

BSc (Hons) Artificial Intelligence and Data Science

Module: CM 1605

Group Coursework

Module Leader : Ms. Janani Harischandra

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1. Introduction

Our passion for improving healthcare led us to create "MyHealth.com," a revolutionary application addressing the demand for better healthcare services. Inspired by technological advancements in the industry, our team is eager to contribute to global healthcare enhancement through this initiative.

1. Sandali focused on HTML web pages, form design, and validation for a smooth user experience.
2. Amna Shouqi led the main interface design, created an interactive quiz, and enhanced engagement with HTML forms.
3. Fathima Khadheeja Alam developed the product purchasing interface and the "About Us" page, ensuring compliance with form design and validation.
4. M.A. Wasif Asi contributed to the product listing page and a unique activation form for personalized mailings, emphasizing excellent user experience through form design and validation.

2. Research on existing systems

WebMD offers global self-diagnosis and health guidance, while Sri Lanka's oDoc provides telehealth consultations and monitoring, enhancing healthcare accessibility and management.

3. Technical Discussion

B.M.S.H. Balasooriya

HTML Web Pages Creation

Presentation Page: Implemented a simple yet engaging landing page that automatically redirects to the main webpage after 5 seconds using JavaScript.

```
<script>
    setTimeout(function() {
        window.location.href = 'mainWebpage.html';
    }, 5000);
</script>
```

Signup Page: Designed a comprehensive form allowing users to enter personal details.

```

<form id="registrationForm">
  <div class="input_box">
    <label for="full_name">Full Name</label>
    <input type="text" id="fullname" placeholder="Enter your full name" />
  </div>
  <!-- Additional fields omitted for clarity -->
</form>

```

Gallery Page: The gallery page was designed to showcase images related to healthcare. When a thumbnail is hovered over, the corresponding larger image is displayed alongside its description.

```

<div class="thumbnail" onmouseover="displayImage('largeImageSrc', '
  
</div>

```

HTML Form Design and validation

CSS Styling: Employed CSS to style the form elements, ensuring they are visually appealing and aligned with the website's overall design language.

```
.input_box {  
    margin-bottom: 15px;  
}  
.input_box input {  
    width: 100%;  
    padding: 10px;  
    border: 1px solid #ccc;  
    border-radius: 5px;  
}
```

JavaScript Validation: Implemented custom JavaScript validation and opted not to use HTML5 validation to fulfill the task requirements.

```
document.getElementById('registrationForm').onsubmit = function(event) {  
    let fullname = document.getElementById('fullname').value;  
    // Check for other fields  
    if (!fullname) {  
        alert('Please fill in all required fields.');        event.preventDefault(); // Prevent form submission  
    }  
};
```

Alert on Successful Form Submission: Used JavaScript to provide feedback to the user upon successful form submission, including a customized greeting message.

```
if (isValid) {  
    alert(`Dear ${username}, thank you for signing up ->  
    form.submit();  
}
```

Interactive Gallery Page: Enhanced the gallery page's interactivity by scripting a feature.

```
function displayImage(imgSrc, imgDescription) {  
    document.getElementById('largeImage').src = imgSrc;  
    document.getElementById('imageDescription').innerText = imgDescription;  
}
```

Amna Shouqi

Quiz Page

Implementation: Designed a quiz layout that dynamically displays questions and collects user answers.

```
<button id="startButton" class="button-33" role="button">Take Quiz Now!</button>
```

```
document.getElementById('startButton').addEventListener('click', startQuiz);  
  
function startQuiz() {  
    document.getElementById('quizContainer').style.display = 'none';  
    // Logic to display the first quiz question  
}
```

Home Page

Objective: To immediately capture the visitor's attention with an overview of MyHealth's offerings.

Implementation: Utilized CSS for styling the homepage to be visually appealing, ensuring the key sections such as "Hospitals Near You" are easily navigable.


```

.mainSlide .slide .item {
  width: 40px;
  height: 80px;
  margin-top: 100px;
  padding: 100px;
  background-position: 50% 50%;
  background-size: cover;
  display: inline-block;
  transition: 0.5s;
  box-shadow: 0 4px 8px rgba(72, 68, 68, 0.2);
  border: 5px solid rgb(255, 255, 255);
}

```

```

.signup, .signin {
  padding: 20px 30px;
  border-radius: 40px;
  cursor: pointer;
  text-decoration: none;
}
.signup:hover, .signin:hover {
  border: 1px solid #1a0ec1;
  background: #0d2e8f;
  color: rgb(255, 254, 254);
  transition: 0.5s;
}

@media (max-width: 768px) {
  .zig-zag {
    flex-direction: column;
    align-items: center;
  }
}

```

Fathima Khadheeja Alam

About Us Page:

Enhanced the "About Us" page to reflect the mission and values of MyHealth.com. Utilizing CSS for aesthetics and JavaScript for dynamic content.

