

Front-End UI/UX Mini Project

Project 2: E-COMMERCE PRODUCT PAGE

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PROJECT 2:

Abstract

This project focuses on the design and development of a responsive **E-commerce Product Page** using **HTML, CSS, and JavaScript**. The main objective is to present product information in an attractive and user-friendly manner while encouraging customers to make a purchase.

HTML is used to structure the content of the page, including product images, descriptions, prices, and action buttons. CSS is applied to enhance the visual appearance through layout design, colors, fonts, and responsiveness across different screen sizes. JavaScript is used to add interactivity, such as image switching, quantity selection, price updates, and dynamic user feedback.

The product page is designed to be simple, efficient, and visually appealing, simulating a real-world online shopping experience. This project helps in understanding the fundamentals of front-end web development and demonstrates how static and dynamic web technologies work together to build an effective e-commerce interface.

Objectives

- Design a simple and attractive e-commerce product page
 - Display product details clearly
 - Improve user interaction using JavaScript
 - Learn basic front-end web development
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Scope of the Project

- Front-end only (no backend or database)
- Single product page design
- No real payment or login system
- Focus on UI and user experience

HTML Tags Overview

- `<!DOCTYPE html>` – Declares the document type as HTML5
 - `<html lang="en">` – Root element of the webpage and sets the language to English
 - `<head>` – Contains metadata, page title, and external resource links
 - `<meta charset="UTF-8">` – Ensures proper character encoding
 - `<title>` – Defines the title shown in the browser tab
 - `<link>` – Used to include Bootstrap CSS and custom CSS file
 - `<body>` – Contains all visible content of the webpage
 - `<nav>` – Creates the top navigation bar
 - `<div class="container">` – Centers and aligns page content
 - `<a>` – Used for brand name and navigation links
 - `<button>` – Used for navbar toggle and action buttons
 - `` – Creates a navigation menu list
 - `` – Represents individual navigation items
 - `<section>` – Groups the hero/banner content
 - `<div class="row">` – Creates a Bootstrap grid row
 - `<div class="col-md-6">` – Divides the hero section into columns
 - `<h2>` – Displays the main heading text
 - `` – Displays product and banner images
 - `<h4>` – Displays the product section heading
 - `<div class="col-md-3">` – Defines each product column
 - `<div class="card">` – Displays products inside card components
 - `<div class="card-body">` – Contains product details
 - `<h6>` – Displays product names
 - `<p>` – Displays product prices
 - `<script>` – Links Bootstrap and custom JavaScript files
-

CSS Overview

- `body` – Sets the overall background color and default font for the webpage
 - `background-color` – Applies a light background color to the page
 - `font-family` – Defines the default font style for all text
 - `.hero-section` – Styles the hero/banner section of the page
 - `padding` – Adds vertical spacing inside the hero section
 - `.product-card` – Targets individual product cards
 - `transition` – Adds smooth animation effects to the product cards
 - `.product-card:hover` – Applies styles when the user hovers over a product card
 - `transform` – Moves the card slightly upward on hover
 - `#mainphoto` – Sets a fixed height for the main hero image
 - `#lastphoto` – Sets a fixed height for the last product image
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JavaScript Overview

- **function addToCart(button)** – Defines a function that runs when the “Add to Cart” button is clicked
 - **button** – Refers to the button element that triggered the function
 - **alert()** – Displays a popup message to confirm the product was added successfully
 - **const product** – Creates an object to store product details
 - **name** – Stores the product name using the button’s data attribute
 - **price** – Stores the product price using the button’s data attribute
 - **button.dataset.name** – Retrieves the product name from the HTML data attribute
 - **button.dataset.price** – Retrieves the product price from the HTML data attribute
 - **console.log()** – Prints messages and product data in the browser console
 - **product** – Displays the complete product object in Inspect mode
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Tools and Technologies Used

- **HTML** – page structure
 - **CSS** – layout, colors, and styling
 - **JavaScript** – interactivity
 - **VS Code** – code editor
 - **Web Browser** – testing (Chrome/Edge)
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HTML Structure Overview

