Fitness-Web

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What Is Fitness-Web?

- Fitness-Web is a website currently hosted on GitHub: https://munemrastgir.github.io/www/
- Fitness-Web is a website created by gym-goers for gym-goers
- Fitness-Web is an educational website devoted to all things fitness.
  - We have a database of the most effective and frequently used, stretches, programs, and exercises.
  - Calculators to make sure you are on track.
  - Tips to help you work smarter.
  - Recommended supplements to help you achieve your goals.
  - Useful articles for absorbing more information

Our Aim

- To help de-mystify gym culture, and inform others about nutrition.

- The target audience we wish to inspire
  - People without experience in lifting weights.
  - Teenagers to elderly, or whomever needs tips on fitness.

- Benefits For Our Users
  - To provide a general, easy to access, overview on weight lifting
  - A concentrated database of exercises.
  - Helpful calculators to help meet your goals!

Technologies Used

•HTML	•Angular
•JavaScript	•NodeJS
•HTMLDOM	•CSS
•JSON	•C++
•Git	•Google Forms
•Gimp + Photoshop	•Brackets

Architecture Of Project

- Website is coded in HTML, centered around index Home Page
- Created a background and foreground to insert images, apply CSS for design elements
- Place the muscular body in the middle of page which can be used to navigate to subpage workouts
- Workout database is coded in nodeJS for all the main muscles
- Subpages are available for any extra workout information a user may need

Work Distribution

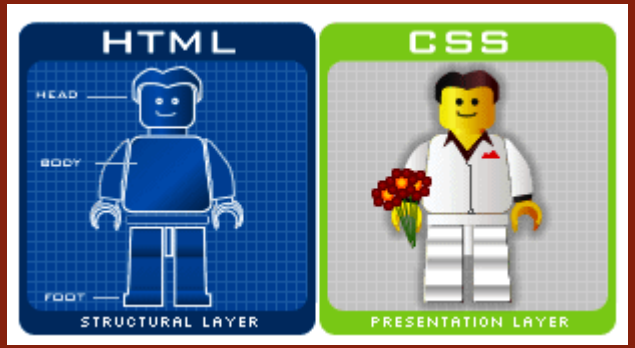
- Raymond Leung - HTML, CSS, Photoshop (Homepage Design, creating supplements, Tips, Workouts, About Us, and Contact pages.
- Munem Rastgir - Colored body, Filled up ab database, BMI calculator, Nutrition page, About us, assorted css design elements, PP slides
- Shi Li Liang - HTML, JavaScript, Image Map, Calculators
- Christopher Mayol - HTML, JavaScript, Jquery, Json Database, and DOM Manipulation

CSS

Cascading Style Sheet for web development

What Is CSS?

- Language used to describe the presentation of a website.
- Manipulate all kinds of texts, images, and tools to however they want to look.
- CSS is independent and can be used with any XML-Based Markup Language.
  - Ex. Atom, VoiceXML
- Before CSS, design attributes were written inside HTML. Utilizing CSS allows HTML code to be much simpler.

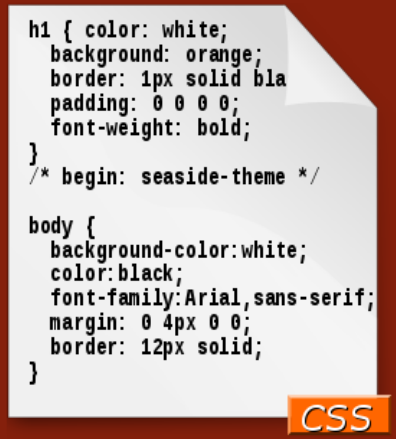


Basic Formatting

- Create classes that have the same name as your HTML tags
- Add modifiers to your classes that describe features
  - Ex: Color, size, font, position, etc.
- Multiple style sheets should be used for different web-pages
- Can modify multiple sections of one page so we can style background, foreground, body of text, etc.

```
p.ex1 {
    border: 1px solid black;
    outline-style: solid;
    outline-color: red;
}
```

```
p.ex2 {
    border: 1px solid black;
    outline-style: double;
    outline-color: green;
}
```



Adding it to HTML

- Once we create our CSS classes, we need to call it in our HTML file
- Using tags in HTML <>, we can say
- Between the divs, any web elements will be modified with the instructions used in myclass
- Also we have to link the stylesheet at the top of the webpage using
  <link rel="stylesheet" type="text/css" href="style.css">

When Should I Use CSS?

