Web Design and Development 4COSC011W

Report

Author: Neth Pehesara Botheju Student ID: w2053245/ 20221813

> Group Number: G23 - 6 Student Role: Student 1

> > Link(s) to Website

URL:

Contents

1. Introduction	3
1.1 Team Members and Task Allocation	3
1.2 Website topic/theme	3
1.3 Contributions	4
2. Technical Discussion	4
2.1 Implementation	4
2.1.1 Splash Screen Implementation	4
2.1.2 Shop Implementation	5
2.1.3 Checkout Implementation	
2.1.4 Content page Implementation	8
2.2 Task completion checklist	g
3. Webpage Validation Statement	g
4. Janet	g
5. Self-reflection	g
References	10
Appendices	10
Appendix A: Code	10
Appendix B: Screenshots	46
Appendix C: Screenshots - Webpage Validation E	Evidence49
Appendix D. Task Completion Checklist	51

1. Introduction

1.1 Team Members and Task Allocation

Student 1 (Neth Botheju/w2053245):

- Splash screen
- Shop
- Checkout
- Content page
- Page Editor

Student 2 (Parami De Silva/ w2053238):

- Nav bar + Home page
- Feedback
- Content page
- Page Editor

Student 3 (Adeesha Vass/ w2053228):

- User profile
- Team
- Content page
- Page Editor

Student 4 (Thevin Warnasuriya/ w2053250):

- Gallery
- Sitemap
- Content page
- Page Editor

1.2 Website topic/theme

Our focus is on the 6th United Nations Sustainable Development Goal, "Ensure availability and sustainable management of water and sanitation for all". As a small non-profit organization, we sell merchandise such as wristbands, reusable water bottles, keychains, and caps. We donate the money we raise to our partner organizations that support clean water initiatives.

Contributions 1.3

Group Coursework Meetings (minimum 5 meetings, e.g., one per week)		
Date & Time	21st of March 2024, 9.30pm to 10.30 pm	
Objective:	Assign roles to each student and discuss which UN Sustainable	
	Development Goal to select.	
Attended:	Yes	
Your Contribution:	Suggest topics and ideas based on various UN Sustainable	
	Development Goals	
Date & Time:	26 th of March 2024, 9.00am to 1.30pm (Physical)	
Objective:	Finalize the topic and start working on it.	
Attended:	Yes	
Your Contribution:	As the team leader, guide all members to selecting a final topic.	
Date & Time	27 th of March 2024, 10.00pm to 10.45pm	
Objective:	Discuss content pages and assign them to team members.	
Attended:	l: Yes	
Your Contribution:	I agreed to create the "About Us" page as a content page.	
Date & Time:	30 th March 2024, 5.00pm to 6.00pm	
Objective:	Discuss the problems and challenges faced by each member and tried to solve them.	
Attended:	Yes	
Your Contribution:	Get help for my problems and help others with theirs.	
Date & Time:	1 st April 2024, 9.30pm to 10.30pm	
Objective:	Share our finalized work and ask for feedback.	
Attended:	Yes	
Your Contribution:	I reviewed the websites I have created and asked for feedback from	
	other members.	
	Date & Time Objective: Attended: Your Contribution: Date & Time: Objective: Attended: Your Contribution: Date & Time Objective: Attended: Your Contribution: Date & Time: Objective: Attended: Your Contribution: Date & Time: Objective: Attended: Attended: Your Contribution: Date & Time: Objective: Attended: Attended:	

2. Technical Discussion

2.1 **Implementation**

2.1.1 Splash Screen Implementation

The splash screen is an introductory screen that includes:

- An image element displaying the logo in the center of the page.
- Displaying the mission (in this case mission is in short).
- Displaying the group members.
- A loading indicator element (in this case I have used a spinning animation loading indicator).

I have used the `setTimeout` function in JavaScript to redirect the user to the home page after 4 seconds.

```
setTimeout(function () {
    window.location.href = "home.html";
   }, 4000);
```

2.1.2 Shop Implementation

The shop page shows all the products that the users can buy through the online store. Each item includes such details as an image, title, description, price, quantity selection, and color options. Users can add items to their cart and continue to checkout.

On the right-hand side of the shop page, there is a shopping cart section. Clicking the "Add to Cart" button for an item will add it to the shopping cart with the selected quantity and color. Each item in the cart has a bin icon (delete icon). Clicking this bin icon will remove the item from the shopping cart.

Clicking the checkout button in the shopping cart section will redirect you to the checkout page with the selected items. If no items are selected, a alert message will shows like, "The cart is empty! Please add items to your cart before proceeding to checkout."

Below is an image showcasing the product display and shopping cart,

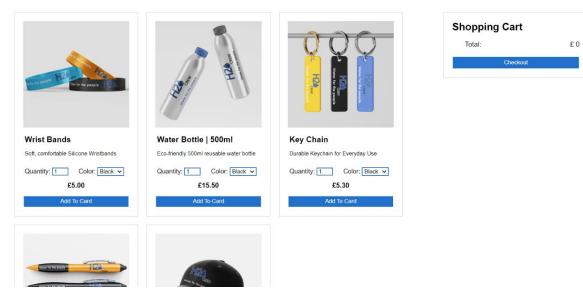


Figure 1 Product showcase and shopping cart.

Some important HTML code structure that I implemented for this part:

The container element #items to hold individual item divs. Each item div has the relevant information and a button to add it to the cart.

<div id="items"></div>

The container element #cart-items to hold individual cart divs. Each cart div has the relevant details and a delete icon to remove that item from the cart.

<div id="cart-items"></div>

JavaScript functionality implemented for this part:

First in JavaScript, an array items stores item details (id, title, description, price, image path). Using a for loop the items are displayed by creating a div using an HTML template that in javascript. "Add to Cart" buttons have event listeners (onclick) attached to the addToCart() function to add items to the cart.

The "Add to Cart" button has an onclick event listener attached to the addToCart() function. addToCart() Function:

- Takes item ID as a parameter.
- Take selected quantity and color.
- Adds the item (with ID, quantity, color) to cartList array. carList is a separate list that store cart items.
- Updates totalPrice variable and updates it on the HTML page.
- Calls reloadCart() to refresh the cart display.

reloadCart() Function:

- Display car items using cartList array.
- Uses items array to get some additional item details like img path based on the id.
- Attaches onclick event listeners to delete icons, and link it to the remove() function for the item removal.
- Calls storeData() to store cart data locally.

Delete Image Icon(bin icon): Clicking on it will execute the remove() function, which removes that item from the cartList based on id. Then, updates the total price, and refreshes the cart by calling reloadCard() function.

The storeData function locally stores the cartList, items list, and totalPrice variable using JavaScript local storage functionality. This will allow for later access to this data on the checkout page.

