



WEB DESIGN AND CLIENT SIDE SCRIPTING

EUGENE MCLAUGHLIN

HDCSDEV_INT - HIGHER DIPLOMA IN SCIENCE IN COMPUTING

Go Training Fitness Centre

Project Report

Students:

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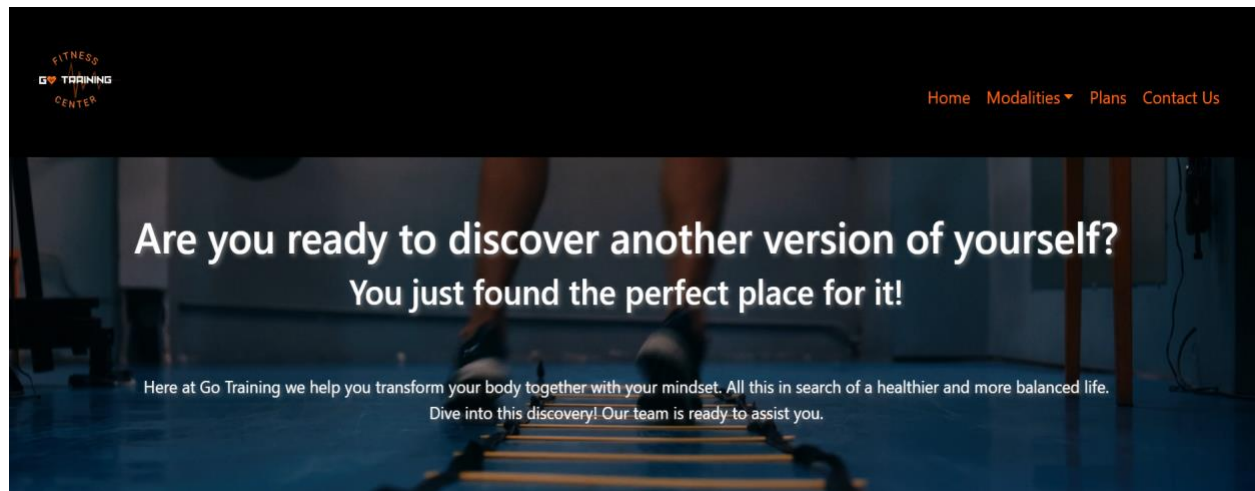
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Alexandre Duarte da Rocha – Student Number 23425474

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1. Project Summary



The “Go Training Fitness Centre Website” was developed to deliver a modern, responsive, and visually captivating platform that showcases the fitness centre’s services. The primary purpose was to highlight various offerings, including some training modalities such as CrossFit and Swimming, membership plans, and contact information, while ensuring accessibility across different devices.

The presented project had a strong emphasis of having a clean and easy understanding design with intuitive navigation. With the integration of modern web tools such as HTML, CSS, Bootstrap, and JavaScript, we were able to fulfill the points mentioned, and assure responsiveness. These technologies enabled the creation of a user-friendly experience that meets industry standards and user expectations by making the platform more functional and pleasing to the eyes of those who access it and at the same time capturing the user's attention to its content.

2. Design Process

2.1. Research & Investigation

To understand user expectations and industry standards, we analyzed several fitness websites, such as SmartFit, Bodytech, Stoneybatter Cross Training and Competition Gym, which provided inspiration for layout, color schemes, and content presentation. Key insights included the importance of high-quality visuals, clear navigation, and the effective presentation of membership options. This research informed the structure and design of the “Go Training” website.

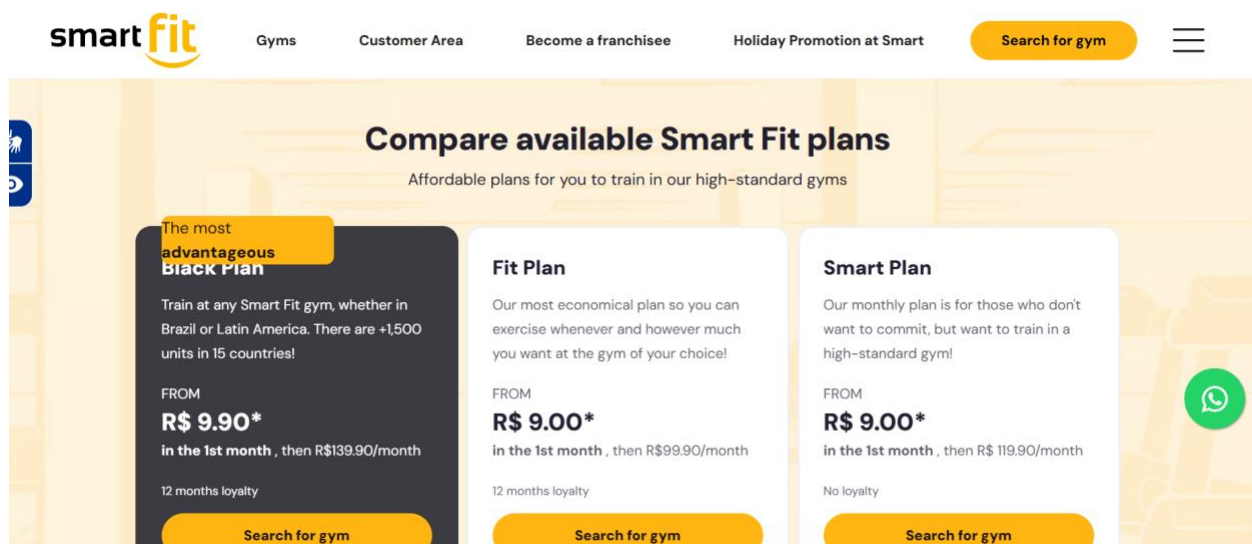


Fig.1 Smart Fit. (n.d.). Plans. Retrieved November 27, 2024. From <https://www.smartfit.com.br/>

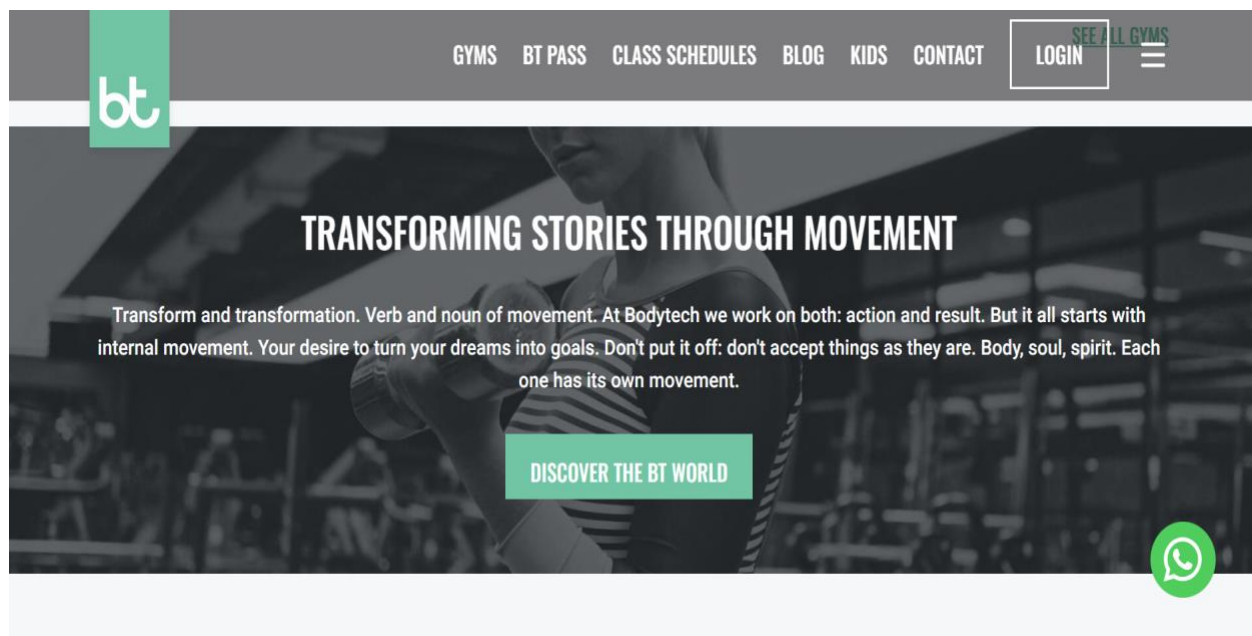


Fig.2 Bodytech. (n.d.). Home. Retrieved November 27, 2024. From <https://www.bodytech.com.br/>