- Are you using an XML-based markup language? Use CSS!
  - CSS can be applied to any XML document.

- When you want to modify the design of your web page
  - Using CSS you can control the position of all elements.
  - Changed your mind on the style?
    - Edit one structure and your changes will “Cascade” across all web pages that have the stylesheet imported.

- Reduce HTML Page Weight
  - CSS can optimize HTML code by moving its contents to an external stylesheet, we can take advantage of resource caching. Stylesheet is transferred once and then cached on a client.

More Uses of CSS

- We can use selectors and a declaration block to:
  - Modify alignment and colors of text
  - Manipulate image positions
  - Create layers to divide and overlap our page

- With CSS you have full control of your design.
  - It is very important to organize your web page content from the design aspect of your website, using CSS helps make your job easier.
  - All web pages that share the same stylesheet can all be easily changed at with CSS.

- CSS has simple syntax and is easy to understand. Using CSS can be quick to learn with rewarding results.

What Problem Does CSS Solve?

- Writing all presentation styles in HTML is slow and messy.
  - CSS Keeps the website content and design separate.
    - CSS can take advantage of resource caching.
  - Keeping the design of the web page separate from the content allows for modular design.

- Creating many different web pages? Import the same style sheet to save time.

- This allows for easy to read, fast to set up, organized code

- Different devices are accounted for
  - Different resolutions and content are displayed for different devices.

How it Helped Us

- We used CSS to style our webpages.
  - To create an easy to find navigation bar, we needed to stylize the unordered list.
  - To create the highlight on hover functionality on our website, we needed CSS.
  - Change view-styles and alignments on different screen sizes.

- An unordered list of our arm exercises will span very far down making it inconvenient for users to find an exercise. Using CSS to add columns and combining other techniques made the exercises more visible.

- Not all browsers will function correctly with standard CSS.
  - Another way we used of CSS is to use specific tags to allow the many different browsers to interact with your CSS correctly.

