

## **Assignment 3 (Individual Website Development)**

### **ShopEasyOnline E-Commerce Website**

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**Submitted By:**

**Sujit Paudel [20028983]**

**Web Development**

**Kings' Owns Institute**

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**Submitted To:**

**Mubashir Hussain**

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**Website Link :**

<https://shopeasyonline.netlify.app/shopeasy/>

**Google Drive:**

[https://drive.google.com/drive/folders/126430Vq3RSJmVRDqGQNpdUcUzlpQ3aXz?usp=drive\\_link](https://drive.google.com/drive/folders/126430Vq3RSJmVRDqGQNpdUcUzlpQ3aXz?usp=drive_link)

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## 1. Introduction

### Business Overview

This project involves the development of a simple e-commerce website named **ShopEasyOnline** designed to provide users with a platform for browsing products and submitting inquiries via a contact form. The website aims to offer a seamless online shopping experience where users can easily access information about various products, with the option to reach out for further inquiries.

The target audience for this website includes potential customers who are interested in purchasing products online and users who may want to contact the business for more information or support. The website aims to create a user-friendly, accessible, and visually appealing experience, catering to the needs of online shoppers and potential clients.

### Website Structure

The website is structured to include the following key sections:

- **Header:** The header includes the website's logo, a navigation menu for easy access to different pages (such as Home, Products, Contact), and a search bar to help users quickly find products.
- **Product Section:** The product section showcases a variety of products, each displayed with a name, image, description, and price. This section is organized to make browsing easy and intuitive.
- **Contact Form:** The contact form is a critical feature of the website, enabling users to submit inquiries or messages directly to the business. It includes fields for the user's name, email, and message.
- **Footer:** The footer contains additional links, including terms of service, privacy policy, and links to social media profiles, enhancing the website's connectivity and user engagement.

### Design Decisions and Challenges

Several key design decisions were made during the development of the website, all aimed at providing an intuitive and visually appealing experience:

1. **User-Centric Design:** The layout was designed with a focus on clarity and ease of navigation. The products are presented in a clean and organized grid format, while the contact form is placed in a dedicated section to ensure users can easily find and interact with it.
2. **Responsive Layout:** To ensure that the website is accessible and usable across a range of devices, from mobile phones to desktop computers, a responsive design was implemented. Media queries were used to adjust the layout based on screen size, making sure that the website remains functional on any device.

3. **Minimalist Aesthetic:** A minimalist design approach was taken, where only the essential elements are included on the pages. This decision was made to ensure the website's appearance remains sleek and professional without being overly cluttered. Simple typography and a neutral color palette were chosen to emphasize the products.

### **Challenges Faced:**

1. **Form Functionality and User Feedback:** One challenge during development was ensuring that the form submission process provided immediate and clear feedback to the user without refreshing the page. This was resolved by using JavaScript to intercept the form submission and display a confirmation alert. However, ensuring this functionality worked smoothly across all devices required extra attention to testing and debugging.
2. **Responsive Design Implementation:** Although the website is responsive, achieving a fluid and well-aligned layout across various screen sizes required careful attention to CSS styling. It was particularly challenging to ensure that images and text scaled properly without breaking the layout, especially on smaller devices like smartphones.

## **2. AI Assistance Declaration**

### **AI Tools Used**

In the development of the e-commerce website, AI tools were leveraged to help with JavaScript code generation, particularly for form handling and validation. The primary AI tool used was ChatGPT (OpenAI), which assisted in producing the initial code snippets and suggestions. These snippets were then customized based on the specific functionality and requirements for the website.