HTML Structure: Structured the page to include a header, main content with the team's backstory, and a footer.

```
<div class="card">
  <div class="profile-pic">
    
  </div>
  <div class="details">
    <h2>Sandali Balasooriya</h2>
    <p class="tag">STUDENT 1</p>
    <div class="social">
      <i class="fa-brands fa-instagram"></i>
      <i class="fa-brands fa-twitter"></i>
      <i class="fa-brands fa-github"></i>
    </div>
    <a href="Page-Editors/student1.html" class="link">Page Editor</a>
  </div>
</div>
```

CSS Styling: Employed CSS for visual enhancements, making the page more inviting and professional.

```
.card {
  background: #fff;
  border-radius: 10px;
  padding: 20px;
  box-shadow: 0 4px 6px rgba(0, 0, 0, 0.1);
  transition: all 0.3s ease-in-out;
}

.card:hover {
  transform: translateY(-5px);
}
```

JavaScript Interactivity: The script for dynamically adjusting font sizes adds an accessibility feature.

```
function increaseFontSize() {  
  var elements = document.querySelectorAll('.resizeable');  
  elements.forEach(function(element) {  
    var style = window.getComputedStyle(element, null).getPropertyValue('font-size');  
    var fontSize = parseFloat(style);  
    element.style.fontSize = (fontSize + 1) + 'px';  
  });  
}
```

Products Page:

Dynamic Content: JavaScript is used to populate product details.

```
function increaseFontSize() {  
  var elements = document.querySelectorAll('.resizeable');  
  elements.forEach(function(element) {  
    var style = window.getComputedStyle(element, null).getPropertyValue('font-size');  
    var fontSize = parseFloat(style);  
    element.style.fontSize = (fontSize + 1) + 'px';  
  });  
}
```

Responsive Design: Both the "About Us" and "Products" pages are designed to be responsive, ensuring that content is accessible and aesthetically pleasing on any device.

```
.product {  
  background: #f9f9f9;  
  padding: 15px;  
  border-radius: 8px;  
  box-shadow: 0 2px 4px rgba(0,0,0,0.1);  
  text-align: center;  
}  
  
.product img {  
  max-width: 100%;  
  height: auto;  
  border-radius: 4px;  
}  
  
.btn.fill {  
  background-color: #007bff;  
  color: white;  
  padding: 10px 20px;  
  border: none;  
  border-radius: 5px;  
  cursor: pointer;  
}
```

User Interaction: The inclusion of a shopping cart modal and a detailed checkout form.

```
<div class="product">
  
  <h2>Stethoscope</h2>
  <p class="price">$19.99</p>
  <button class="btn fill" data-product-id="1">BUY NOW</button>
</div>
```

```
function addToCart(productId) {
  console.log("Added to cart", productId);
  // Add product to cart logic here
}
```

M.A. Wasif Asi

Theme Toggle Button: Implemented a light and dark mode toggle feature. This was achieved by toggling a class `.dark-mode` on the `body` element using JavaScript.

```
function toggleTheme() {  
  document.body.classList.toggle('dark-mode');  
}
```

Subscription Form: A simple yet effective subscription form was designed, allowing users to input their name and email. JavaScript validation ensures that the input fields are not empty before submitting.

```
<form id="subscribeForm">  
  <input type="text" id="name" name="name" placeholder="Enter Your Name" required>  
  <input type="email" id="email" name="email" placeholder="Enter your email address" required>  
</form>
```

Review Section: A dynamic review section was created to display user reviews. This section uses flexbox for layout, ensuring reviews are responsive and visually appealing.

```
// Simplified example of inserting reviews into HTML  
function displayReviews(reviews) {  
  reviews.forEach(review => {  
    const reviewElement = `<div class="review-box">${review.content}</div>`;   
    document.querySelector('.review-container').innerHTML += reviewElement;  
  });  
}
```