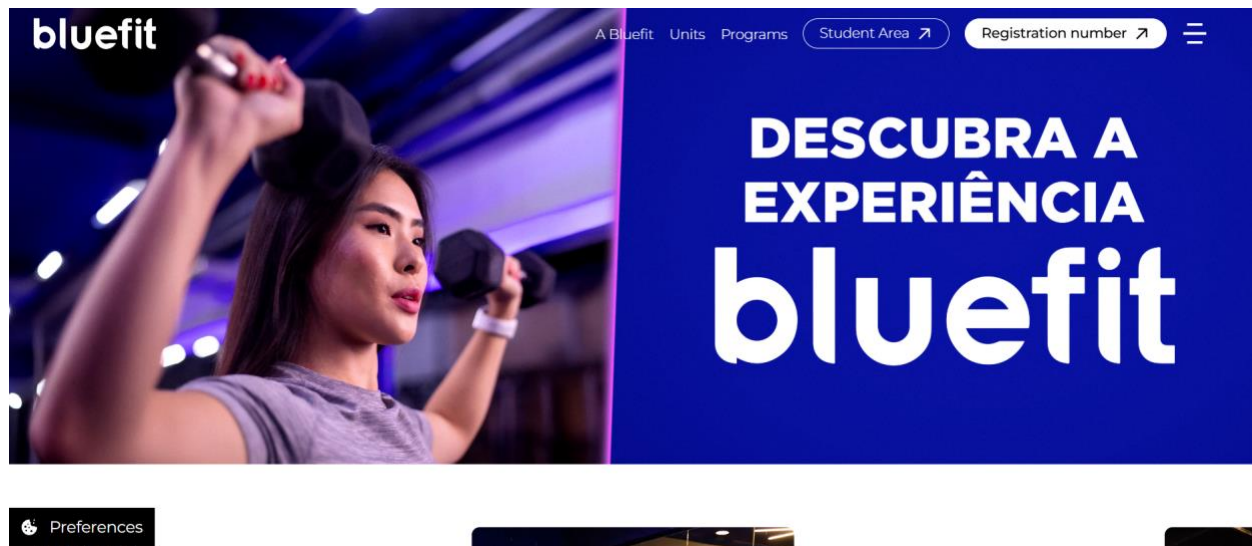


Fig.3 BlueFit. (n.d.). Home. Retrieved November 27, 2024. From <https://www.bluefit.com.br>

The image shows the Competition Gym website. At the top is an orange navigation bar with the 'competition' logo and links: 'THE COMPETITION', 'SCHEDULES', 'MODALITIES', 'KIDS', 'UNITS', 'PILATES', 'SERVICES', 'CASES', 'BLOG', and 'CONTACT'. Below this is a white section with an orange 'VISIT THE BLOG' button. The main heading is 'TAKE A TRIAL CLASS!' followed by a horizontal line and the text '*Required fields.' Below this are three form fields: 'Full Name*' with a placeholder 'Your name', 'E-mail*' with a placeholder 'Your email', and 'Contact Telephone Number*' with a placeholder '99.9999.9999'. A green location pin icon is on the right side of the form.

Fig.4 Competition Gym.(n.d.). Home. Retrieved November 27, 2024. From <https://www.competition.com.br>

2.2. Requirements & Technical Approach

The project aimed to create a responsive website with six pages: **Index**, **Swimming**, **Contact Us**, **Open Gym**, **Plans**, and **CrossFit**. Each page needed to have a clean design, easy navigation, and a consistent style that matched the fitness theme.

To build the website, the team used **HTML**, **CSS**, **JavaScript**, and **Bootstrap**:

- **HTML** was used to structure the content on each page.
- **CSS** helped style the pages with colors, fonts, and layouts to make the website look clean and modern.
- **JavaScript** added interactive features like carousels, on click button and form validation to make the website more dynamic and user-friendly.
- **Bootstrap** made the site responsive, so it works well on different screen sizes, like phones, tablets, and desktops.

The team used **GitHub** for version control and collaboration, which made it easy to track changes and combine everyone's work. Development was done in **VS Code**, a simple yet powerful tool for writing and debugging code.

The technical approach focused on using reliable tools and keeping things simple while ensuring the website was functional, visually appealing, and easy for users to explore.

2.3. Design & Wireframe

2.3.1. UI Kit Design

The website uses a color palette of black, white, gray, and orange to balance sobriety with visual appeal. Fonts and buttons were selected for readability and user engagement. The Go Training logo, designed with a heart and heartbeats symbolizing vitality, reinforces the website's theme of health and wellness.

Student Clara used Canva application to create a UI kit to be used in the development of this project, containing colour palette scheme, font families, logo, navigation bar and footer designs. This kit information will be applied across all project pages.