### **Initial Outputs from AI Tools**

#### **1. JavaScript for Form Handling (ChatGPT)**

Initial AI Output: The AI generated an initial JavaScript code for handling form submission. The code suggested a basic implementation where the form triggers an alert on submission:

```
const form = document.getElementById("myForm");

form.addEventListener("submit", function () {
  alert("Form submitted successfully");
});
```

**Customization:** The initial code was modified to prevent the form from submitting immediately and display an alert to the user. Additionally, a form reset was added to clear the form fields after submission. This ensured a more user-friendly interaction with the form:

javascript

```
const form = document.getElementById("myForm");

form.addEventListener("submit", function (event) {
  event.preventDefault(); // Prevent form from submitting to allow dialog to appear
  alert("Your message was submitted successfully");
  form.reset(); // Reset the form after submission
});
```

○

## 2. JavaScript for Handling Multiple Forms (ChatGPT)

Initial AI Output: The AI initially suggested a code snippet to handle multiple forms on the website by selecting all form elements and adding event listeners to each:

```
const forms = document.querySelectorAll("form");

forms.forEach((form) => {
  form.addEventListener("submit", function () {
    alert("Form submitted");
  });
});
```

○

**Customization:** Since the website only required a single form, the code was simplified to target the specific myForm ID. This focused the functionality on the relevant form:

```
const form = document.getElementById("myForm");

form.addEventListener("submit", function (event) {
  event.preventDefault();
  alert("Your message was submitted successfully");
  form.reset();
});
```

○

## 3. AI-Generated Validation Snippet

Initial AI Output: The AI suggested a simple form validation mechanism where it checked if required fields were filled before the form was submitted. If the fields were empty, an alert would be shown:

```
form.addEventListener("submit", function (event) {  
  if (form.name.value === "" || form.email.value === "") {  
    alert("Please fill in all fields");  
    event.preventDefault();  
  }  
});
```

○

**Customization:** Rather than using JavaScript for validation, HTML5's built-in form validation was applied. HTML5 provides native form validation attributes such as required, pattern, and type to validate the fields. The form was updated with these attributes to ensure that users would receive automatic validation feedback without needing custom JavaScript validation logic:

```
<form id="myForm">  
  <label for="name">Name:</label>  
  <input type="text" id="name" name="name" required><br><br>  
  
  <label for="email">Email:</label>  
  <input type="email" id="email" name="email" required><br><br>  
  
  <input type="submit" value="Submit">  
  
</form>
```

### 3. Accessibility and Usability

#### Accessibility Features

To ensure the website is accessible to everyone, including people with disabilities, the following steps were taken:

##### 1. Semantic HTML

We used clear, descriptive HTML elements like `<header>`, `<nav>`, and `<footer>` to create an easy-to-follow structure for screen readers.

## **2. Alt Text for Images**

All images have descriptive alt text, so screen readers can describe them to users with visual impairments.

## **3. Keyboard Navigation**

The website can be fully navigated using a keyboard, allowing users who can't use a mouse to interact with the site.

## **4. Accessible Forms**

Forms have clear labels for each input field, making them easier to understand for users with screen readers.

## **5. High Contrast Text**

We ensured that text stands out clearly against the background to help users with visual impairments.

## **6. Error Messages**

Clear error messages are shown if a form field is left empty, helping users easily correct mistakes.

## **Ensuring Responsiveness**

To make the website easy to use on all devices, we focused on responsiveness:

### **1. Responsive Layout**

The design adapts to different screen sizes using CSS media queries. For example, product listings stack vertically on smaller screens to prevent horizontal scrolling.

### **2. Flexible Grid System**

We used flexible layout techniques like flexbox and CSS grid, allowing content to adjust based on screen size.

### **3. Mobile-Friendly Navigation**

On smaller screens, the navigation menu becomes a collapsible menu for easy access.

### **4. Touch-Friendly Design**

Buttons and links are large enough for users on touch devices to easily interact with.

### **5. Viewport Meta Tag**

The viewport tag ensures the website scales properly on mobile devices.

### **6. Cross-Device Testing**

The website was tested on various devices and browsers to ensure a consistent experience for all users.

## 4. Screenshots and Visuals

### Website Screenshots

Below are the key screenshots of the website pages, showcasing the main features and design elements:

#### 1. Homepage

The homepage features a clean, simple layout with a clear header, navigation menu, and product display section. The design is minimalistic to ensure a smooth user experience.