Inside the cart-container, there is a "Checkout" Button: If the cart is empty, an alert shows you to add items. Otherwise, it takes you to the checkout page.

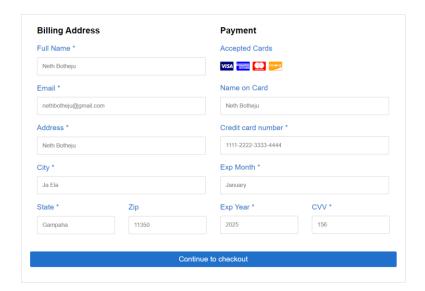
These are some important CSS styles applied to this part:

CSS styles the item divs, including grid layout is used to display the items in rows and columns. Also, some additional CSS applied for the cart section.

2.1.3 Checkout Implementation

The checkout section allows users to review their cart items, view the total price, and enter their billing and payment information to complete the purchase.

Below is an image showing the checkout form and order summary,



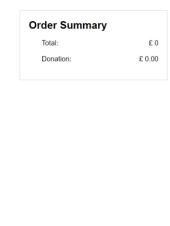


Figure 2 Checkout from and Order Summary

Some important HTML code structure that I implemented for this part:

The HTML structure includes separate sections for displaying cart items, total price, and the checkout form.

JavaScript functionality implemented for this part:

In JavaScript, the code first accesses the locally stored data (cartList, items, and totalPrice) and assigns them to variables.

Similar to the shop page shopping cart section, the code iterates through the cartList array using a for loop. This loop will display cart items in the cart.

Then, the code calculates and displays the total price and the amount donated through item purchases.

Checkout Page: The checkout form has sections for billing and payment details. Clicking "Continue to check out," the form is validated using checkFormInputs(). If valid, a confirmation message shows. If confirm, then "Order placed" message is shown, the form is submitted, and the page is redirected to the shop page.

For the cart section of the checkout page, the same CSS styles as shop.html.

For the checkout form section, stylish styles are added to align with a blue and white theme.

2.1.4 Content page Implementation

I have created a page called "aboutUs.html" that provides information about our organization. The page is divided into sections:

- About Us: This section details our organization's mission.
- Partner Organizations: Here, we showcase the logos of our partner organizations. Clicking on a logo redirect to the respective organization's detailed page.
- Donation History: This section we added a table to display past few months donation history.

Internal links to each section are at the top of the page.

Challenges that I have faced and lessons that I have learned

Challenge:

When submission of the checkout form, display a confirmation message. If the user confirms, redirect to the shop page.

Lesson Learned:

To achieve this, add a "submit" event listener to the form. Within the listener, first prevent the form been submitted. Then, prompt the user for confirmation. If the user confirm, the form will be submitted and redirected to the shop page.

Challenge:

Transfer shopping cart products from the shop page to the checkout page.

Lesson Learned:

Used JavaScript's local storage functionality to save cart data locally. This data can then be accessed and used on the checkout page later.

2.2 Task completion checklist

According to the table in Appendix D, in my role as Student 1, I have completed all assigned implementation tasks. This includes the splash screen (intro screen), the shop page with all features and requirements listed in the coursework specification, the checkout page with all the listed requirements like form validation etc..., and the content page (I created the About Us page, which also follows the specification requirements, including internal links for each section on the page).

I ensured all pages followed the provided navigation bar created by the group member who is doing the role of Student 2 and used the general theme and template chosen by our group members. To improve the overall user experience, I added CSS styling and interactive elements for all the parts I implemented. Additionally, I implemented a page editor web page that includes links to all the tasks I have completed. I also added a link to this page editor webpage in the footer of all the web pages that I have created.

3. Webpage Validation Statement

Appendix C contains screenshots of validation results for all my web pages. I used a free online markup validation tool which is W3C Markup Validation Service to check the code and see if there were any mistakes in markups.

4. Janet

Our website follows Janet regulations, Janet policies, and legal requirements. This website is developed for educational purposes as a university first year coursework project.

Following the Janet Acceptable Use Policy (AUP), the website does not include any illegal or harmful content. For security, we haven't used databases to store any type of data. However, we are collecting some data from user in the checkout page, feedback page and profile page. But we are not sharing user collected information with any third parties.

When we come to the accessibility, we have added alternative text descriptions for all images and a user friendly design for easy navigation. Regarding copyright, we have only used licensed or copyright-free materials for the website.

5. Self-reflection

Being the leader of the group, I really liked working together with members. We brainstorm ideas together, listened to each other's thoughts and ideas, and even picked our project topic as a team.

I gained some valuable experience working as a team. It's important to me to listen to everyone's thoughts as the leader, not just my own. I also got better at making choices that considered what everyone wanted, so no one felt left out. Working with different people showed me how to get along well with everyone, even if they come from different places or work in different ways.

In this project, my role was student 1 building the shop checkout page. This helped me get much better at coding with JavaScript. I also learned new things about design and how to work with other people. Overall, the project helped me improve in a lot of ways!

Being a leader was helpful when working with my teammates. But I also realized that leaders have to do more work and take on more responsibility than other members in the team. If I could do this project again, I would definitely plan everything out really well before we started working. Also, having a clear schedule would help us get things done on time and avoid any slowdowns.

References

Lun Dev Code (2023, March 08). *Add To Cart Shopping using HTML CSS and JavaScript* [Video]. YouTube. https://youtu.be/bCTd1eRX7lw?si=FHOJmwuZM56YRij7

Mr. Web Designer (2021, December 18). *Create A Responsive Payment Gateway Form Design Using HTML & CSS Only* [Video]. YouTube. https://youtu.be/cce_70pxbqw?si=CDQqH5892b5lsFFT

Mozilla Developer Network. (2023). Window: localStorage property. [Online]. Available at: https://developer.mozilla.org/en-US/docs/Web/API/Window/localStorage [Accessed 27 March 2024].

W3Schools. (no date). *JSON.stringify()*. [Online]. Available at: https://www.w3schools.com/js/js_json_stringify.asp [Accessed 27 March 2024].

W3Schools. (no date). *JSON.parse()*. [Online]. Available at: https://www.w3schools.com/js/js_json_parse.asp [Accessed 27 March 2024].

W3Schools. (no date). preventDefault() Event Method. [Online]. Available at: https://www.w3schools.com/jsref/event_preventdefault.asp [Accessed 27 March 2024].