- Header section for product title
 - Image section for product display
 - Product details (price, description)
 - Quantity selector
 - Buttons: Add to Cart, Buy Now
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CSS Styling Strategy

- Use Flexbox for layout
- Apply consistent colors and fonts
- Add spacing and alignment

- Button hover effects
 - Responsive design for mobile and desktop
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Key Features

- Responsive product layout
 - Interactive buttons
 - Quantity selection
 - Clean and modern design
 - User-friendly interface
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Challenges Faced & Solutions

Challenge	Solution
Page not responsive	Used Flexbox
Layout alignment issues	Proper margins and padding
Adding interactivity	JavaScript event handling

Outcome

- Successfully created a functional product page
- Improved understanding of HTML, CSS, and JS
- Enhanced UI/UX design skills
- Project ready for academic submission

Future Enhancements

- Add shopping cart functionality
- Backend integration
- Payment gateway
- User login and signup
- Product reviews and ratings

SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>product collection</title>

<!-- Bootstrap CSS -->
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">

<!-- Custom CSS -->
<link rel="stylesheet" href="style.css">
</head>
<body>

<!-- Top Navbar -->
<nav class="navbar navbar-expand-lg navbar-light bg-white shadow-sm">
<div class="container">
  <a class="navbar-brand fw-bold text-success" href="#">PRODUCT PAGE</a>

  <button class="navbar-toggler" data-bs-toggle="collapse" data-bs-target="#navMenu">
    <span class="navbar-toggler-icon"></span>
  </button>

  <div class="collapse navbar-collapse" id="navMenu">
```

```

<ul class="navbar-nav ms-auto">
  <li class="nav-item"><a class="nav-link" href="#">Categories</a></li>
  <li class="nav-item"><a class="nav-link" href="#">Deals</a></li>
  <li class="nav-item"><a class="nav-link" href="#">Delivery</a></li>
  <li class="nav-item"><a class="nav-link" href="#">Account</a></li>
</ul>
</div>
</div>
</nav>

<!-- Hero Section --&gt;
&lt;section class="hero-section"&gt;
  &lt;div class="container"&gt;
    &lt;div class="row align-items-center"&gt;
      &lt;div class="col-md-6"&gt;
        &lt;h2 class="fw-bold"&gt;Grab Upto 50% Off&lt;br&gt;On Selected Headphone&lt;/h2&gt;
        &lt;button class="btn btn-success mt-3"&gt;Buy Now&lt;/button&gt;
      &lt;/div&gt;
      &lt;div class="col-md-6 text-center"&gt;
        &lt;img src="https://media.istockphoto.com/id/109190483/photo/red-arrow.webp?a=1&amp;b=1&amp;s=612x612&amp;w=0&amp;k=20&amp;c=Kv2g3kZLG1xysuySqlqSGuKWQ3rbNw49FIBqBnAxEzc=" class="img-fluid rounded" alt="Headphone" id="mainphoto"&gt;
      &lt;/div&gt;
    &lt;/div&gt;
  &lt;/div&gt;
&lt;/section&gt;

<!-- Product Section --&gt;
&lt;div class="container my-5"&gt;
  &lt;h4 class="mb-3"&gt;Headphones For You!&lt;/h4&gt;

  &lt;div class="row g-4"&gt;

    <!-- Product 1 --&gt;
    &lt;div class="col-md-3"&gt;
      &lt;div class="card product-card"&gt;
        &lt;img src="https://plus.unsplash.com/premium_photo-1679513691474-73102089c117?w=500"
             class="card-img-top" alt="AirPods Max"&gt;
        &lt;div class="card-body text-center"&gt;
          &lt;h6&gt;AirPods Max&lt;/h6&gt;
          &lt;p class="text-success fw-bold"&gt;₹5,599&lt;/p&gt;
          &lt;button class="btn btn-sm btnoutline-success"&gt;
            Buy Now
          &lt;/button&gt;
        &lt;/div&gt;
      &lt;/div&gt;
    &lt;/div&gt;
  &lt;/div&gt;
&lt;/div&gt;
</pre>

```