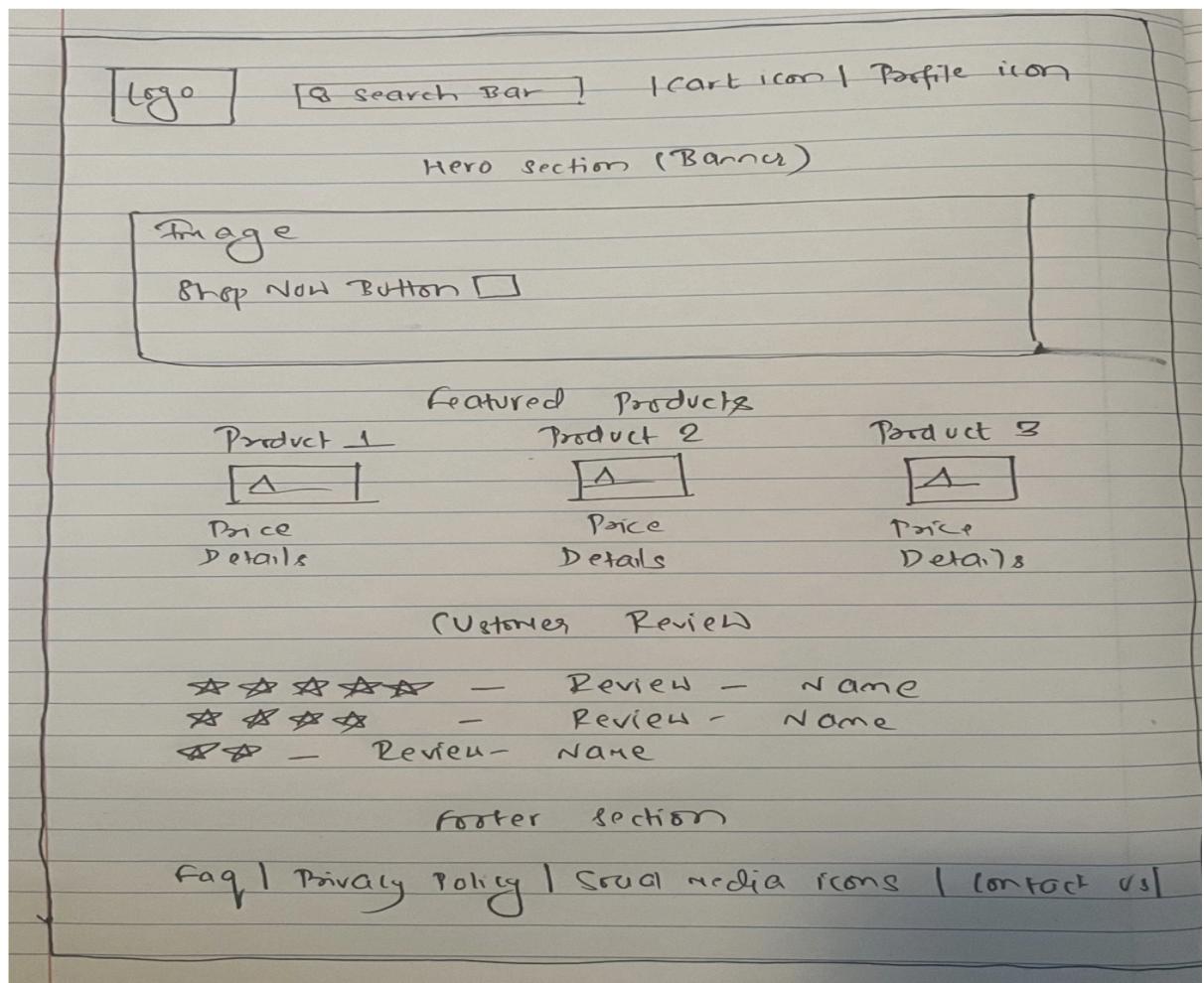


Fig: Initial Homepage Draft

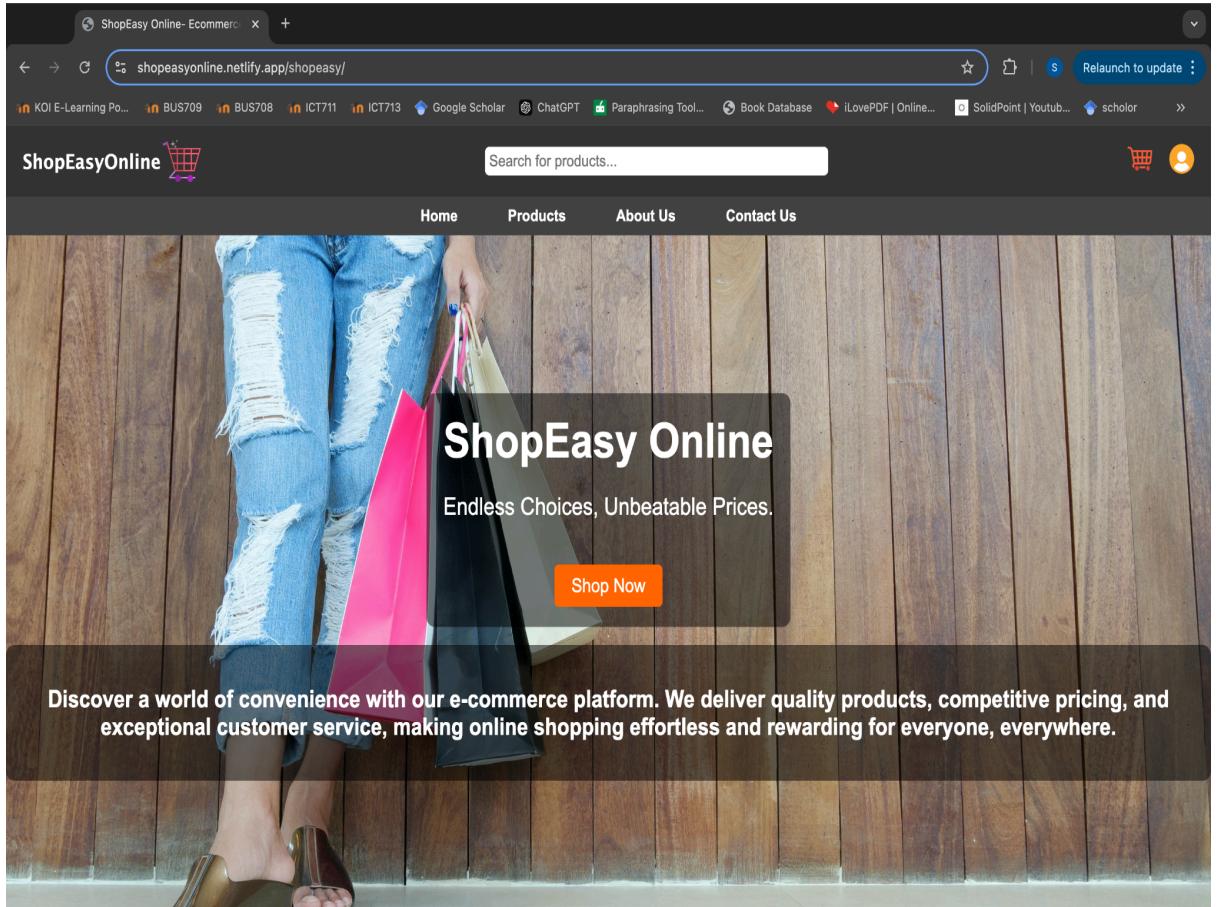


Fig: Final Output Homepage

## 2. Product Listing Page

This page displays the available products in a grid layout. Each product includes an image, title, price, and a brief description. The design is responsive, so the products adjust based on screen size.