Appendices

Appendix A: Code

splash.html

```
<link href="splash-styles.css" rel="stylesheet" />
   <script>
     // Using this setTimeout function the page will redirect after 4s
     setTimeout(function () {
       window.location.href = "home.html";
     }, 4000);
   </script>
 </head>
 <body>
   <div class="container">
     <img src="img/logo-splash.png" alt="Logo" />
     <b>Sell cool stuff, give clean water.</b>
     Group members: Neth Botheju, Adeesha Vaas, Thevin Waranasuriya, Parami
       De Silva
     <div class="loader"></div>
   </div>
   <!-- Footer part html -->
   <div class="footer">
     <a href="pageEditor.html">Page Editor</a>
   </div>
 </body>
</html>
```

splash-styles.css

```
.container {
 margin: 0;
 display: flex;
 flex-direction: column;
  justify-content: center;
 align-items: center;
 height: 92vh;
  font-family: Arial;
img {
 width: 320px;
.loader {
 border: 8px solid #f3f3f3;
 border-radius: 50%;
 border-top: 8px solid #2170cc;
 width: 40px;
```

```
height: 40px;
  animation: spin 2s linear infinite;
/st This part is used for rotate the spin st/
@keyframes spin {
 0% {
    transform: rotate(0deg);
  100% {
    transform: rotate(360deg);
/st The below css styles for the footer part st/
.footer {
 font-family: Arial;
 clear: both;
 text-align: right;
  padding-right: 70px;
.footer a {
 color: black;
  text-decoration: none;
```

shop.html

```
<!DOCTYPE html>
<html lang="en">
   <meta charset="UTF-8" />
   <title>Shop Page</title>
   <link href="shop checkout-styles.css" rel="stylesheet" />
   <script src="shop-scripts.js" defer></script>
 <body>
   <!-- Nav bar created by student 2 -->
     <a href="#"
            xmlns="http://www.w3.org/2000/svg"
            height="26"
            viewBox="0 -960 960 960"
            width="24"
```

```
<path
          d="m256-200-56-56 224-224-224-224 56-56 224 224 224-224 56 56-
224 224 224 224-56 56-224-224-224 224Z"
         /></svg
      ></a>
     <a href="#">Home</a>
     <a href="#">Gallerv</a>
     <a href="#">Shop</a>
     <a href="#">User profile</a>
     <a href="#">Feedback</a>
     <a href="#">Sitemap</a>
     <a href="#">Team</a>
     <a href="#">About US</a>
    <l
     <img src="img/logo.png" alt="logo" class="logo" />
     <a href="#">Home</a>
     <a href="#">Gallery</a>
     <a href="#">Shop</a>
     <a href="#">User profile</a>
     <a href="#">Feedback</a>
     <a href="#">Sitemap</a>
     <a href="#">Team</a>
     <a href="#">About US</a>
     <a href="#"
        ><svg
         xmlns="http://www.w3.org/2000/svg"
         height="26"
         viewBox="0 -960 960 960"
         width="26"
         <path
          d="M120-240v-80h720v80H120Zm0-200v-80h720v80H120Zm0-200v-
80h720v80H120Z"
         /></svg
      ></a>
     </nav>
  <br />
  <div id="items"></div>
```

```
<div class="cart-container">
      <h2>Shopping Cart</h2>
      <div id="cart-items"></div>
      <div class="price">
        Total: <span class="amount">&#163;&nbsp;<span</pre>
id="total">0</span></span>
      </div>
      <button id="checkoutBtn" onclick="checkoutBtn()">Checkout</button>
    </div>
    <!-- This is the footer part -->
    <div class="footer">
     <a href="pageEditor.html">Page Editor</a>
    </div>
  </body>
```

shop-scripts.js

```
const items = [
   title: "Wrist Bands",
   img: "img/hand-band.png",
   description: "Soft, comfortable Silicone Wristbands",
   title: "Water Bottle | 500ml",
   img: "img/bottle.png",
   description: "Eco-friendly 500ml reusable water bottle",
   price: 15.5,
   title: "Key Chain",
   img: "img/keytag.png",
   description: "Durable Keychain for Everyday Use",
   price: 5.3,
```

```
title: "Pen",
    img: "img/pen.png",
    description: "Stylish refillable pen for everyday work",
    price: 5.0,
    title: "Cap",
    img: "img/cap.png",
    description: "Durable Cap for Everyday Wear",
    price: 16.0,
let cartList = [];
// This for loop use to display products
for (let i = 0; i < items.length; i++) {</pre>
  let parentElement = document.getElementById("items");
  let newDiv = document.createElement("div");
  newDiv.classList.add("item");
  newDiv.innerHTML = `
          <img src="${items[i].img}">
          <h3>${items[i].title}</h3>
          ${items[i].description}
          <label for="quantity">Quantity: </label>
          <input type="number" id="quantity${i}" name="quantity" min="1"</pre>
value="1">
          <label for="color">Color: </label>
          <select id="color${i}">
              <option value="Black" selected>Black</option>
              <option value="Yellow">Yellow</option>
              <option value="Blue">Blue</option>
          </select>
          <h4>&#163;${items[i].price.toFixed(2)}</h4>
          <button onclick="addToCart(${</pre>
            items[i].id
          }, 'quantity${i}', 'color${i}', ${
    items[i].price
  })">Add To Card</button>
```

```
parentElement.appendChild(newDiv);
let totalPrice = 0;
// This function is used reload the cart
function reloadCart() {
  let parentElement = document.getElementById("cart-items");
  parentElement.innerHTML = "";
  for (let i = 0; i < cartList.length; i++) {</pre>
   let newDiv = document.createElement("div");
    newDiv.classList.add("cart");
    let item = items.find((item) => item.id === cartList[i].id);
    newDiv.innerHTML = `
           <img src="${item.img}">
            <b>${item.title}</b><br/>
           ${cartList[i].color}   
           ${cartList[i].quantity} x ${item.price.toFixed(2)}<br/>
           £${(item.price * cartList[i].quantity).toFixed(2)}
           <img src="img/delete.png" onclick="remove(${cartList[i].id})">
   parentElement.appendChild(newDiv);
  storeData();
function addToCart(id, quantityId, colorId, price) {
  let quantity = document.getElementById(quantityId).value;
  let color = document.getElementById(colorId).value;
   quantity: quantity,
   color: color,
  };
  totalPrice += price * quantity;
  document.getElementById("total").innerHTML = totalPrice.toFixed(2);
  cartList.push(newItem);
  reloadCart();
```

```
// This function is used to remove a item from the cart
function remove(id) {
  for (let i = 0; i < cartList.length; i++) {</pre>
    if (cartList[i].id == id) {
      let item = items.find((item) => item.id === id);
      totalPrice -= item.price * cartList[i].quantity;
      if (totalPrice < 0.009) {</pre>
        totalPrice = 0;
      document.getElementById("total").innerHTML = totalPrice.toFixed(2);
      cartList.splice(i, 1);
      break;
  reloadCart();
function storeData() {
  localStorage.setItem("cartList", JSON.stringify(cartList));
  localStorage.setItem("totalPrice", totalPrice.toFixed(2));
  localStorage.setItem("items", JSON.stringify(items));
// This function checks whether the cart is empty or not
function checkoutBtn() {
 if (totalPrice == 0) {
    alert(
      "The cart is empty! Please add items to your cart before proceeding to
checkout."
   );
  } else {
    location.href = "checkout.html";
function showSidebar() {
  const sidebar = document.querySelector(".sidebar");
  sidebar.style.display = "flex";
function hideSidebar() {
 const sidebar = document.querySelector(".sidebar");
  sidebar.style.display = "none";
```