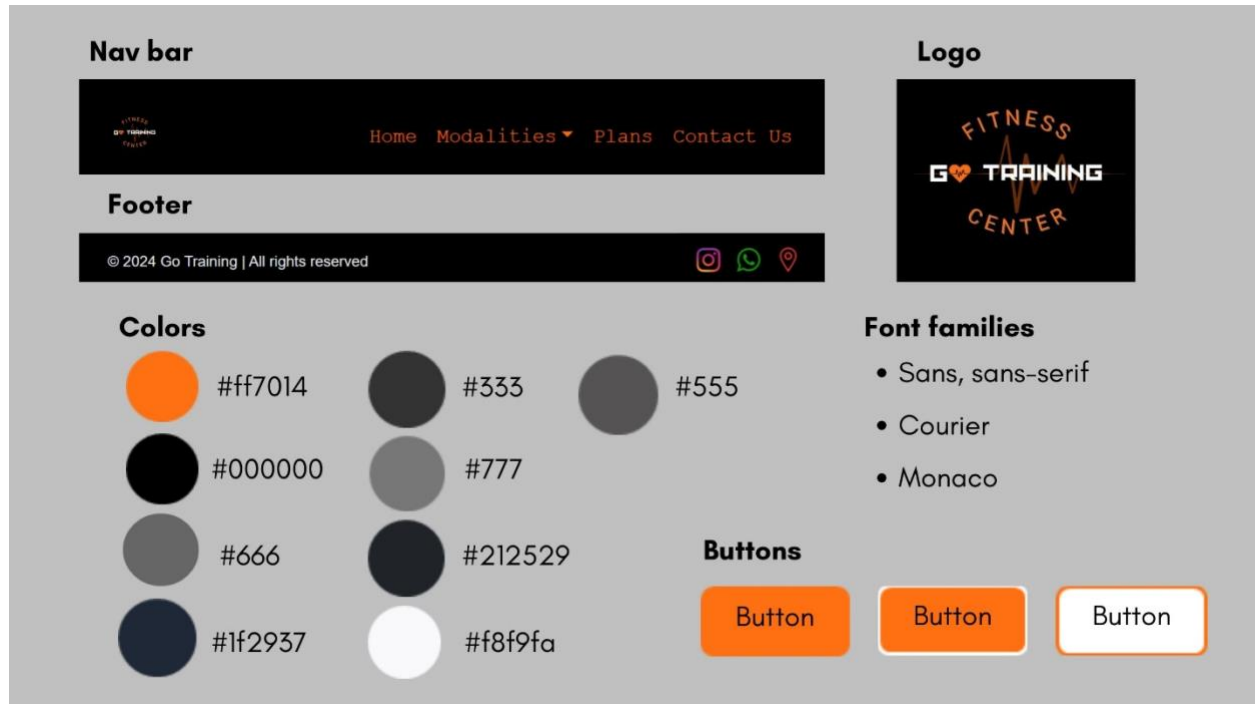


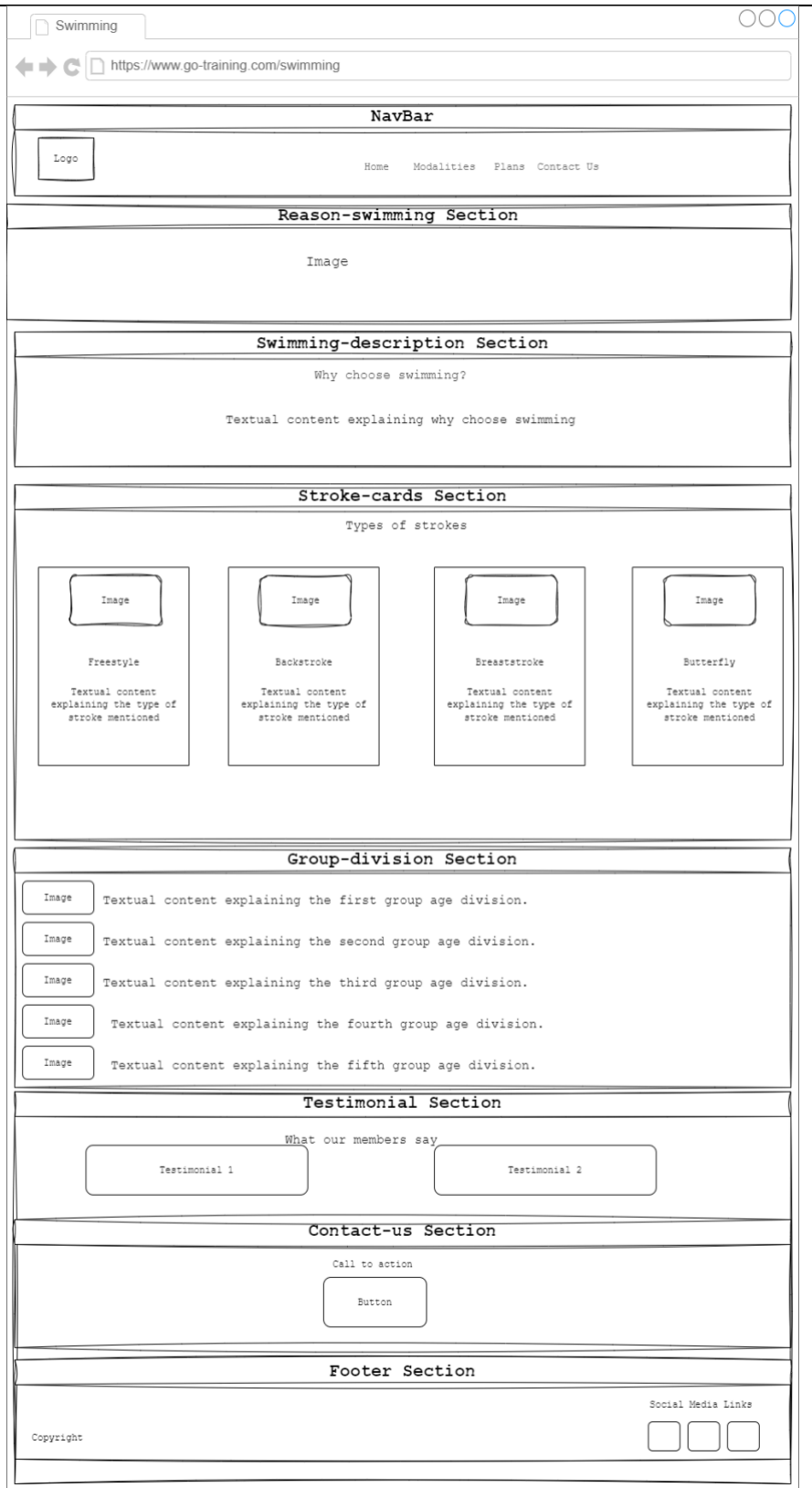
Fig.5. UI Kit created by student Clara

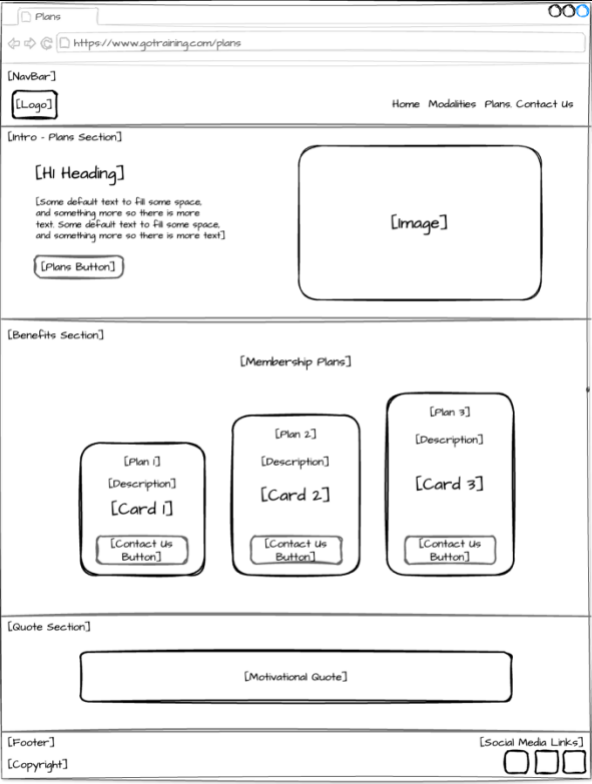
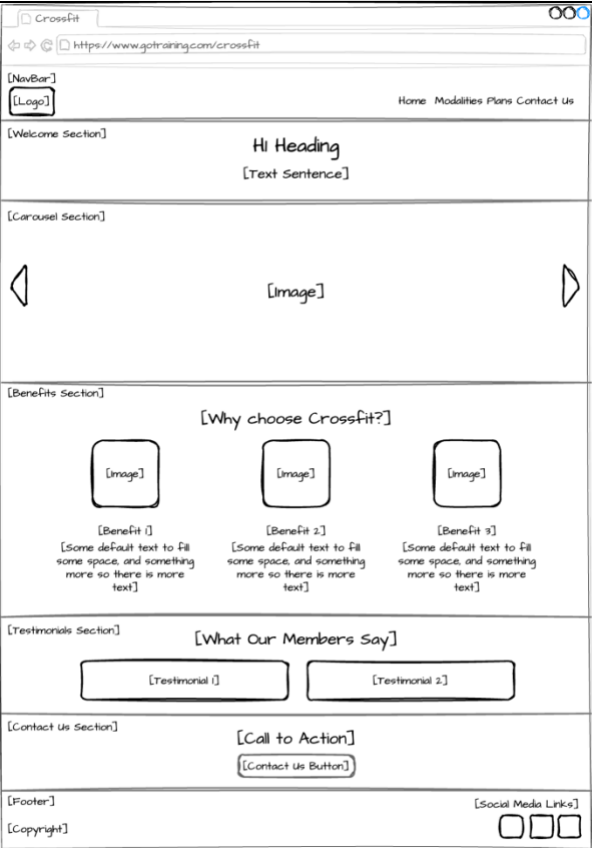
2.3.2. Wireframes

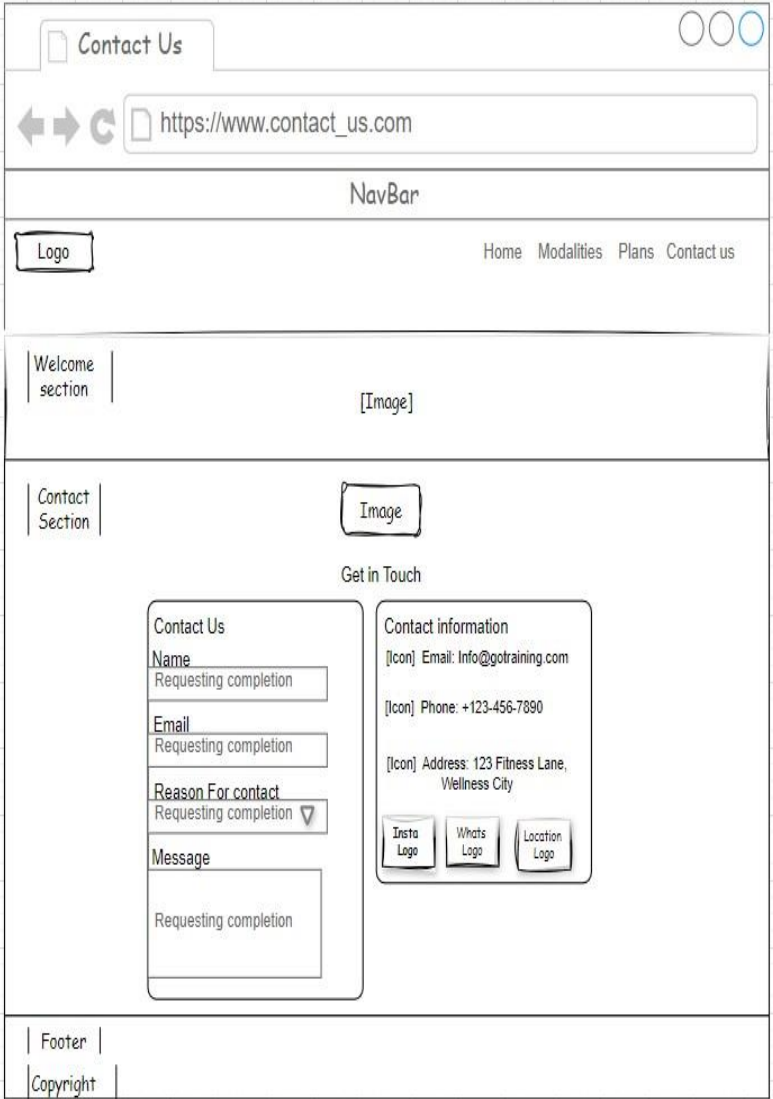
Wireframes were created for each page making use of the draw.io website.