```
onclick="addToCart(this)"
dataname="AirPods Max"
dataprice="5599">
    Add to Cart
    </button>
</div>
</div>
</div>

<!-- Product 2 -->
<div class="col-md-3">
    <div class="card product-card">
        
        <div class="card-body text-center">
            <h6>Bose BT</h6>
            <p class="text-success fw-bold">₹2,899</p>
            <button      class="btn btn-sm btnoutline-success"
onclick="addToCart(this)"      dataname="Bose
BT"      data-price="2899">
                Add to Cart
                </button>
            </div>
        </div>
    </div>
</div>

<!-- Product 3 -->
<div class="col-md-3">
    <div class="card product-card">
        
        <div class="card-body text-center">
            <h6>Vivefox Headphones</h6>
            <p class="text-success fw-bold">₹3,999</p>
            <button      class="btn btn-sm btnoutline-success"
onclick="addToCart(this)"      dataname="Vivefox
Headphones"      data-
price="3999">
                Add to Cart
                </button>
            </div>
        </div>
    </div>
</div>
```

```
</div>
</div>

</div>
</div>

<!-- Bootstrap JS -->
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>

<!-- Custom JS -->
<script src="script.js"></script>
</body> </html>
```

CSS CODE

```
body {
    background-color: #f8f9fa;
    font-family: Arial, sans-serif;
}

.hero-section {
backgroundcolor: #f6efe8;
padding: 40px 0;
}

.product-card {
transition: transform 0.3s;
}

.product-card:hover { transform:
translateY(-5px); }
#mainphoto{
    height:
200px;
}

#lastphoto{
height: 200px;
}
```

JAVA SCRIPT

```
function addToCart(button) {  
    alert("add successfully");  const  
    product = {      name:  
        button.dataset.name,  
        price: button.dataset.price  
  
    };  
  
    console.log("🛒 Product Added to Cart");  
    console.log(product);  
}
```

Screen-shorts of final output

G 127.0.0.1:5500/index.html

PRODUCT PAGE Categories Deals Delivery Account

Grab Upto 50% Off On Selected Headphone

Buy Now

↓

Price Review Color Offer

Headphones For You!

AirPods Max
₹5,599

Add to Cart

Bose BT
₹2,899

Add to Cart

Vivefox Headphones
₹3,999

Add to Cart

① 127.0.0.1:5500/index.html

PRODUCT PAGE 127.0.0.1:5500 says Categories Deals Delivery Account

Grab Upto 50% Off On Selected Headphone

Buy Now

OK

↓

Product added to cart successfully!

Price Review Color Offer

Headphones For You!

AirPods Max
₹5,599

Add to Cart

Bose BT
₹2,899

Add to Cart

Vivefox Headphones
₹3,999

Add to Cart

Grab Upto 50% Off
On Selected Headphone

Buy Now



Headphones For You!



AirPods Max
₹6,599

Add to Cart



Bose BT
₹2,899

Add to Cart



Vivefox Headphones
₹3,999

Add to Cart

3 hidden

Product Added to Cart

script.js:15
name: 'Bose BT', price: '2899'
name: "Bose BT"
price: "2899"
[[Prototype]]: Object

Product Added to Cart

script.js:15
script.js:16
name: 'Vivefox Headphones', price: '3999'
name: "Vivefox Headphones"
price: "3999"
[[Prototype]]: Object

Product Added to Cart

script.js:15
script.js:16
name: 'AirPods Max', price: '5599'
name: "AirPods Max"
price: "5599"
[[Prototype]]: Object

> `ctrl + i` to turn on code suggestions. Don't show again NEW

Activate Windows

Conclusion

In this project, I designed and developed an e-commerce product page using HTML, CSS, and JavaScript. The main goal was to display product details in a clear and attractive way while providing a smooth user experience. Features like product images, pricing, descriptions, and interactive elements help users understand the product easily and encourage them to make a purchase. This project improved my front-end development skills and gave me practical experience in building real-world web pages. Overall, the product page is responsive, user-friendly, and suitable for modern e-commerce websites.

Reference

L&T LMS: <https://learn.Intedetect.com/Landing/MyCourse>