checkout.html

```
<!DOCTYPE html>
<html lang="en">
   <meta charset="UTF-8" />
   <title>Checkout Page</title>
   <link href="shop checkout-styles.css" rel="stylesheet" />
   k
    rel="stylesheet"
    href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css"
   />
   <script src="checkout-scripts.js" defer></script>
 </head>
 <body>
    <a href="#"
         ><svg
           xmlns="http://www.w3.org/2000/svg"
           height="26"
           viewBox="0 -960 960 960"
           width="24"
           <path
            d="m256-200-56-56 224-224-224-56-56 224 224 224-224 56 56-
224 224 224 224-56 56-224-224-224 224Z"
           /></svg
       ></a>
      <a href="#">Home</a>
      <a href="#">Gallery</a>
      <a href="#">Shop</a>
      <a href="#">User profile</a>
      <a href="#">Feedback</a>
      <a href="#">Sitemap</a>
      <a href="#">Team</a>
      <a href="#">About US</a>
    <l
      <img src="img/logo.png" alt="logo" class="logo" />
      <a href="#">Home</a>
      <a href="#">Gallery</a>
      <a href="#">Shop</a>
```

```
<a href="#">User profile</a>
      <a href="#">Feedback</a>
      <a href="#">Sitemap</a>
      <a href="#">Team</a>
      <a href="#">About US</a>
      <a href="#"
           xmlns="http://www.w3.org/2000/svg"
           height="26"
           viewBox="0 -960 960 960"
           width="26"
           <path
            d="M120-240v-80h720v80H120Zm0-200v-80h720v80H120Zm0-200v-
80h720v80H120Z"
        ></a>
      </nav>
   <!-- Cart implementation-->
   <div class="cart-container">
    <h2>Order Summary</h2>
    <div id="orderedItems"></div>
    <div class="price">
      Total: <span class="amount">&#163;&nbsp;<span
id="total">0</span></span>
    </div>
    <br />
    <div class="donation">
      Donation:
      <span class="amount">&#163;&nbsp;<span id="donation">0</span></span>
    </div>
   </div>
   <!-- Checkout form -->
   <form id="checkoutForm" action="#" method="POST">
    <div class="checkout-form-container">
      <div class="column">
        <div class="column-main">
        <h3>Billing Address</h3>
```

```
<label for="full-name">Full Name *</label>
    <input</pre>
      type="text"
      id="full-name"
      placeholder="Neth Botheju"
      required
    /><br />
    <label for="email">Email *</label>
    <input</pre>
      type="email"
      id="email"
      placeholder="nethbotheju@gmail.com"
      required
    /><br />
    <label for="address">Address *</label>
    <input</pre>
      type="text"
      id="address"
      placeholder="28/B, Xavier 2nd lane, Hettigama"
      required
    <label for="city">City *</label>
    <input type="text" id="city" placeholder="Ja Ela" required /><br</pre>
  </div>
  <div class="column-in-container">
    <div class="column-in">
      <label for="state">State *</label>
      <input</pre>
        type="text"
        id="state"
        placeholder="Gampaha"
        required
    </div>
    <div class="column-in">
      <label for="zip">Zip</label>
      <input type="text" id="zip" placeholder="11350" /><br />
    </div>
  </div>
</div>
<div class="column">
  <div class="column-main">
   <h3>Payment</h3>
```

```
<label>Accepted Cards</label>
    <div class="icon-container">
      <i class="fa fa-cc-visa" style="color: navy"></i></i>
      <i class="fa fa-cc-amex" style="color: blue"></i></i>
      <i class="fa fa-cc-mastercard" style="color: red"></i></i>
      <i class="fa fa-cc-discover" style="color: orange"></i></i>
    </div>
    <label for="card-name">Name on Card</label>
    <input</pre>
      type="text"
      id="card-name"
      placeholder="Neth Botheju"
    <label for="card-no">Credit card number *</label>
    <input</pre>
     type="text"
      id="card-no"
      placeholder="1111-2222-3333-4444"
      required
    <label for="exp-month">Exp Month *</label>
    <input</pre>
      type="text"
      id="exp-month"
      placeholder="January"
      required
    /><br />
  </div>
</div>
<div class="column-in-container">
  <div class="column-in">
    <label for="exp-year">Exp Year *</label>
    <input</pre>
      type="text"
      id="exp-year"
      placeholder="2025"
      required
  </div>
  <div class="column-in">
    <label for="cvv">CVV *</label>
    <input type="text" id="cvv" placeholder="156" required /><br />
  </div>
</div>
<input type="submit" value="Continue to checkout" class="btn" />
```

```
</div>
    </form>
    <!-- This is the footer part -->
    <div class="footer">
     <a href="pageEditor.html">Page Editor</a>
   </div>
  </body>
</html>
```

checkout-scripts.js

```
// Retrive saved cart data and assigning to the variables
let cartList = JSON.parse(localStorage.getItem("cartList")) || [];
let items = JSON.parse(localStorage.getItem("items")) || [];
let totalPrice = localStorage.getItem("totalPrice") || 0;
let parentElement = document.getElementById("orderedItems");
parentElement.innerHTML = "";
for (let i = 0; i < cartList.length; i++) {</pre>
  let newDiv = document.createElement("div");
  newDiv.classList.add("cart");
  let item = items.find((item) => item.id === cartList[i].id);
  newDiv.innerHTML = `
             <img src="${item.img}">
             <b>${item.title}</b><br/>
           ${cartList[i].color}   
           ${cartList[i].quantity} x ${item.price.toFixed(2)}<br/>>
           £${(item.price * cartList[i].quantity).toFixed(2)}
  parentElement.appendChild(newDiv);
document.getElementById("total").innerHTML = totalPrice;
document.getElementById("donation").innerHTML = (totalPrice * 0.8).toFixed(2);
window.onbeforeunload = function () {
```

```
localStorage.setItem("cartList", JSON.stringify([]));
  localStorage.setItem("items", JSON.stringify([]));
  localStorage.setItem("totalPrice", "0");
};
let isFormValid = false;
// Validate form inputs
function checkFormInputs() {
  let year = document.getElementById("exp-year").value;
  let card = document.getElementById("card-no").value;
  let cvv = document.getElementById("cvv").value;
  let month = document.getElementById("exp-month").value;
  let cvv_no = Number(cvv);
  let card no = Number(card);
  let yearNumber = Number(year);
  let validMonths = [
    "january",
    "february",
    "march",
    "april",
    "may",
    "june",
    "july",
    "august",
    "september",
    "october",
    "november",
    "december",
  if (isNaN(yearNumber) || year.length != 4) {
    alert("Please enter a valid year.");
    isFormValid = false;
  } else if (yearNumber < 2024) {</pre>
    alert("Please enter a valid expiration year.");
    isFormValid = false;
  } else if (isNaN(card_no) || card.length != 16) {
    alert("Please enter a valid card no.");
    isFormValid = false;
  } else if (isNaN(cvv_no) || cvv.length != 3) {
    alert("Please enter a valid cvv no.");
    isFormValid = false;
  } else if (!validMonths.includes(month.toLowerCase())) {
    alert("Please enter a valid expiration month.");
  } else {
```

```
isFormValid = true;
  return isFormValid;
document.querySelector("form").addEventListener("submit", function (event) {
  event.preventDefault();
 if (cartList.length === 0) {
    alert(
      "Your cart is currently empty. Please add some items from shop page."
  } else {
    isFormValid = checkFormInputs();
    if (isFormValid) {
      var confirmation = confirm("Are you sure you want to place the order?");
      if (confirmation) {
        alert("Order is successfully placed");
        this.submit();
        window.location.href = "shop.html";
});
function showSidebar() {
  const sidebar = document.querySelector(".sidebar");
  sidebar.style.display = "flex";
function hideSidebar() {
  const sidebar = document.querySelector(".sidebar");
  sidebar.style.display = "none";
```