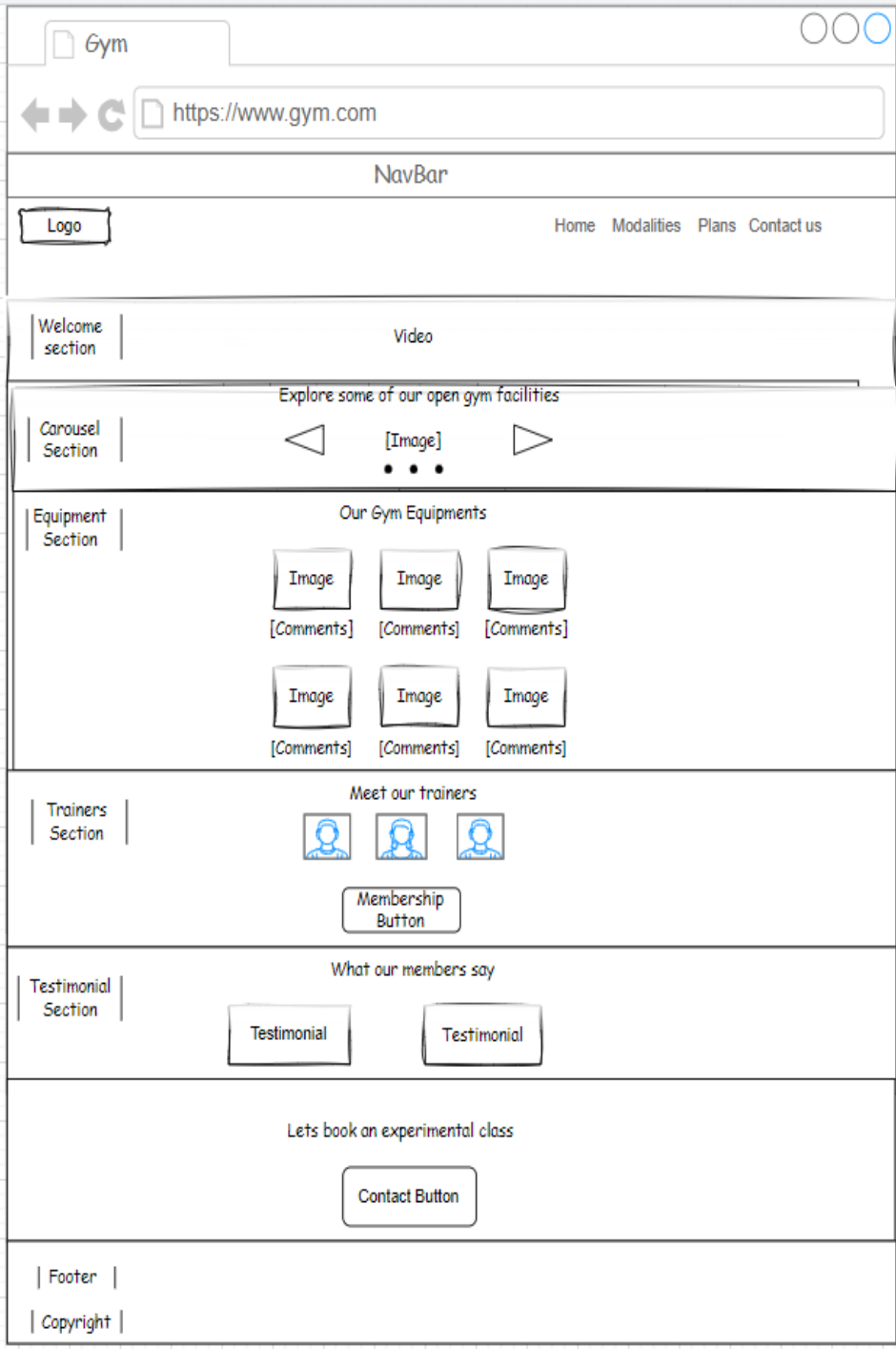
Student	Page	Wireframe
Clara	Index	<p>The wireframe for the Index page is structured as follows:</p> <ul style="list-style-type: none"> NavBar: Contains a Logo and navigation links: Home, Modalities, Plans, Contact Us. Introduction-content Section: Features a Video placeholder and the text "Textual content overlaying the video". Modalities-explanation Section: <ul style="list-style-type: none"> Heading: "Here is what we offer in our fitness center" Modality 1: Includes an Image placeholder and "Textual content explaining what we offer in this modality". Modality 2: Includes an Image placeholder and "Textual content explaining what we offer in this modality". Modality 3: Includes an Image placeholder and "Textual content explaining what we offer in this modality". Modality 4: Includes an Image placeholder and "Textual content explaining what we offer in this modality". Tips Section: <ul style="list-style-type: none"> Heading: "Some tips for a healthier routine" Three columns of tips: <ul style="list-style-type: none"> Tip 1: "Drink plenty of water" with an Image placeholder and "Textual content explaining tobenefits of drinking plenty of water". Tip 2: "Good sleep routine" with an Image placeholder and "Textual content explaining benefits of having a good sleep routine". Tip 3: "Take your mind off things" with an Image placeholder and "Textual content explaining benefits of taking your mind off things". Products Section - carousel: Features a large Image placeholder and navigation arrows. Footer: Contains a Copyright notice and Social Media Links with three placeholder icons.

Swimming



	Plans	
Guilherme	Crossfit	

Alexandre	Contact Us	
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		 <p>The wireframe illustrates a website layout for a gym. It begins with a browser window showing the URL 'https://www.gym.com'. The 'NavBar' contains a 'Logo' and links for 'Home', 'Modalities', 'Plans', and 'Contact us'. The 'Welcome section' is followed by a 'Video' area. A 'Carousel Section' features a slider titled 'Explore some of our open gym facilities' with a central '[Image]' placeholder and navigation arrows. The 'Equipment Section' is titled 'Our Gym Equipments' and displays a grid of six items, each with an 'Image' placeholder and a '[Comments]' link. The 'Trainers Section' is titled 'Meet our trainers' and shows three trainer icons, a 'Membership Button', and a 'Testimonial Section' with two 'Testimonial' boxes. A 'Contact Button' is located below the testimonials, preceded by the text 'Lets book an experimental class'. The 'Footer' includes 'Footer' and 'Copyright' text.</p>
--	--	---

3. Project Work

Breakdown of Tasks

The project was divided among the team members in the following way:

Clara

- Worked on the **Index** and **Swimming** pages.
- Created the **Go Training logo**, designed the **UI Kit** and **navigation bar** for all pages, showing the current path active, and making sure these features had a clean and appealing look that matched the theme of the website.

Guilherme

- Handled the **Plans** and **CrossFit** pages.
- Implemented the **floating button**, which allows the users to switch the styles of the modality pages, added interactive features like **carousels** and designed the **footer** for all pages.

Alexandre

- Focused on the **Contact Us** and **Gym** pages.
- Built the **contact form** and added **form validation** to make sure it worked smoothly.

The team used **GitHub** to track tasks, share updates, and keep everything organized. This made sure everyone's work fit together without any problems.

4. Development

4.1. Bootstrap Integration

Bootstrap was a big help in making the website look modern and responsive. It allowed us to quickly set up layouts using its grid system, which automatically adjusted to fit different screen sizes. This made it easy to design pages without starting from scratch for each device.

The navigation bar was made using Bootstrap tools, making it interactive with dropdown menus and a responsive design. Buttons and other elements were styled with Bootstrap classes, which saved time and gave a clean, professional appearance.

Overall, Bootstrap simplified a lot of the work and kept everything consistent across the website.

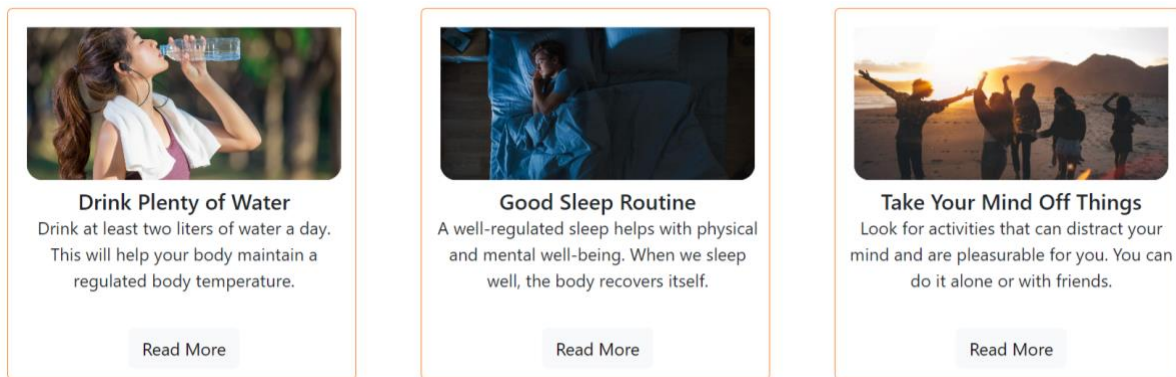


Fig. 5. Tips section using HTML, CSS and Bootstraps Card component (created by Student Clara)