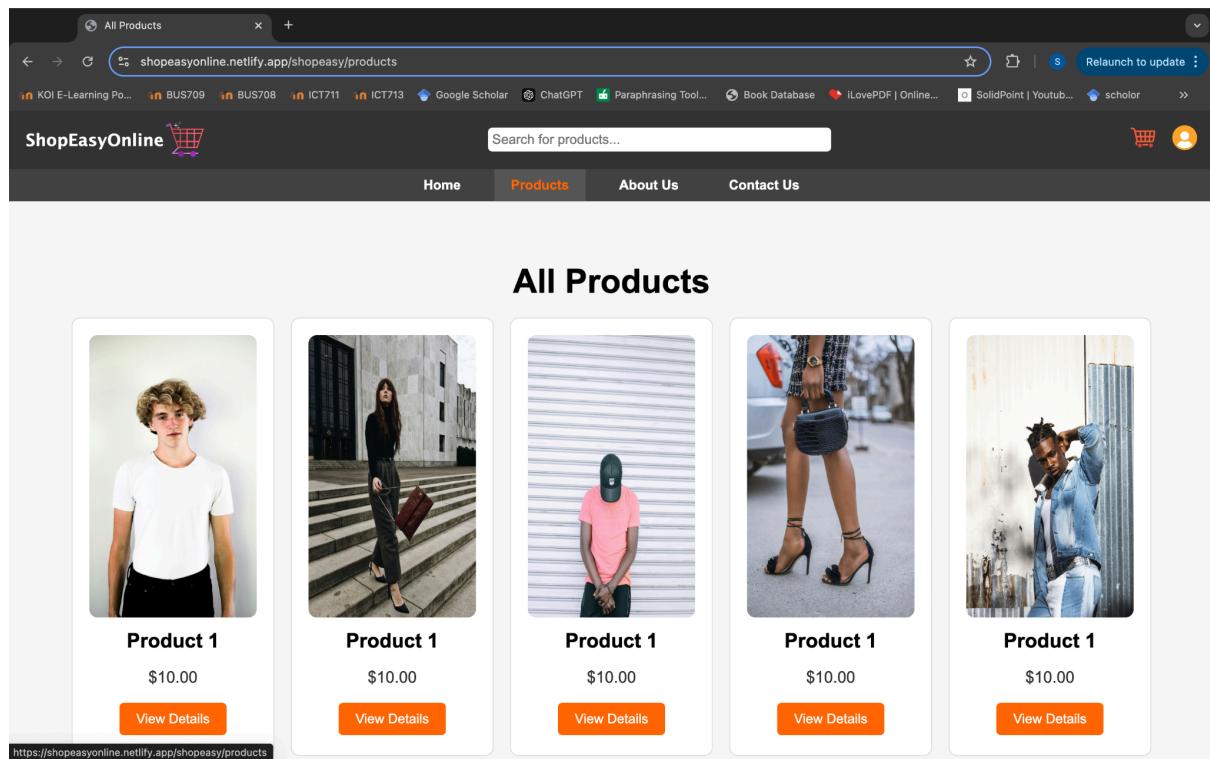


Fig: Products Page Output

### 3. Contact Form Page

The contact form is straightforward with fields for name, email, and message. The form uses HTML5 validation to ensure correct input before submission.