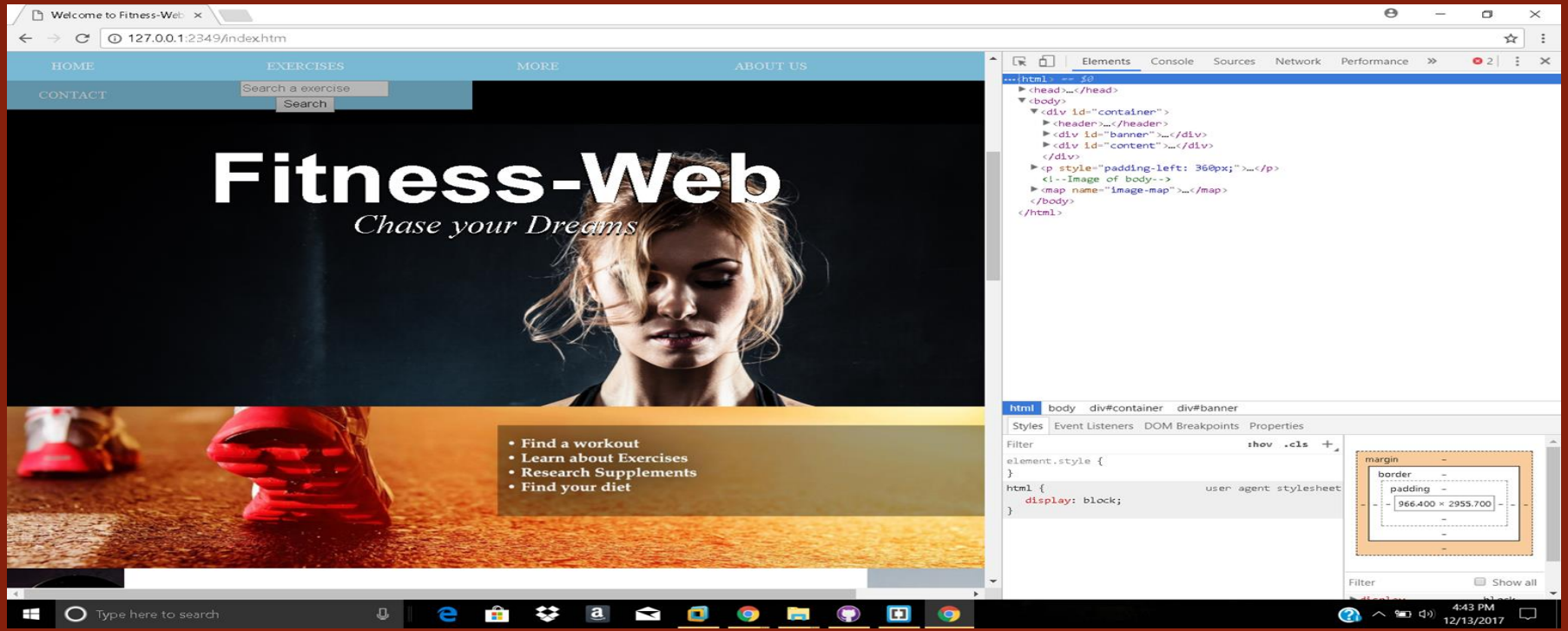
JS HTML DOM

Document Object Model

What is the DOM?

- The DOM stands for Document Object Model
- The DOM is a Programming interface for HTML and XML documents
- Defines a standard for accessing documents
- DOM is not a programming language, but without it, the JS language wouldn’t have any model or notion of web pages
- The DOM allows us to build documents and navigate their structure
- It allows us to Add, modify, or delete elements and content from this structure.
- *"The W3C Document Object Model (DOM) is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure, and style of a document."*

Document


Welcome to Fitness-Web
127.0.0.1:2349/index.htm
HOME
EXERCISES
MORE
ABOUT US
CONTACT
Search a exercise
Search
Fitness-Web
Chase your Dreams
• Find a workout
• Learn about Exercises
• Research Supplements
• Find your diet
Elements
Console
Sources
Network
Performance
<html> == $0
<head>…</head>
<body>

<header>…</header>
…
…

…
<!--Image of body-->
<map name="image-map">…</map>
</body>
</html>
html
body
div#container
div#banner
Styles
Event Listeners
DOM Breakpoints
Properties
element.style {
}
html {
display: block;
}
user agent stylesheet
margin
border
padding
966.400 × 2955.700
Show all
Type here to search
4:43 PM
12/13/2017

Objects Are Elements

Every HTML element in the document is an object

- <head></head> is an object
- <body></body> is an object
- is an object
- <h1></h1> is an object