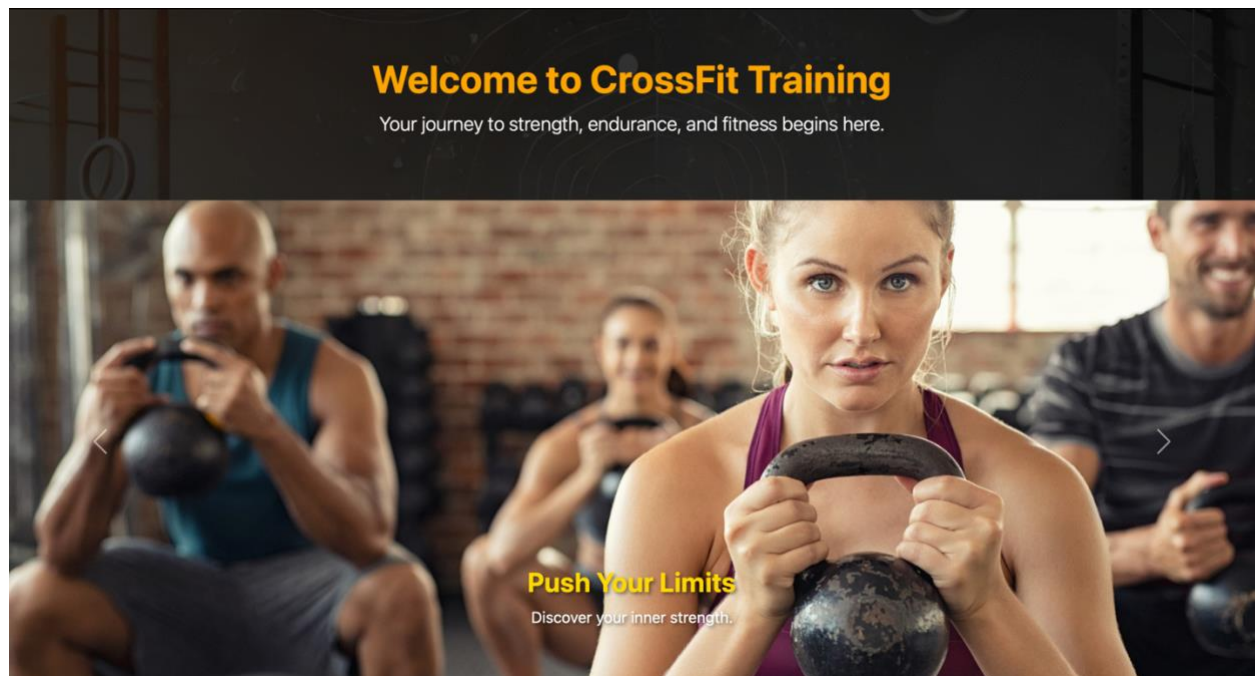


Fig. 6. Display of images created using HTML, CSS and Bootstraps Carousel component (created by Student Guilherme)

Contact Us

Name

Your Name

Email

Your Email

Reason for Contact

Select a reason

Message

Your Message

Contact Information

Email: info@gotraining.com

Phone: +123-456-7890

Address: 123 Fitness Lane, Wellness City




  

Fig. 7. Forms section created using HTML, CSS and JavaScript to validate (created by Student Alexandre)

4.2. JavaScript Implementation

To enhance user interactivity and provide a unique feature on the CrossFit page, a **floating button** was implemented by the student Guilherme to allow the users to toggle between two stylesheets: the external.css and the student's individual stylesheet. This button is fixed at the top-right corner of the screen and remains accessible even when the user scrolls down the page.

How it was implemented

1. **HTML Integration:** A button element was added with the ID toggleStyles and assigned to the class floating-button to enable custom styling.

```
<button id="toggleStyles" class="btn btn-outline-light ms-3 floating-button">Switch Styles</button>
```

2. **CSS for Floating Button:** Using CSS, the button was styled to stay fixed in the top-right corner of the screen. The <position: fixed> property ensures it remains in place during scrolling.

```
/* Floating Button */
.floating-button {
  position: fixed; /* Keeps the button in a fixed position on the screen */
  top: 20px; /* Distance from the top of the viewport */
  right: 20px; /* Distance from the right of the viewport */
  z-index: 1000; /* Ensures it stays on top of other elements */
  padding: 10px 15px;
  background-color: #ff7014; /* Highlight color to make it visible */
  color: white;
  border: none;
  border-radius: 5px;
  box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2); /* Subtle shadow for better visibility */
  cursor: pointer;
  transition: background-color 0.3s ease, transform 0.2s ease; /* Add a hover effect */
}

.floating-button:hover {
  background-color: #e85d0a; /* Darker shade on hover */
  transform: scale(1.1); /* Slight zoom effect */
}
```

3. **JavaScript Functionality:** A simple JavaScript function was written to toggle the <href> attribute of the link element responsible for loading the CSS file. This switches the stylesheet whenever the button is clicked.

```
<!-- Switch Styles Button -->
<script>
  document.getElementById('toggleStyles').addEventListener('click', function () {
    const currentStylesheet = document.getElementById('dynamicStyle');
    const newStylesheet =
      currentStylesheet.getAttribute('href') === 'stylesGui.css' ? 'external.css' : 'stylesGui.css';
    currentStylesheet.setAttribute('href', newStylesheet);
  });
</script>
```


To make it clear to the user what page the person is currently at the website, it was implemented a JavaScript element which returns a visual mark on the nav bar link.

How it was implemented

1. **CSS for active path:** Using CSS, the active path was styled to be highlighted in a different color on the nav bar, so that you can visually see whatever page you are on the website.

```
.nav-link.active {  
  font-weight: bold;  
  color: white !important;  
}
```

2. **JavaScript Functionality:** A simple JavaScript code was written to select the nav bar and dropdown items links and return the active link at the moment.

```
// Select nav-links and dropdown items and get the active path  
const menuLinks = document.querySelectorAll(".nav-link, .dropdown-item");  
const currentPath = window.location.pathname.split("/").pop();  
  
//show the active link item at the moment  
menuLinks.forEach((linkItem) => {  
  const linkItemPath = linkItem.getAttribute("href").split("/").pop();  
  
  if (linkItemPath === currentPath) {  
    linkItem.classList.add("active");  
  
    //dropdown link item  
    const dropdownParent = linkItem.closest(".dropdown-menu");  
    if (dropdownParent) {  
      const dropdownToggle = dropdownParent.previousElementSibling;  
      if (dropdownToggle) {  
        dropdownToggle.classList.add("active");  
      }  
    }  
  }  
});
```

This line imports Bootstrap 5.3.0, a front-end library providing pre-built components and JavaScript-based features.

As it is used to add scroll-based animations to HTML elements, student Alexandre decided to take this tool to implement a sophisticated effect in my contact page.

```
12 <link href="https://cdn.jsdelivr.net/npm/aos@2.3.4/dist/aos.css" rel="stylesheet">
13 </head>
```

This imports AOS v2.3.4, a library used for adding scroll-based animations to HTML elements.

To ensure that the script runs only after the HTML content has fully loaded, and to configure the AOS Library mentioned above, these commands were used:

```
144 <!-- Scripts -->
145 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
146 <script src="https://cdn.jsdelivr.net/npm/aos@2.3.4/dist/aos.js"></script>
147 <script src="Js.js"></script> <!--show active page-->
148 <script>
149     document.addEventListener("DOMContentLoaded", function () {
150         AOS.init({
151             duration: 1000,
152             easing: 'ease-out-back'
153         });
154     });
155 </script>
156 </body>
157
158 </html>
```

Concluding with a gradual appearance effect of the content through a beautiful mouse scroll effect.

4.2. Validation

HTML and CSS were validated using W3C tools to ensure standards compliance.

Plans and Crossfit - Guilherme

To fix errors on the CrossFit and Plans pages and make them follow HTML5 standards, it was necessary to remove extra slashes from <meta> and tags, add headings to sections that didn't have them, quote all attribute values properly and adjust heading levels. These fixes helped make the pages more organized and user-friendly.

Plans Page	
Before Adjustments	
<div><div><div><div>1.</div><div><div>Info</div><div>Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div></div><div>From line 5, column 3; to line 5, column 26</div><div><!--<meta charset="UTF-8" />--> <!--</div></div></div><div><div><div>2.</div><div><div>Warning</div><div>Consider using the h1 element as a top-level heading only (all h1 elements are treated as top-level headings by many screen readers and other tools).</div></div><div>From line 57, column 11; to line 57, column 14</div><div><h1>Need a</div></div></div><div><div><div>3.</div><div><div>Info</div><div>Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div></div><div>From line 70, column 11; to line 70, column 118</div><div>--></div></div></div><div><div><div>4.</div><div><div>Warning</div><div>Section lacks heading. Consider using h2 - h6 elements to add identifying headings to all sections, or else use a div element instead for any cases where no heading is needed.</div></div><div>From line 53, column 5; to line 53, column 48</div><div><div class="p-container container py-5"></div></div></div><div><div><div>5.</div><div><div>Warning</div><div>Section lacks heading. Consider using h2 - h6 elements to add identifying headings to all sections, or else use a div element instead for any cases where no heading is needed.</div></div><div>From line 133, column 5; to line 133, column 42</div><div><div class="quote container my-5"></div></div></div></div> <div>Document checking completed.</div> <div>Used the HTML parser.</div> <div>Total execution time 8 milliseconds.</div>	
After Adjustments	
<div><div>Document checking completed. No errors or warnings to show.</div><div>Used the HTML parser.</div><div>Total execution time 5 milliseconds.</div></div>	