shop_checkout-styles.css

```
margin: 0;
  padding: 0;
body {
  font-family: Arial, Helvetica, sans-serif;
.item {
```

```
flex-direction: column;
 border: 1px solid #ccc;
 margin: 10px;
 padding: 20px;
 width: 250px;
 float: left;
 width: 100%;
 height: 28px;
 background-color: #2170cc;
 color: white;
 border: white 2px solid;
.item img {
 width: 100%;
 height: auto;
.item h3,
margin: 10px 0;
padding: 4px;
 text-align: left;
.cart {
 margin-left: 10px;
 display: flex;
 border-bottom: 1px solid #ccc;
 padding: 15px;
.cart img {
 margin-top: 8px;
 width: 50px;
 height: 50px;
.cart p {
 margin: 0;
 margin-top: 5px;
 padding: 0;
 padding-left: 15px;
 font-size: 16px;
 width: 170px;
```

```
.cart img[src="img/delete.png"] {
 margin-top: 15px;
 margin-left: 10px;
 height: 30px;
 width: 30px;
#checkoutBtn {
 width: 100%;
 height: 30px;
 background-color: #2170cc;
 color: white;
 border: white 2px solid;
.price,
.donation {
  padding-left: 30px;
.cart-container {
 margin-top: 10px;
 width: 300px;
 float: right;
 margin-right: 80px;
 border: 1px solid #ccc;
 padding: 20px;
#items {
 width: 935px;
 margin-left: 80px;
 margin-bottom: 30px;
 float: left;
 display: grid;
 grid-template-columns: repeat(3, 1fr);
.item input[type="number"] {
 width: 32px;
 height: 15px;
 padding-left: 3px;
 border: 2px #2170cc solid;
.item input[type="number"]:focus {
```

```
outline: none;
.item select {
 width: 63px;
 height: 20px;
 border: 2px #2170cc solid;
 text-align: center;
.item label[for="color"] {
 padding-left: 20px;
.amount {
 float: right;
 margin: 0;
 padding-left: 4px;
 font-size: 13px;
 height: 40px;
.item label {
 font-size: 15px;
.item label[for="quantity"] {
 padding-left: 4px;
 margin-top: 10px;
 margin-left: 90px;
 padding: 5px 20px 15px 20px;
 width: 848px;
  border: 1px #ccc solid;
 width: 392px;
 height: auto;
 padding: 0px 16px;
```

```
float: left;
.column-main h3 {
 font-size: 20px;
 margin: 20px 0px;
.checkout-form-container label {
 color: #2170cc;
 font-size: 17px;
 margin-bottom: 10px;
 display: block;
.column-main input[type="text"],
.column-main input[type="email"] {
 width: 365px;
 margin-bottom: 20px;
 padding: 12px;
 border: 1px solid #ccc;
 border-radius: 3px;
 width: 180px;
 padding: 0px 16px;
 float: left;
.column-in input[type="text"],
.column-in input[type="email"] {
 width: 155px;
 margin-bottom: 20px;
 padding: 12px;
 border: 1px solid #ccc;
  border-radius: 3px;
 padding: 7px 0px;
 margin-bottom: 20px;
 font-size: 24px;
```

```
.btn {
  background-color: #2170cc;
 color: white;
 padding: 8px;
 margin: 20px 0px;
  border: none;
 width: 100%;
 border-radius: 3px;
 cursor: pointer;
 font-size: 17px;
button:hover {
 cursor: pointer;
.logo {
 height: 70px;
 width: 125px;
 text-align: center;
 padding-left: 100%;
nav {
 background-color: rgb(255, 255, 255);
 box-shadow: 3px 3px 5px rgb(0, 0, 0, 50%);
nav ul {
 width: 100%;
 display: flex;
 justify-content: flex-end;
 align-items: center;
nav li {
 list-style-type: none;
 height: 50px;
nav a {
 height: 100%;
 padding: 0 30px;
 text-decoration: none;
 display: flex;
 align-items: center;
 color: black;
```

```
background-color: rgb(255, 255, 255);
nav a:hover {
 color: white;
  background-color: rgb(33, 112, 204, 80%);
nav li:first-child {
 margin-right: auto;
.sidebar {
 position: fixed;
 top: 0;
  right: 0;
  height: 100vh;
 width: 250px;
  z-index: 999;
  background-color: rgb(255, 255, 255);
  backdrop-filter: blur(10px);
  box-shadow: -10px 0 10px rgb(0, 0, 0, 30%);
  display: none;
 flex-direction: column;
  align-items: flex-start;
  justify-content: flex-start;
.sidebar li {
 width: 100%;
.sidebar a {
 width: 100%;
.menu-button {
  display: none;
@media (max-width: 1175px) {
  .hideOnMobile {
    display: none;
    display: block;
```

```
@media (max-width: 400px) {
  .sidebar {
   width: 100%;
.footer {
 background-color: white;
 box-shadow: 3px -3px 5px rgb(0, 0, 0, 50%);
 clear: both;
 text-align: right;
 padding-right: 80px;
.footer a {
 color: black;
 text-decoration: none;
```