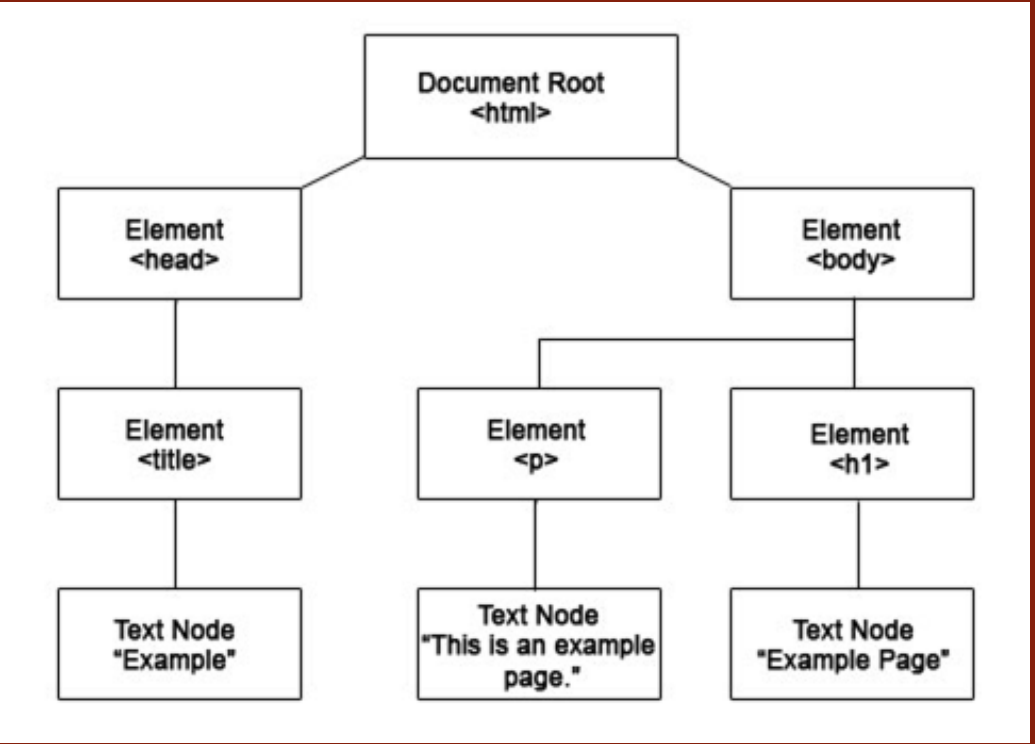
Structure of DOM

- the tree-like representation of a document
- Document Object is the top most node

NODES

- Everything we can change In the document is a node

- Object
  - Represents a part of the document
- Elements
- Text within elements
- HTML attributes



When Should We Use HTML DOM?

The HTML DOM is a standard for accessing and manipulating the document

We use the DOM whenever we want to access or manipulate the html document

- Javascript can access and change all the elements of an HTML document
- Adding and deleting elements in an HTML document
- Dynamically modifying elements of an HTML page after rendering

Examples:

- Change the <h1> text node at the top of the page
- Change the background color of an element node
- Dynamically changing the font of the text node in <p> when you click on it

What Problem Does It Solve?

If HTML didn’t use the DOM, then how will we or any web interface like javascript understand how to retrieve or manipulate information from the HTML document?

- Every elements in a document is part of the DOM, so they can all be accessed and manipulated using the DOM and a scripting language like JavaScript

How can we dynamically modify elements in a HTML document?

- Using javascript, we can dynamically manipulate the HTML page after it has been rendered because of the DOM structure

How Does One Start Using HTML DOM?

- DOM is an object-oriented representation of the web page, so that it can be modified with a scripting language such as JavaScript
- In the DOM, all HTML elements are defined as objects
- HTML DOM document object is the owner of all other objects in the HTML page
  - You must begin with accessing the document objects to access any elements in the an HTML page
  - document.getElementById(*id*) - For finding an element by using the element id
  - document.getElementsByClassName(*name*) - For finding an element by using the element class name
  - *element*.innerHTML = *new html content - For changing the innerHTML of an element*
  - document.appendChild(*element*) - Creating an HTML element

Why are we using HTML DOM?

- We are using JS HTML DOM to
  - create a list or elements of all the exercises using JS on one of the five HTML pages
  - Dynamically modify one of the five HTML pages when one of the exercises is selected
  - Create a box with the description and youtube clip of the selected exercise
- Without JS HTML DOM
  - We would have to create a HTML page for every single exercises in the database
  - The huge amount of files would be hard to keep track of

Introduction