Crossfit Page	
Before Adjustments	
<div><div><div><div>1.</div><div><div>Info</div><div>Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div></div><div>From line 6, column 3; to line 6, column 57</div><div>UTF-8">--> <meta http-equiv="X-UA-Compatible" content="IE=edge" />--> <!--</div></div></div><div><div><div>2.</div><div><div>Warning</div><div>Section lacks heading. Consider using h2 - h6 elements to add identifying headings to all sections, or else use a div element instead for any cases where no heading is needed.</div></div><div>From line 147, column 5; to line 147, column 51</div><div><div class="contact-link text-center py-4"></div></div></div><div><div><div>3.</div><div><div>Info</div><div>Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div></div><div>From line 158, column 9; to line 158, column 74</div><div>--></div></div></div><div><div><div>4.</div><div><div>Info</div><div>Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div></div><div>From line 161, column 9; to line 161, column 73</div><div>--></div></div></div><div><div><div>5.</div><div><div>Info</div><div>Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div></div><div>From line 164, column 9; to line 164, column 77</div><div>--></div></div></div></div> <div>Document checking completed.</div> <div>Used the HTML parser.</div> <div>Total execution time 6 milliseconds.</div>	
After Adjustments	
<div><div>Document checking completed. No errors or warnings to show.</div><div>Used the HTML parser.</div><div>Total execution time 6 milliseconds.</div></div>	

The css file made by Guilherme (stylesGui.css) did not show any errors.

stylesGui.css - Crossfit Page
<p>W3C CSS Validator results for stylesGui.css (CSS level 3 + SVG)</p> <p>Congratulations! No Error Found.</p> <p>This document validates as CSS level 3 + SVG !</p> <p>To show your readers that you've taken the care to create an interoperable Web page, you may display this icon on any page that validates. Here is the XHTML you could use to add this icon to your Web page:</p>

Index and Swimming – Clara

To make Index and Swimming Pages follow HTML5 standards, it was necessary to remove slashes from tags which did not have any effect on void elements and interacted badly with unquoted attributes and also remove the end tag “/” from </br> so that both pages will be organized and written following the standards.

Index Page
<p>Before Adjustments</p> <ol style="list-style-type: none">Info Trailing slash on void elements has no effect and interacts badly with unquoted attribute values. From line 233, column 9, to line 233, column 74 >++<Info Trailing slash on void elements has no effect and interacts badly with unquoted attribute values. From line 236, column 9, to line 236, column 73 >++<Info Trailing slash on void elements has no effect and interacts badly with unquoted attribute values. From line 239, column 9, to line 239, column 77 >++<
<p>After Adjustments</p> <p>Document checking completed. No errors or warnings to show.</p> <p>Used the HTML5 parser: Total execution time 18 milliseconds.</p>

Swimming Page	
Before Adjustments	
<div><div>1. Error End tag <code>
</code>.</div><div>From line 204, column 21; to line 204, column 25</div><div>ifficulty.<code></br></code></div></div>	
<div><div>2. Error End tag <code>
</code>.</div><div>From line 212, column 53; to line 212, column 57</div><div>he sleeps.<code></br></code></div></div>	
<div><div>3. Info Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div><div>From line 233, column 6; to line 233, column 71</div><div>nk"><code></code></div></div>	
<div><div>4. Info Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div><div>From line 236, column 6; to line 236, column 70</div><div>nk"><code></code></div></div>	
<div><div>5. Info Trailing slash on void elements has no effect and interacts badly with unquoted attribute values.</div><div>From line 239, column 6; to line 239, column 74</div><div>nk"><code></code></div></div>	
After Adjustments	
<div>Document checking completed. No errors or warnings to show.</div> <div>Used the HTML parser.</div> <div>Total execution time 6 milliseconds.</div>	

The extra and personalized CSS file to be applied to one of student Clara's page did not return any error or information message.

stylesClara.css - Swimming Page
<div>W3C CSS Validator results for stylesClara.css (CSS level 3 + SVG)</div> <div>Congratulations! No Error Found.</div> <div>This document validates as CSS level 3 + SVG !</div>

Contact Us and Open Gym – Alexandre

Contact Us Page – No errors

Nu Html Checker

This tool is an ongoing experiment in better HTML checking, and its behavior remains subject to change

Showing results for uploaded file **contact_us.html**

Checker Input

Show ☐ source ☐ outline ☐ image report [Options...](#)

Check by **file upload** [Choose file](#) No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

[Check](#)

Document checking completed. No errors or warnings to show.

Used the HTML parser.
Total execution time 8 milliseconds.

[About this checker](#) • [Report an issue](#) • Version: 24.11.29

Gym Page, Before -

- Info** Trailing slash on void elements **has no effect** and **interacts badly with unquoted attribute values**.
From line 5, column 2 to line 5, column 28
`<meta charset="UTF-8" /> <!--`
- Info** Trailing slash on void elements **has no effect** and **interacts badly with unquoted attribute values**.
From line 5, column 2 to line 5, column 57
`<!--> <meta http-equiv="X-UA-Compatible" content="IE=edge" /> <!--`
- Info** Trailing slash on void elements **has no effect** and **interacts badly with unquoted attribute values**.
From line 7, column 2 to line 7, column 74
`<div> <!--> <meta name="viewport" content="width=device-width, initial-scale=1.0" /> <!-- </div>`
- Error** Bad value `videos/gym workout.mp4` for attribute `src` on element `source`: illegal character in path segment: space is not allowed.
From line 50, column 8 to line 50, column 82
`<source src="videos/gym workout.mp4" type="video/mp4">`
- Error** Bad value `images/strength machine.jpg` for attribute `src` on element `img`: illegal character in path segment: space is not allowed.
From line 123, column 19 to line 123, column 68
``
- Error** Bad value `images/free weights.jpg` for attribute `src` on element `img`: illegal character in path segment: space is not allowed.
From line 135, column 19 to line 135, column 64
``
- Error** Bad value `images/Rowing Machine.jpg` for attribute `src` on element `img`: illegal character in path segment: space is not allowed.
From line 161, column 19 to line 161, column 68
``
- Error** Bad value `images/Stationary Bike.jpg` for attribute `src` on element `img`: illegal character in path segment: space is not allowed.
From line 173, column 19 to line 173, column 67
``
- Error** Bad value `images/Elliptical machine.jpg` for attribute `src` on element `img`: illegal character in path segment: space is not allowed.
From line 185, column 19 to line 185, column 100
``
- Error** Stray end tag `<div>`.
From line 248, column 5 to line 248, column 10
`</div>`
- Error** Stray end tag `<section>`.
From line 250, column 5 to line 250, column 14
`</section>`

Gym Page after – No errors

Nu Html Checker

This tool is an ongoing experiment in better HTML checking, and its behavior remains subject to change

Showing results for uploaded file **gym.html**

Checker Input

Show ☐ source ☐ outline ☐ image report

Check by **file upload** No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Document checking completed. No errors or warnings to show.

Used the HTML parser
Total execution time 2 milliseconds.

It was necessary to remove spaces in the images names, and remove strange scripts in the meta lines.


styleAlex.css - No errors

W3C CSS Validator results for stylesAlex.css (CSS level 3 + SVG)


Congratulations! No Error Found.

This document validates as **CSS level 3 + SVG !**

To show your readers that you've taken the care to create an interoperable Web page, you may display this icon on any page that validates. Here is the XHTML you could use to add this icon to your Web page:





```
<p>
  <a href="http://jigsaw.w3.org/css-validator/check/referer">
    
    </a>
  </p>
```

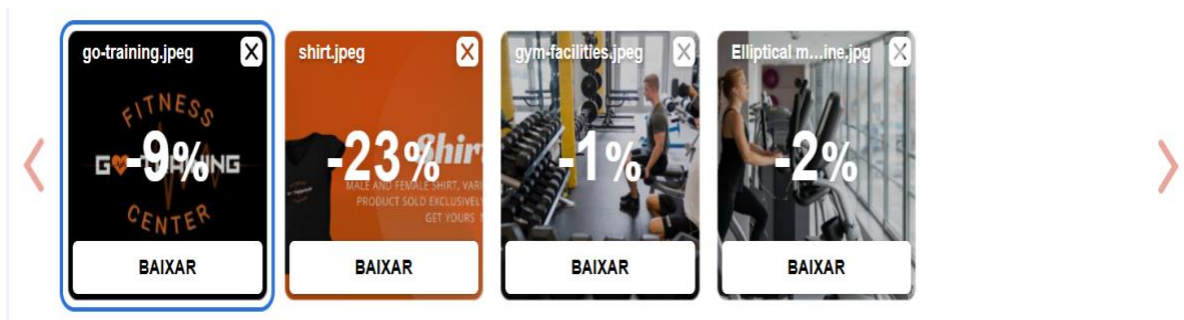


```
<p>
  <a href="http://jigsaw.w3.org/css-validator/check/referer">
    
    </a>
  </p>
```

4.3. SEO and Optimization

Images were optimized for fast loading using Tinify and Optimizilla. It resulted in a considerable reduction size of the images as shown in the screenshots below.

	man-doing-push-ups.jpg JPEG 372 KB	-80% 73 KB	JPEG
	gym.jpg JPEG 112 KB	-10% 100 KB	JPEG
	fun.jpg JPEG 27 KB	-3% 26 KB	JPEG
	freestyle.jpg JPEG 92 KB	-2% 90 KB	JPEG
	crossStrength.png PNG 3 MB	-68% 1 MB	PNG
	fitness-trainers.jpg JPEG 33 KB	-4% 32 KB	JPEG
	endurance-training.jpg AVIF 47 KB	-32% 32 KB	AVIF



Proper use of alt attributes was made to improve accessibility (e.g., Crossfit Page created by Guilherme, Swimming Page created by Clara and Gym Page created by Alexandre as shown below).