aboutUs.html

```
<!DOCTYPE html>
<html lang="en">
   <meta charset="UTF-8" />
   <title>About Us</title>
   <link rel="stylesheet" href="aboutUs-styles.css" />
   <script>
     // Below functions are used for nav bar
     function showSidebar() {
       const sidebar = document.querySelector(".sidebar");
       sidebar.style.display = "flex";
     function hideSidebar() {
       const sidebar = document.querySelector(".sidebar");
       sidebar.style.display = "none";
   </script>
 </head>
   <!-- Nav bar created by student 2 -->
   <nav>
     <a href="#"
           ><svg
             xmlns="http://www.w3.org/2000/svg"
            height="26"
```

```
viewBox="0 -960 960 960"
         width="24"
         <path
           d="m256-200-56-56 224-224-224-224 56-56 224 224 224-224 56 56-
224 224 224 224-56 56-224-224-224 224Z"
         /></svg
      ></a>
     <a href="#">Home</a>
     <a href="#">Gallery</a>
     <a href="#">Shop</a>
     <a href="#">User profile</a>
     <a href="#">Feedback</a>
     <a href="#">Sitemap</a>
     <a href="#">Team</a>
     <a href="#">About US</a>
    <l
     <img src="img/logo.png" alt="logo" class="logo" />
     <a href="#">Home</a>
     <a href="#">Gallery</a>
     <a href="#">Shop</a>
     <a href="#">User profile</a>
     <a href="#">Feedback</a>
     <a href="#">Sitemap</a>
     <a href="#">Team</a>
     <a href="#">About US</a>
     <a href="#"
        ><svg
         xmlns="http://www.w3.org/2000/svg"
         height="26"
         viewBox="0 -960 960 960"
         width="26"
         <path
           d="M120-240v-80h720v80H120Zm0-200v-80h720v80H120Zm0-200v-
80h720v80H120Z"
         /></svg
      ></a>
     </nav>
  <div class="head" style="background-color: rgb(33, 112, 204, 30%)">
    <h1>About Us</h1>
```

```
On this page, we will provide information about us and the
       we partner with for donations, as well as our donation history from
the
       past few months.
      <l
       <a href="#about-us">About Us</a>
       <a href="#partner-organizations">Partner Organizations</a>
       <a href="#donate-history">Donation History</a>
     </div>
    <div class="tile">
     <div class="content">
       <div class="text">
          <h2 id="about-us">About Us</h2>
           Our organization is a non-profit organization that sells cool
stuff
           like wristbands, reusable water bottles, keychains, etc. We donate
           the money we raise to our partner organizations that support clean
           water initiatives.
          We mark up the price of our products by a factor of four to cover
           our costs. For example, if a wristband costs £1 to produce, we
sell
           it for £5. This means that 80% of the proceeds from each product
are
           donated.
         </div>
       <img src="img/forever.jpg" alt="Child picture" />
     </div>
    </div>
    <div class="tile" style="background-color: rgb(33, 112, 204, 30%)">
     <div class="content">
       <div class="text">
         <h2 id="partner-organizations">Partner Organizations</h2>
         <br />
           The three organizations below are our partner organizations to
which
```

```
we donate the money we raise. Click on each organization to be
      redirected to its website.
    <span class="card">
       <a href="#"><img src="img/wfp.png" alt="WFP Image" /></a</pre>
      ></span>
      <span class="card"</pre>
       ><a href="#"><img src="img/worg.png" alt="WORG Image" /></a</pre>
      ></span>
      <span class="card"</pre>
       ><a href="#"><img src="img/twp.png" alt="TWP Image" /></a</pre>
      ></span>
    </div>
 </div>
</div>
<div class="tile">
 <div class="content">
   <div class="text">
    <h2 id="donate-history">Donation History</h2>
    <!-- Add a table to display donate history -->
    Month
       Total Income
       Organizations
      WFP
       W ORG
       TWP
      February
       £ 2650.50
       £ 850.50
       £ 900.00
       £ 900.00
      January
       £ 3550.75
       £ 1200.75
       £ 1175.00
```

```
£ 1175.00
      December
       £ 1950.00
       £ 600.00
       £ 675.00
       £ 675.00
      November
       £ 2350.30
       £ 700.00
       £ 825.30
       £ 825.00
      0ctober
       £ 3150.00
       £ 1250.00
       £ 650.00
       £ 1250.00
      </div>
  </div>
  <div class="footer">
  <a href="pageEditor.html">Page Editor</a>
  </div>
</html>
```

aboutUs-styles.css

```
margin: 0;
  padding: 0;
body {
 font-family: arial;
```

```
margin: 0;
  padding: 0;
h1 {
 text-align: center;
margin-bottom: 20px;
.tile {
 padding: 30px 150px 30px 150px;
.tile h2 {
 margin-top: ∅;
.head {
 text-align: center;
 padding: 30px 150px 20px 150px;
 margin-top: 40px;
 margin-bottom: 30px;
 padding: 0px;
 list-style: none;
 padding: 10px;
 text-decoration: none;
 color: black;
.head ul a:hover {
 background-color: #2170cc;
 color: white;
 display: inline;
 margin-right: 20px;
.tile .content {
 display: flex;
 justify-content: space-between;
```

```
.tile .text {
 margin-top: 5%;
 flex: 1;
 margin-right: 50px;
.tile img {
 flex: 0 0 auto;
 width: 350px;
.card img {
 width: 250px;
 margin: 20px 45px 50px 45px;
.card {
 margin-right: 30px;
.card a:hover {
 opacity: 80%;
 cursor: pointer;
table {
 border: 1px solid #2170cc;
table,
table th,
table td {
 border: 1px solid #2170cc;
 border-collapse: collapse;
 padding: 20px;
.logo {
 height: 70px;
 width: 125px;
 text-align: center;
 padding-left: 100%;
nav {
```

```
background-color: rgb(255, 255, 255);
  box-shadow: 3px 3px 5px rgb(0, 0, 0, 50%);
nav ul {
 width: 100%;
 display: flex;
 justify-content: flex-end;
 align-items: center;
nav li {
 list-style-type: none;
 height: 50px;
nav a {
 height: 100%;
 padding: 0 30px;
 text-decoration: none;
 display: flex;
 align-items: center;
 color: black;
 background-color: rgb(255, 255, 255);
nav a:hover {
 color: white;
 background-color: rgb(33, 112, 204, 80%);
nav li:first-child {
 margin-right: auto;
.sidebar {
 position: fixed;
 top: 0;
 right: 0;
 height: 100vh;
 width: 250px;
 z-index: 999;
  background-color: rgb(255, 255, 255);
 backdrop-filter: blur(10px);
  box-shadow: -10px 0 10px rgb(0, 0, 0, 30%);
 display: none;
 flex-direction: column;
 align-items: flex-start;
```

```
justify-content: flex-start;
.sidebar li {
 width: 100%;
.sidebar a {
 width: 100%;
.menu-button {
 display: none;
  animation: slideIn 0.5s ease forwards;
@media (max-width: 1175px) {
  .hideOnMobile {
   display: none;
 .menu-button {
   display: block;
@media (max-width: 400px) {
  .sidebar {
   width: 100%;
.footer {
 background-color: white;
 box-shadow: 3px -3px 5px rgb(0, 0, 0, 50%);
 clear: both;
 text-align: right;
 padding-right: 70px;
.footer a {
 color: black;
 text-decoration: none;
```