4. Discussion of UX/UI principles/Applications/Justifications

4.1 Navigation Techniques

The website, with its simple structure, forgoes breadcrumb navigation, using an active-link highlight in the navigation bar to show user location, ensuring easy page navigation.

```
<nav>
  <div class="topnav">
    <div class="left-nav">
      <a href="home.html">
      <span class="myHealth">MyHealth</span></a>
    </div>

    <div class="right-nav hidden" id="right-nav">
      <a href="home.html" class="main-pages active-link">Home</a>
      <a href="aboutUs.html" class="main-pages">About Us</a>
      <a href="products.html" class="main-pages">Products</a>
      <a href="listening.html" class="main-pages">Reviews</a>
    </div>
  </div>
```

```
.active-link {
  border-bottom: 2px solid #0a1536;
}
```

4.2 Color balance/selection/consistency

Color Combination:

Neutral Backgrounds: Used shades of white and light gray to keep the site looking fresh and to ensure content readability.

Vibrant Accents: Bright colors like #f44336 (a kind of red) for buttons and links to catch the user's attention and make the interface lively.

```
:root {  
  --background: #ffffff;  
  --text: #333333;  
  --accent-color: #f44336; /* Vibrant red for accents */  
  --nav-bg-color: white;  
  --nav-text-right: #343a40; /* Dark gray for contrast */  
}
```

Composition:

Navigation Bar: Positioned at the top for easy access, with a semi-transparent background to blend with any page content while remaining distinct.


```
.main-logo {  
  height: 3em;  
}  
.icon, .googleIcon {  
  color: var(--nav-text-right);  
}  
}
```

Graphics:

Images and Icons: Chosen to complement the color scheme and content theme, used sparingly to not overwhelm the user. Icons are simple and intuitive, enhancing the user experience without distracting from the content.

Logo: Designed to be simple and recognizable, using the accent color for brand consistency.

```
.topnav {  
  background: rgba(255, 255, 255, 0.6);  
  backdrop-filter: blur(5px);  
}  
section {  
  padding: 20px;  
  margin-bottom: 20px;  
}
```

Content Sections: Structured with generous padding and margin to ensure the text and elements are not cramped, enhancing readability and user experience.

4.3 Color Contrast Test

The website uses a high-contrast scheme with white backgrounds and dark text for readability. Vibrant colors highlight calls to action, while a dark blue and purple footer adds a professional, health-focused touch.

4.4 Typography / consistency

The website pairs "Open Sans" for headings and "Lato" for body text, balancing approachability with formality for a healthcare audience. Strategic font sizes and dark blue or black text colors against light backgrounds ensure readability and visual hierarchy.

```
h1, h2, h3 {
  font-family: 'Open Sans', sans-serif;
}

body {
  font-family: 'Lato', sans-serif;
  color: #343a40; /* Dark text for better legibility */
}

/* Headings styled for prominence */
.header h1 {
  font-size: 4rem;
  color: rgb(0, 3, 37);
  text-shadow: 0px 1px 1px 2px rgba(0,0,0,0.1);
  font-weight: 700;
}
```

4.5 Accessibility

Text Accessibility Techniques:

Use of Semantic HTML: By using semantic elements like `<header>`, `<footer>`, `<section>`, and `<article>`, the website structure becomes more understandable for assistive technologies.

Font Sizes: Relative units for font sizes (`rem`, `em`) allow text to be resized based on user preferences.

```
h1 {  
  font-size: 4rem; /* Responsive and scalable text size */  
}
```

Image Accessibility Techniques:

Alt Text: Alternative text for images using the **alt** attribute to describe the image content and function is a critical accessibility feature.

```

```

Table Accessibility Techniques:

Table Headings and Captions: Use of **<th>** for defining headers and **<caption>** to describe the context of the table.

```
<table>
  <caption>List of medical products</caption>
  <tr>
    <th>Product Name</th>
    <th>Price</th>
  </tr>
  <!-- Table rows -->
</table>
```

Form Accessibility Techniques:

