonts here -->
</head>
```

Connecting CSS to HTML file: `link` stylesheet between the `<head>` tags

CSS Rule Sets

Apply specific properties to elements on the website

Selector:
determines where the style is applied
Declaration block: lists the individual styles between {}

```
      selector  
      {  
body {  
      background-color: blue;  
      }  
}
```

Declaration block has the **property name** and **property value**

SELECTING ELEMENTS

1. **Element Selector:** uses element's tag to specify where to apply the rule set

HTML

```
<h2>Piglet</h2>
<p>This piglet is SO
cute!</p>
<h2>Baby Hedgehog</h2>
<p>It's pretty cool how
hedgehogs can roll
themselves up.<p>
```

CSS

```
h2 {
  font-size: 14 px;
  font-weight: 600;
  color: teal;
}
```

RESULT

Piglet

This piglet is SO cute!

Baby Hedgehog

It's pretty cool how hedgehogs can roll themselves up.

SELECTING ELEMENTS

2. Class & ID Selectors: use ID or class of HTML elements to specify where rule set is applied

HTML

```
<p id="top">Hello World!</p>
```

```
<p>I'm CSS!</p>
```

```
<p class="bottom">It's nice to  
meet you CSS.</p>
```

```
<p class="bottom">It's nice to  
meet you HTML.</p>
```

CSS

```
#top { color: orange; }
```

```
p { color: blue; }
```

```
.bottom { color: teal; }
```

RESULT

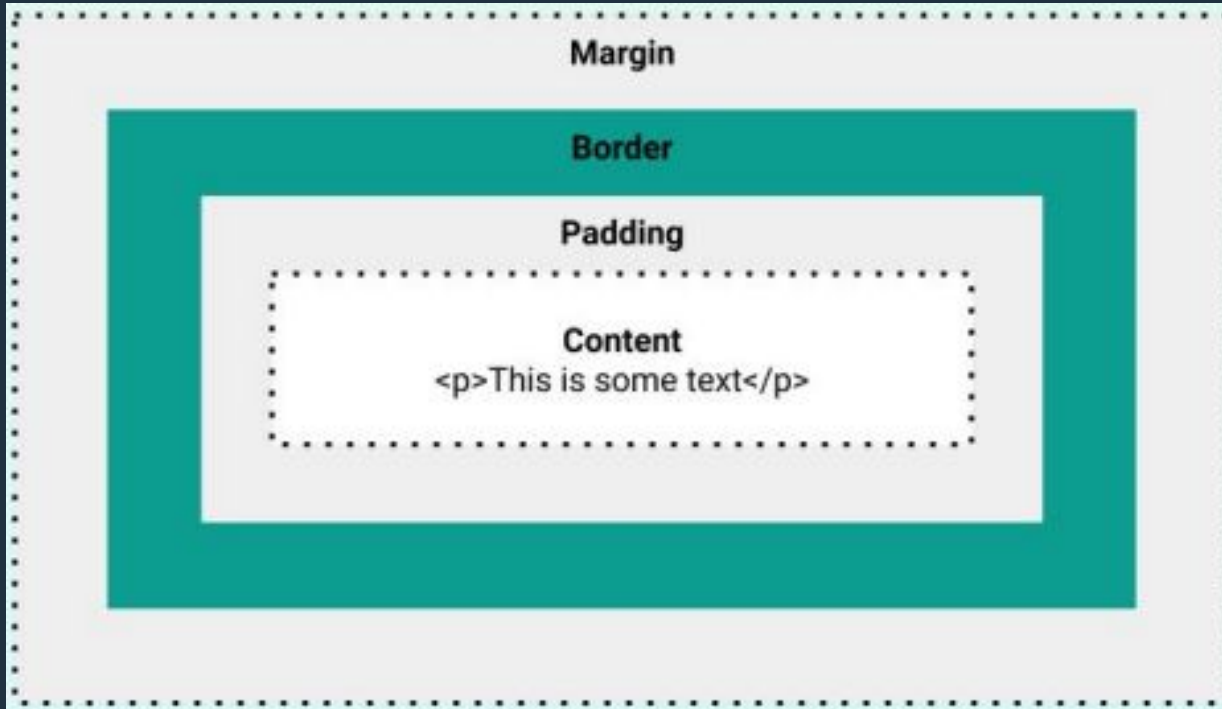
Hello World!

I'm CSS!

It's nice to meet you
CSS.

It's nice to meet you
HTML.

POSITIONING



Padding: transparent area around the content; used to give elements their *size*

Border: frames the padding and content

Margin: clear area that goes around the outside of the border; used to *separate* elements



LET'S TRY IT!



JAVASCRIPT

Make your website interactive!

Different from Java- scripting language, runs only on browser (cannot run on virtual machine), all in text (no compiler needed), require different plug-ins

```
<script src="script.js"></script>  
</body>  
  
</html>
```

DATA TYPES

1. **String:** "John", "I am a string"

2. **Number:** 15, 30.3

3. **Bigint:** BigInt("123456789012345678901234567890") (64-bit floating point)

4. **Boolean:** true, false

5. **Undefined:** name = undefined

6. **Null:** x = null

7. **Symbol:** sym1 = Symbol("symbol1") (used to add unique property keys to an object)

8. **Object:** const person = {firstName:"John", lastName:"Doe"};

DECLARING VARIABLES



```
let x = 2;
```

```
x = "Data";
```

```
let y = 4;
```

```
x == y; -> returns false
```

```
const name = "MyName";
```

```
let var = "Nimbus" + 2000; -> returns Nimbus2000
```



LET'S TRY IT!





THANK YOU!

Feel free to reach out to me with
questions!



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CREDITS.

Presentation Template: [SlidesMania](#)

Sample Images: [Unsplash](#)

Fonts used in this presentation: Roboto Mono and **Roboto Bold**

Resources:

<https://flatironschool.com/blog/front-end-vs-back-end-development/#:~:text=Amazon%20is%20a%20good%20example.user%20through%20Front%20End%20language.>

<https://girlswhocode.com/assets/images/craft-prod/images/Girls-Who-Code-At-Home-Activist-Toolkit-Part-3.pdf>



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