- CrossFit Page created by student Guilherme

```
<!-- CrossFit Benefits -->
<section class="benefits-section py-5 bg-light">
  <div class="container">
    <h2 class="text-center mb-4">Why Choose CrossFit?</h2>
    <div class="row">
      <div class="col-md-4 text-center">
        
        <h5>Strength & Power</h5>
        <p>Build a solid foundation of strength and resilience with high-intensity training.</p>
      </div>
      <div class="col-md-4 text-center">
        
        <h5>Cardio Endurance</h5>
        <p>Enhance your stamina and endurance with dynamic workouts.</p>
      </div>
      <div class="col-md-4 text-center">
        
        <h5>Community Support</h5>
        <p>Be part of a supportive and motivating group of fitness enthusiasts.</p>
      </div>
    </div>
  </div>
</section>
```

- Swimming Page created by student Clara

```
div class="col-md-3 col-sm-6 col-12">
  <div class="strokecards">
    
    <div class="stroke-body">
      <h5 class="card-title">Freestyle</h5>
      <p class="card-text">Fast and efficient type of stroke. Swimming performed by alternating
        arms and breathing laterally. Predominant swimming style among practitioners and generally
        be learnt due to being the "simplest".
      </p>
    </div>
  </div>
</div>
div class="col-md-3 col-sm-6 col-12">
  <div class="strokecards">
    
    <div class="stroke-body">
      <h5 class="card-title">Backstroke</h5>
      <p class="card-text">Swimming is performed on the back also with alternating movement of
        the arms, but with circular movements. Breathing is more easily controlled, as the face is
        constantly above the water level.
      </p>
    </div>
  </div>
</div>
```

- Gym Page created by student Alexandre

```
    </p>
  </div>
</div>
<div class="carousel-item">
  
  <div class="carousel-caption d-none d-md-block">
    <h5>Spacious Workout Area</h5>
    <p>Plenty of space to move, lift, and train without feeling crowded.</p>
  </div>
</div>
<div class="carousel-item">
  
  <div class="carousel-caption d-none d-md-block">
    <h5>Don't forget the cardio !</h5>
    <p>Experience our top-notch machines designed to help you achieve your fitness goals.</p>
  </div>
</div>
</div>

<!-- Carousel Controls -->
<button class="carousel-control-prev" type="button" data-bs-target="#gymCarousel" data-bs-slide="prev">
  <span class="carousel-control-prev-icon" aria-hidden="true"></span>
  <span class="visually-hidden">Previous</span>
```

4.5. Testing

4.5.1. Responsiveness

We used Bootstrap extensively in our project to ensure responsiveness and a consistent layout across various screen sizes. Bootstrap's grid system, with classes like col-lg, col-md, and col-sm, helped us create flexible layouts that automatically adjust based on the viewport size.

In addition to Bootstrap, we implemented custom CSS media queries to handle specific styling needs that were not covered by default Bootstrap classes. These media queries allowed us to fine-tune the appearance of elements like font sizes, paddings, and margins for different screen widths.



Together, Bootstrap and CSS media queries ensured that our website provides a seamless and visually appealing experience across devices.

Plans and Crossfit Pages (Guilherme)

In the Plans and CrossFit pages, the Bootstrap grid allowed content, such as plan cards and carousels, to rearrange from multi-column layouts on large screens to single-column layouts on smaller devices (e.g., cards in Plans Page).

Plans Page - Cards	
<pre><!-- Silver Plan Card --> <div class="item-plan col-lg-4 col-md-6 col-sm-12"> <h3>Silver</h3> <p>A basic plan for fitness enthusiasts starting their journey.</p> 24/7 gym access. Weekly functional training. </pre>	
col-lg-4	
<div><h3>Our Membership Plans</h3><div><div><h4>Silver</h4><p>A basic plan for fitness enthusiasts starting their journey.</p><ul style="list-style-type: none">24/7 gym access.Weekly functional training.<p>€29.99/month</p><p>Contact Us</p></div><div><h4>Gold</h4><p>A flexible plan for those seeking more variety and options.</p><ul style="list-style-type: none">Everything in the Silver Plan.Choose between swimming or CrossFit.Personalized monthly workout plan.<p>€49.99/month</p><p>Contact Us</p></div><div><h4>Platinum</h4><p>An all-in-one premium package for full access and priority benefits.</p><ul style="list-style-type: none">Everything in the Gold Plan.Swimming and CrossFit included.Nutrition consultation.Priority access to events and programs.<p>€69.99/month</p><p>Contact Us</p></div></div></div>	
Col-md-6	Col-sm-12
<div><h3>Our Membership Plans</h3><div><div><h4>Silver</h4><p>A basic plan for fitness enthusiasts starting their journey.</p><ul style="list-style-type: none">24/7 gym access.Weekly functional training.<p>€29.99/month</p><p>Contact Us</p></div><div><h4>Gold</h4><p>A flexible plan for those seeking more variety and options.</p><ul style="list-style-type: none">Everything in the Silver Plan.Choose between swimming or CrossFit.Personalized monthly workout plan.<p>€49.99/month</p><p>Contact Us</p></div></div><div><div><h4>Platinum</h4><p>An all-in-one premium package for full access and priority benefits.</p><ul style="list-style-type: none">Everything in the Gold Plan.Swimming and CrossFit included.Nutrition consultation.Priority access to events and programs.<p>€69.99/month</p><p>Contact Us</p></div></div></div>	<div><h3>Our Membership Plans</h3><div><div><h4>Silver</h4><p>A basic plan for fitness enthusiasts starting their journey.</p><ul style="list-style-type: none">24/7 gym access.Weekly functional training.<p>€29.99/month</p><p>Contact Us</p></div><div><h4>Gold</h4><p>A flexible plan for those seeking more variety and options.</p><ul style="list-style-type: none">Everything in the Silver Plan.Choose between swimming or CrossFit.Personalized monthly workout plan.<p>€49.99/month</p><p>Contact Us</p></div></div></div>

CSS media queries adjusted the size of the plan cards and centered buttons on smaller screens to maintain usability and aesthetic consistency (e.g., “Choose a Plan” button).

Plan Page – “Choose a Plan” Button	
<pre>/* _____ Responsive Adjustments _____ */ @media (max-width: 991px) { /* Plans Page */ .p-container aside { margin-bottom: 20px; } .p-container .p-button { margin: 10px auto 0; } .item-plan { margin: 0 auto 20px; } }</pre>	
Large Screen (width > 991px)	
<p>Need a plan?</p> <p>If you don't know where to start, we are here to help. You can choose one or two of our modalities or get access to everything. Let's go! We are Go Training.</p> <p>Choose a plan</p>	
Smaller Screen (width <= 991px)	
<p>Need a plan?</p> <p>If you don't know where to start, we are here to help. You can choose one or two of our modalities or get access to everything. Let's go! We are Go Training.</p> <p>Choose a plan</p>	

Index and Swimming Pages (Clara)


In the Index and Swimming pages, the Bootstrap grid allowed content, such as plan cards and carousels, to rearrange from multi-column layouts on large screens to single-column layouts on smaller devices (e.g. Tips Section on Index Page).

Index Page – Tips Section (card content)

```
<div class="tip-cards row g-4">  
  <div class="col-md-4 col-sm-6 col-12">  
    <div class="health-card">  
        
      <div class="health-body">  
        <h5 class="card-title">Drink Plenty of Water</h5>  
        <p class="card-text">Drink at least two liters of water a day. This practice will help  
body temperature regulated.</p>  
      </div>  
    </div>  
  </div>
```

col-lg-4


Some tips for a healthier routine



Drink Plenty of Water

Drink at least two liters of water a day. This practice will help your body to keep the body temperature regulated.


[Read More](#)



Good Sleep Routine

A well-regulated sleep helps with physical and mental well-being. When we sleep well, the body recovers itself.





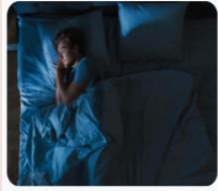
[Read More](#)



Take Your Mind Off Things




Look for activities that can distract your mind and are pleasurable for you. You can do it alone or with friends.