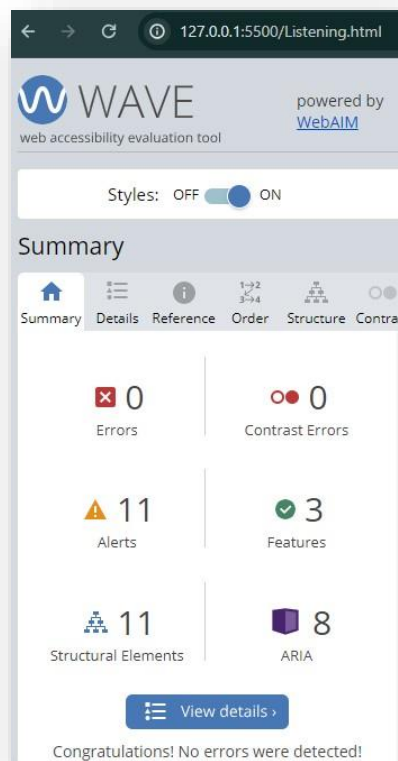
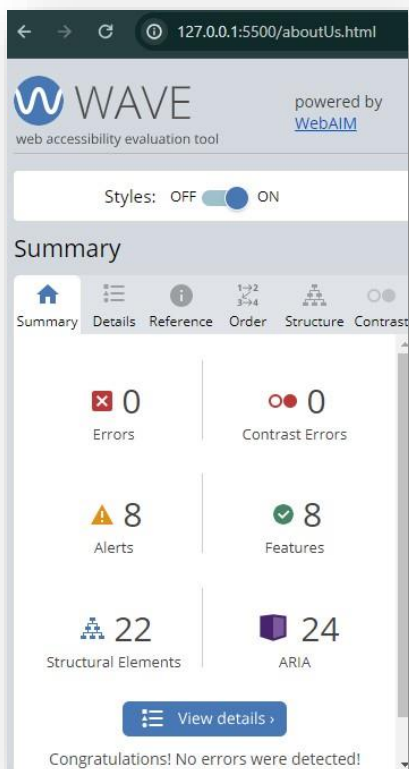
Labeling Form Elements: Each form input has an associated `<label>` with a `for` attribute matching the input's `id`, which is essential for screen readers.

```
<label for="email">Email:</label>
<input type="email" id="email" name="email">
```

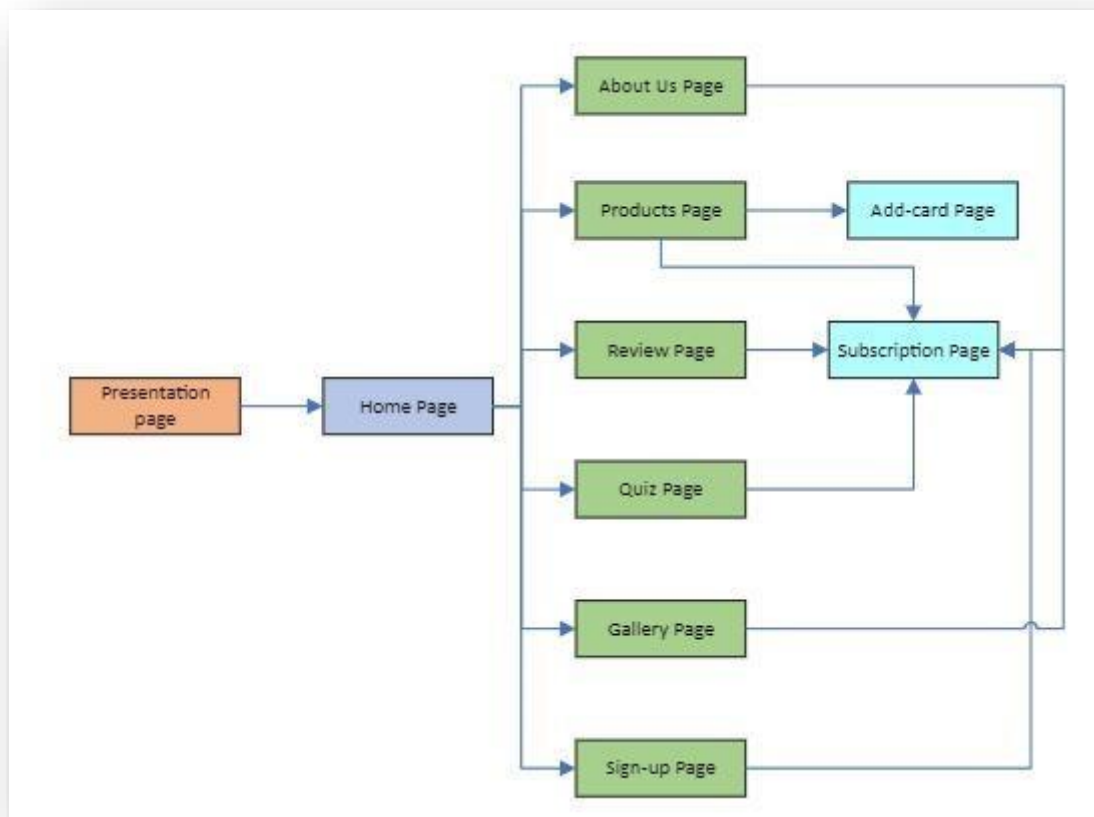
Fieldsets and Legends: Grouping related form elements with `<fieldset>` and `<legend>` for context.

```
<fieldset>
  <legend>Personal Information</legend>
  <!-- Input fields -->
</fieldset>
```

4.6 Accessibility Test



4.7 Site Diagram



5. Self-Reflection

Student 1: Encountered difficulties in implementing responsive design

Student 2: Concentrated on JavaScript. Acquired an understanding of the significance of code




Student 3: Learned to adapt and use feedback efficiently."