pageEditor.html

```
<!DOCTYPE html>
<html lang="en">
```

```
<meta charset="UTF-8" />
   <title>Page Editor (Student 1)</title>
   <link rel="stylesheet" href="pageEditor-styles.css" />
   <script>
    function showSidebar() {
      const sidebar = document.querySelector(".sidebar");
      sidebar.style.display = "flex";
    function hideSidebar() {
      const sidebar = document.querySelector(".sidebar");
      sidebar.style.display = "none";
   </script>
 </head>
 <body>
   <!-- Nav bar created by student 2 -->
    <a href="#"
         ><svg
           xmlns="http://www.w3.org/2000/svg"
           height="26"
           viewBox="0 -960 960 960"
           width="24"
           <path
            d="m256-200-56-56 224-224-224-56-56 224 224 224-224 56 56-
224 224 224 224-56 56-224-224-224 224Z"
           /></svg
        ></a>
      <a href="#">Home</a>
      <a href="#">Gallery</a>
      <a href="#">Shop</a>
      <a href="#">User profile</a>
      <a href="#">Feedback</a>
      <a href="#">Sitemap</a>
      <a href="#">Team</a>
      <a href="#">About US</a>
    <l
      <img src="img/logo.png" alt="logo" class="logo" />
      <a href="#">Home</a>
      <a href="#">Gallery</a>
      <a href="#">Shop</a>
```

```
<a href="#">User profile</a>
      <a href="#">Feedback</a>
      <a href="#">Sitemap</a>
      <a href="#">Team</a>
      <a href="#">About US</a>
      <a href="#"
         ><svg
          xmlns="http://www.w3.org/2000/svg"
          height="26"
          viewBox="0 -960 960 960"
          width="26"
           <path
            d="M120-240v-80h720v80H120Zm0-200v-80h720v80H120Zm0-200v-
80h720v80H120Z"
       ></a>
      </nav>
   <br />
   <h1>Page Editor</h1>
   <div class="editor-info">
    <h2>Name: Neth Botheju</h2>
    <h3>Role: Student 1</h3>
    The following pages were edited by me!
    <a href="#bottom">Jump to bottom</a>
   </div>
   <div class="page-section">
    <h2>Splash Screen</h2>
    <l
      An image element displaying the logo in the center of the
page.
      Text element for displaying the mission
      Text element for displaying the group members
      A loading indicator element
    <br />
    <a href="splash.html">Link to Splash Screen</a>
   </div>
   <div class="page-section">
    <h2>Shop Page</h2>
```

```
<l
       Displaying the product showcase in a three-column layout
         Product customization options (Ability to select color and specify
         quantity)
       A shopping cart for holding selected products.
         A "Checkout" button within the shopping cart for initiating the
         checkout process.
       <a href="shop.html">Link to Shop page</a>
   </div>
   <div class="page-section">
     <h2>Checkout Page</h2>
     <l
       Checkout form
       Order Summary
       Form Validation and Order Confirmation
     <a href="checkout.html">Link to Checkout page</a>
   </div>
   <div class="page-section">
     <h2>About Us page (Content page)</h2>
       Divied page content in to sections
       <1i>>
         Implement internal linking to that each section at the top of the
page
       <a href="aboutUs.html">Link to About Us page</a>
   </div>
   <a id="bottom"></a>
   <br />
   <div class="footer">
     <br />
     <a href="pageEditor.html">Page Editor</a>
     <br />
```

```
</div>
</body>
```

pageEditor-styles.css

```
margin: 0;
 padding: 0;
body {
 font-family: sans-serif;
 text-align: center;
h1,
h2,
h3 {
 margin: 10px 0;
.editor-info {
 background-color: rgb(33, 112, 204, 0.3);
 padding: 15px;
 border-radius: 5px;
.page-section {
 margin-top: 25px;
 padding: 15px;
 border: 1px solid #ddd;
 border-radius: 5px;
.page-section ul {
 list-style-type: none;
 padding: 0;
.page-section li {
 padding-bottom: 10px;
a {
 color: #2170cc;
  text-decoration: none;
```

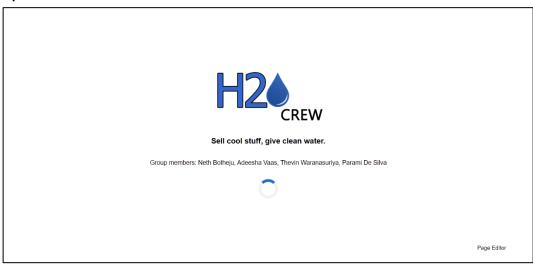
```
height: 70px;
 width: 125px;
 text-align: center;
 padding-left: 100%;
nav {
 background-color: rgb(255, 255, 255);
 box-shadow: 3px 3px 5px rgb(0, 0, 0, 50%);
nav ul {
 width: 100%;
 display: flex;
 justify-content: flex-end;
 align-items: center;
nav li {
 list-style-type: none;
 height: 50px;
nav a {
 height: 100%;
 padding: 0 30px;
 text-decoration: none;
 display: flex;
 align-items: center;
 color: black;
 background-color: rgb(255, 255, 255);
nav a:hover {
 color: white;
 background-color: rgb(33, 112, 204, 80%);
nav li:first-child {
 margin-right: auto;
.sidebar {
 position: fixed;
 top: 0;
 right: 0;
```

```
height: 100vh;
  width: 250px;
  z-index: 999;
  background-color: rgb(255, 255, 255);
  backdrop-filter: blur(10px);
  box-shadow: -10px 0 10px rgb(0, 0, 0, 30%);
  display: none;
  flex-direction: column;
 align-items: flex-start;
 justify-content: flex-start;
.sidebar li {
  width: 100%;
.sidebar a {
  width: 100%;
.menu-button {
 display: none;
  animation: slideIn 0.5s ease forwards;
@media (max-width: 1175px) {
  .hideOnMobile {
   display: none;
 .menu-button {
   display: block;
@media (max-width: 400px) {
 .sidebar {
   width: 100%;
.footer {
 background-color: white;
 box-shadow: 3px -3px 5px rgb(0, 0, 0, 50%);
 clear: both;
 text-align: right;
  padding-right: 70px;
.footer a {
```