[Read More](#)

Col-md-6	Col-sm-12
<p>Some tips for a healthier routine</p> <div>  <p>Drink Plenty of Water</p> <p>Drink at least two liters of water a day. This practice will help your body to keep the body temperature regulated.</p> <p>Read More</p> </div> <div>  <p>Good Sleep Routine</p> <p>A well-regulated sleep helps with physical and mental well-being. When we sleep well, the body recovers itself.</p> <p>Read More</p> </div> <div>  <p>Take Your Mind Off Things</p> <p>Look for activities that can distract your mind and are pleasurable for you. You can do it alone or with friends.</p> <p>Read More</p> </div>	<div>  <p>Drink Plenty of Water</p> <p>Drink at least two liters of water a day. This practice will help your body to keep the body temperature regulated.</p> <p>Read More</p> </div> <div>  <p>Good Sleep Routine</p> <p>A well-regulated sleep helps with physical and mental well-being. When we sleep well,</p> </div>

CSS media queries adjusted the size of the plan cards and centered textual content and photos (e.g. What we offer section on Index page).

Plan Page – “Choose a Plan” Button
<pre> @media (max-width: 768px) { /* Index Page */ .tip-cards { display: flex; flex-direction: column; align-items: center; } .health-card { flex: 1 1 100%; /*card occupy the whole container*/ margin: 5px 0; } } </pre>

Large and Medium Screen (width > 768px)	
<div>Here is what we offer in our fitness center</div> <div><div></div><div><div>Fitness Instructors</div><div>Our team is ready to ensure that any physical activity is carried out safely. Your workouts will be personalized to meet your needs and any limitations.</div></div></div> <div><div><div>CrossFit Classes</div><div>Reach new physical heights and improve your resistance with dynamic and intense training. We combine gymnastics exercises, weight lifting and much more, in a suitable, complete and efficient format.</div></div><div></div></div>	
Smaller Screen (width <= 768px)	
<div>Here is what we offer in our fitness center</div> <div><div></div><div><div>Fitness Instructors</div><div>Our team is ready to ensure that any physical activity is carried out safely. Your workouts will be personalized to meet your needs and any limitations.</div></div></div> <div><div></div><div><div>CrossFit Classes</div><div>Reach new physical heights and improve your resistance with dynamic and intense training. We combine gymnastics exercises, weight lifting and much more, in a suitable, complete and efficient format.</div></div></div>	

Contact Us and Open Gym Pages (Alexandre)

In the Contact Us page the Responsiveness starts in the Navbar:

```
header>  
<nav class="navbar navbar-expand-lg navbar-dark">  
  <a class="navbar-brand" href="index.html" aria-label="Home">
```

Which ensures that it collapses into a hamburger menu on smaller screens (typically for devices under 992px wide). And it includes a brand logo and a set of navigation links, which switch to a collapsible dropdown on smaller screens.

This is important because it ensures that the navigation remains user-friendly and accessible on both desktop and mobile devices.

Top Image:

The top image is set as a full-width image (w-100) with the `img-fluid` class, which makes it responsive. It ensures that the image scales appropriately on various screen sizes without overflowing the container.



Contact Form and Contact Information:

Both the form and the contact information are placed in a row with Bootstrap's grid system, which adjusts according to screen size. On larger screens (lg and above), the form and the contact info are placed side-by-side in col-lg-6 columns.

On smaller screens, the columns will stack vertically, ensuring readability and usability. This is handled by Bootstrap's responsive grid, which automatically adjusts column widths based on the screen size:

Contact Us

Name

Your Name

Email

Your Email

Reason for Contact

Select a reason

Message

Your Message

Send Message

Contact Information

Email: info@gotraining.com

Phone: +123-456-7890

Address: 123 Fitness Lane, Wellness City

Instagram, WhatsApp, Location

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Footer:

The footer is simple and flexible, with centered text and padding. It will adapt to the screen width and display correctly on both mobile and desktop.

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Gym Page Nav Bar

Just like on the previous page, the effects on the navbar were repeated here to maintain coherence in responsiveness and design.

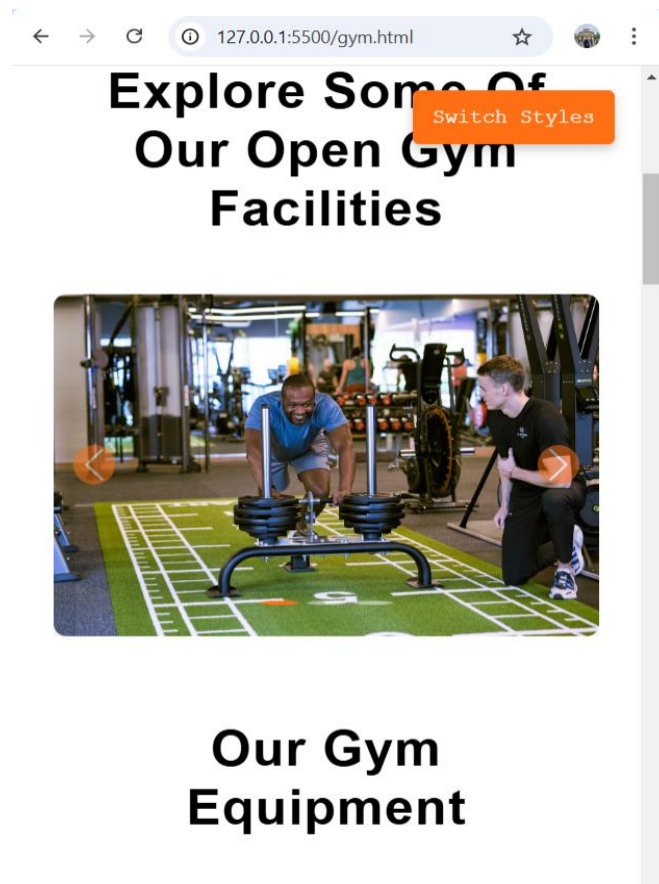
Carousel:

The carousel uses **Bootstrap Carousel**, which is responsive by default. Images resize automatically using the classes d-block w-100.

The class carousel-caption d-none d-md-block hides the captions on screens smaller than "md" ($\geq 768\text{px}$), ensuring a cleaner interface.

Result:

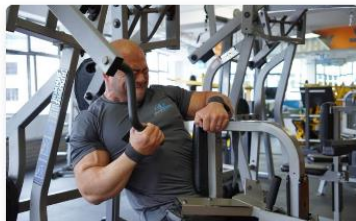
On small screens, the focus remains on images without overwhelming users with text.



Responsive Grid System

The page uses Bootstrap's **Grid System** to organize elements, such as equipment and trainers:

Our Gym Equipment



Strength Machines

Our strength machines are designed for maximum safety and effectiveness, perfect for building muscle mass.



Free Weights

Fully stocked with dumbbells, barbells, and kettlebells for the ultimate strength and power training.



Treadmills

Our state-of-the-art treadmills are perfect for runners and walkers alike, offering a smooth experience with multiple settings.



Rowing Machines

Engage your entire body with our rowing machines, perfect for building endurance and toning muscles. Perfect combination !



Stationary Bikes

Enjoy an intense cardio session with our top-of-the-line stationary bikes, featuring adjustable resistance for all levels.



Elliptical Machines

Our elliptical machines are perfect for low-impact cardio that burns calories efficiently while being easy on your joints.

Dynamic Style Switcher

The "Switch Styles" button toggles between two CSS files (external.css and stylesAlex.css). This dynamic feature can change the appearance and potentially the responsiveness of the page if the styles differ significantly.

5. Website Deployment

The website was deployed on GitHub Pages. Challenges included aligning the navigation bar across all pages, which was resolved through collaboration. Also, one of the pages had one image that, after deployment, did not open. So, we checked and it was a typing error which immediately was corrected.

Link to the website: <https://silveiraguilherme.github.io/gotrainingfitness/>

6. Results and Achievements

The “Go Training” website successfully met its objectives, offering a visually appealing and functional platform. Highlights include a fully responsive design, seamless navigation, and engaging interactive features.

7. Teamwork and Improvements

Collaboration among team members was effective, with clear task distribution and regular check-ins. Future improvements could include adding a backend for dynamic content and incorporating user feedback mechanisms.

8. Conclusion

The “Go Training Fitness Website” project provided valuable experience in web development, teamwork, and problem-solving. The final product is a testament to the team’s dedication to creating a high-quality, user-centered platform.

8. References

Bootstrap Documentation: <https://getbootstrap.com>

W3C Validator: <https://validator.w3.org>

Tinify (file compression): <https://tinypng.com>

Optimizilla (image compressor): <https://imagecompressor.com/pt/>

SmartFit: <https://www.smartfit.com.br/>

Bodytech: <https://www.bodytech.com.br/>

Competition Gym: <https://www.competition.com.br/>

BlueFit: <https://www.bluefit.com.br>