Student4: Learned a lot about data management.

6. References

1. Duckett, J. (2014). HTML and CSS: Design and Build Websites. Wiley.
2. McFarland, D. (2015). CSS: The Missing Manual. O'Reilly Media.
3. Freeman, E. & Robson, E. (2017). Head First JavaScript Programming: A Brain-Friendly Guide. O'Reilly Media.


Appendix: Screenshots





[Home](#)
[About Us](#)
[Products](#)
[Reviews](#)
[Quiz](#)
[Gallery](#)



Unlock a healthier you with MyHealth


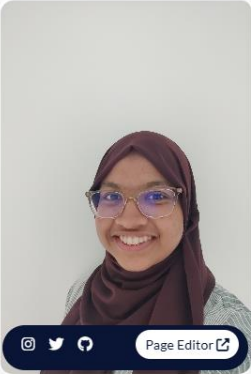
~Your trusted AI companion to wellness


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Meet the Team









Fathima Khadheeja Alam

STUDENT 3

Passionate co-founder revolutionizes healthcare with technology, making wellness accessible and personalized for all.


[Page Editor](#)





Featured Products



Thermometer

105 Remaining

\$19.99

Technical Specifications: Type: Digital Infrared Measurement Range: 32°C to 42.9°C (89.6°F to 109.2°F) Accuracy: $\pm 0.2^{\circ}\text{C}$ ($\pm 0.4^{\circ}\text{F}$) Measurement Distance: 1 to 5 cm (non-contact) Usage: Designed for quick, non-contact temperature measurements, making it ideal for monitoring fevers in adults and children alike. Suitable for home or professional use in various settings, including hospitals, clinics, and schools.

BUY NOW

Reviews

Light Theme



Lily Smith
@lilysmith



"The blood pressure monitor is easy to use and provides accurate readings. It's helped me keep track of my blood pressure at home, which has been incredibly convenient. Definitely worth the investment."



Max Johnson
@maxjohnson



"I've been using the electronic thermometer for a while now, and it's been reliable so far. It gives quick temperature readings, although I wish the display was a bit larger for easier reading."



Emily Davis
@emilydavis



"The portable oxygen concentrator has given me the freedom to go about my daily activities without worrying about running out of oxygen. It's lightweight and easy to carry around, making it perfect for travel."



Chris Taylor
@christaylor



"The wheelchair has been a game-changer for my mobility. It's sturdy, comfortable, and easy to maneuver. The adjustable features make it customizable to my needs."



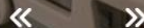
Question 2

What is the medical term for high blood pressure?

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Title

Mr/Mrs/Ms/Master/Dr/Rev

Full Name

Enter your full name

Date of Birth

dd/mm/yyyy



Phone Number

Enter your phone number

Subscribe to our Newsletter

Full Name

Enter your full name

Email

Enter your email

Subscribe

Page Editor

Name: Amna Shouqi

Role: Student 2

I completed the following tasks

Main Page

Designed the main page with navigation buttons, ensuring intuitive user interaction and smooth transition between sections. Incorporated various elements to enhance user experience, such as nearby hospital recommendations.

Quiz Page



Home About Us Products Reviews Quiz Gallery

Featured Products



Stethoscope

205 Remaining

\$19.99

Technical Specifications: Chestpiece Type: Dual Sided Diaphragm Type: Length: 27 inches / 69 cm Weight: Approximately 150 grams Acoustic P Warranty: 5 years Usage: Ideal for detecting normal and abnormal heart sounds in adult patients. Suitable for use in non-critical care environments: general ward, OB/GYN, ambulatory clinic, or urgent care.

BUY NOW

Your Cart

Thermometer



\$19.99

- 2 +

Subtotal: \$39.98

Stethoscope



\$19.99

- 2 +

Subtotal: \$39.98

Total: \$79.96

Checkout