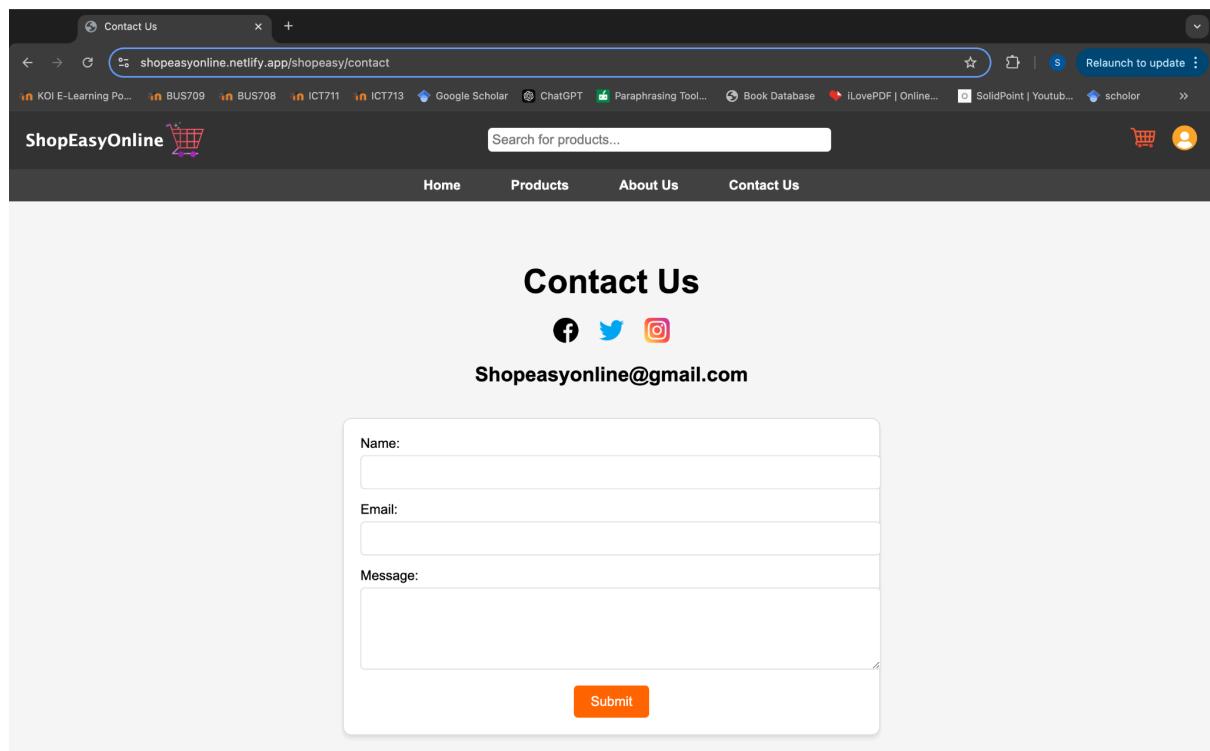


Fig: Contact Page Output

#### 4. Mobile View

The website's layout adapts to smaller screens, displaying content in a stacked format and using a collapsible menu for easy navigation.

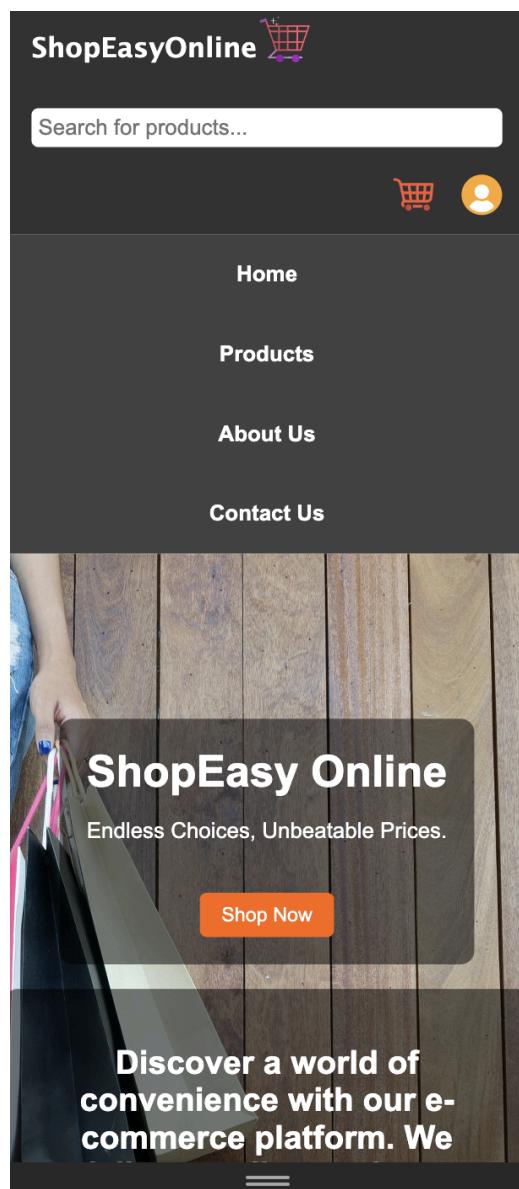


Fig: Mobile View Output

#### 5. Reflection and Learning

This project helped me improve my web development skills, especially with HTML, CSS, and handling forms. AI tools provided helpful code snippets, making it easier to implement features like form submission and validation. I customized these suggestions to fit my needs and ensure the form worked well with HTML5 validation.

Feedback during the design review focused on improving the website's mobile responsiveness and the contact form's layout. I used this feedback to adjust the design, making it more user-friendly and consistent across devices.

Overall, the project taught me how to create a functional website and how AI tools and feedback helped improve the final product.