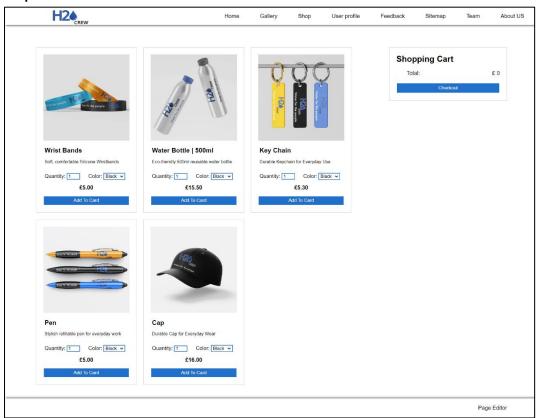
```
color: black;
text-decoration: none;
}
```

Appendix B: Screenshots

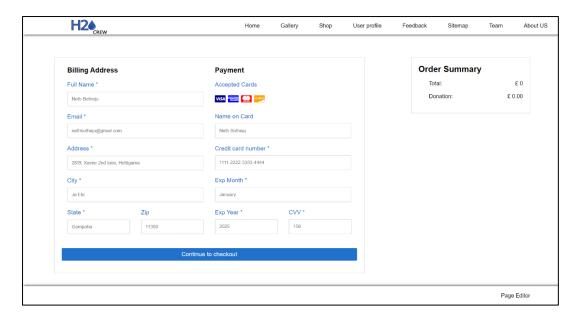
splash.html



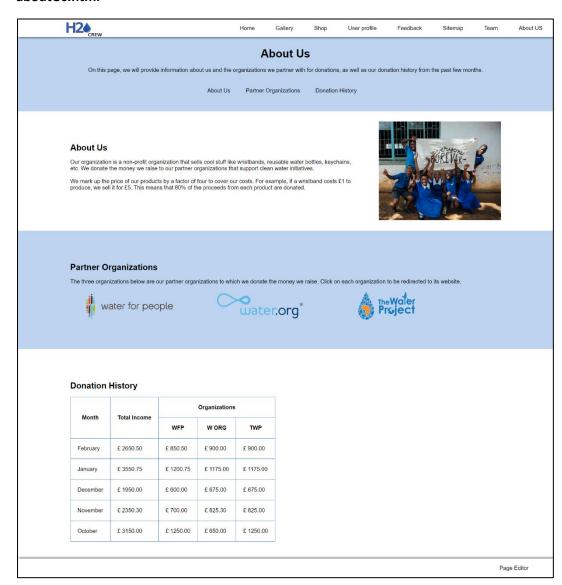
shop.html



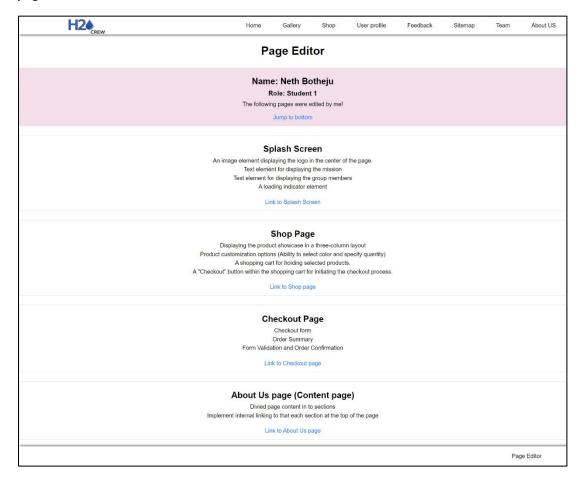
checkout.html



aboutUs.html



pageEditor.html



Appendix C: Screenshots - Webpage Validation Evidence

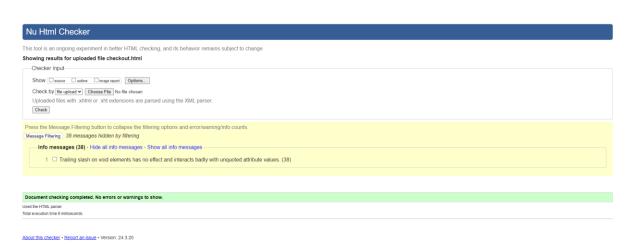
splash.html

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 splash.html Checker Inout
Show verse outine maps report Options. Check by tile upload of Checker is No file chosen Uploaded files with withmit or whit extensions are parsed using the XML parser. Check
Press the Message Filtering button to collapse the filtering options and error/warning/info counts. Message Filtering: 6 messages hidden by filtering Info messages (6) - Hide all info messages - Show all info messages 1 Trailing slash on void elements has no effect and interacts badly with unquoted attribute values (6)
Document checking completed. No errors or warnings to show. Used the HTML parser. Total execution time 4 milliseconds.
About this checker - Report an issue - Version: 24.3.20

shop.html

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 shop.html Checker Input Show source outline image report Options... Check by file upload V Choose File No file chos Uploaded files with .xhtml or .xht extensions are parsed using the XML parser Check Info messages (11) · Hide all info messages · Show all info messages 1 Trailing slash on void elements has no effect and interacts badly with unquoted attribute values. (11) Document checking completed. No errors or warnings to show. Used the HTML parser. Total execution time 5 milliseconds.

checkout.html

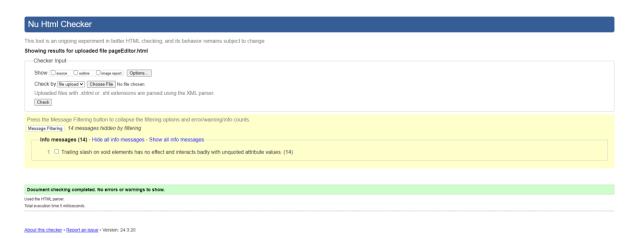


aboutUs.html

his tool is an ongoing experiment in better HTML checking, and its behavior remains subject to change	
howing results for uploaded file aboutUs.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	
Press the Message Filtering button to collapse the filtering options and error/warning/info counts.	
Press the Message Filtering outlon to collapse the illering options and error/warning/into counts. Message Filtering 15 messages hidden by filtering	
Info messages (15) · Hide all info messages · Show all info messages	
1 Trailing slash on void elements has no effect and interacts badly with unquoted attribute values. (15)	

About this checker • Report an issue • Version: 24.3.20

pageEditor.html



Appendix D: Task Completion Checklist

Student 1 Teels		Completed		Student Comments
Student 1 Tasks	Yes	No	Partially	
1 – Splash Screen	✓			Splash screen successfully implemented
2 – Shop	✓			Shop page successfully implemented
3 – Content page	✓			Content page successfully implemented
4 – Page Editor	✓			Page editor successfully implemented
5 – Use of the provided navigation bar (adapted)	✓			Successfully added navigation bar to all web pages
6 – Use of provided template (adapted)	✓			Implemented all web pages according to the provided template
7 – Additional CSS	√			Added additional CSS
8 – Additional Interactivity	✓			Added additional interactivity
9 – Uploaded to Webserver				