

Project Report: E-commerce Product Page using HTML, CSS, and JavaScript

Introduction

The E-commerce product page is a crucial part of any online shopping platform, designed to showcase products, provide descriptions, display pricing, and allow users to interact with product images through an image slider. This project focuses on developing a simple yet interactive product page using HTML, CSS, and JavaScript.

Objectives

- To create a visually appealing and user-friendly product page.
- To implement an image slider for better product visualization.
- To provide structured product details including price and description.
- To enhance user interaction with responsive design elements.

Technologies Used

- **HTML:** For structuring the content of the product page.
- **CSS:** For styling and layout design.
- **JavaScript:** For interactive elements such as the image slider.

Features

- Navigation bar for easy access to different pages.
- Product image slider for better visualization.
- Detailed product description and pricing information.
- "Add to Cart" button for user interaction.
- Customer reviews section.
- Related products section.
- Contact details for customer support.
- Responsive design for better accessibility on various devices.

Implementation Details

The implementation of this project includes the following:

- Structuring the web page using HTML with a **navigation bar, product container, image slider, product details, customer reviews, related products, and contact details.**

- Styling the page using CSS to enhance visual appearance, including **flexbox**, **grid layout**, and **media queries** for responsiveness.
- Implementing JavaScript for the **image slider**, allowing users to navigate through product images using **next and previous buttons**.

Code Implementation

The project consists of a single HTML file that integrates CSS for styling and JavaScript for interactivity. The key components of the implementation include:

- **HTML:** Defines the structure of the web page.
- **CSS:** Styles the elements for better user experience.
- **JavaScript:** Handles the functionality of the image slider.

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Product Page with Image Slider</title>

  <style>

    body {

      font-family: sans-serif;

      margin: 0;

      padding: 0;

      line-height: 1.6;

    }

    nav {

      background-color: #333;

      color: white;
```

```
padding: 10px 0;

text-align: center;

}

nav a {

color: white;

text-decoration: none;

padding: 10px 20px;

}

.product-container {

width: 80%;

margin: 20px auto;

display: flex;

flex-wrap: wrap;

justify-content: center;

}

.product-image {

flex: 1 1 300px;

max-width: 400px;

margin: 20px;

text-align: center;

position: relative; /* Needed for absolute positioning of
controls */

overflow: hidden; /* Hide overflowing images */

}
```

```
.slider-container {  
    display: flex;  
    transition: transform 0.5s ease-in-out; /* Smooth slider  
transition */  
}  
  
.product-image img {  
    width: 100%;  
    height: auto;  
    border-radius: 8px;  
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);  
}  
  
.slider-control {  
    position: absolute;  
    top: 50%;  
    transform: translateY(-50%);  
    background-color: rgba(0, 0, 0, 0.5);  
    color: white;  
    padding: 10px;  
    border: none;  
    cursor: pointer;  
    z-index: 10;  
}  
  
.slider-control.prev {  
    left: 10px;  
}
```

```
.slider-control.next {  
  
    right: 10px;  
  
}  
  
.product-details {  
  
    flex: 1 1 400px;  
  
    margin: 20px;  
  
}  
  
.product-details h2 {  
  
    margin-top: 0;  
  
}  
  
.product-details p {  
  
    margin-bottom: 20px;  
  
}  
  
.product-price {  
  
    font-size: 1.5em;  
  
    font-weight: bold;  
  
    margin-bottom: 20px;  
  
}  
  
.add-to-cart {  
  
    background-color: #007bff;  
  
    color: white;  
  
    border: none;
```

```
padding: 10px 20px;

font-size: 1em;

cursor: pointer;

border-radius: 5px;

transition: background-color 0.3s ease;
}

.add-to-cart:hover {

background-color: #0056b3;
}

.reviews, .related-products, .contact-details {

width: 80%;

margin: 20px auto;

padding: 20px;

border-top: 1px solid #eee;
}

.review {

border-bottom: 1px solid #eee;

padding-bottom: 10px;

margin-bottom: 10px;
}

.related-products-list {

display: flex;

flex-wrap: wrap;

justify-content: space-around;
```

```
}

.related-product {

    width: 200px;

    margin: 10px;

    text-align: center;

}

.related-product img {

    max-width: 100%;

    height: auto;

    border-radius: 8px;

    box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);

}

@media (max-width: 768px) {

    .product-container {

        width: 95%;

    }

}

</style>

</head>

<body>

    <nav>

        <a href="index.html">Home</a>

        <a href="shop.html">Shop</a>

        <a href="contact.html">Contact</a>
```

```
</nav>

<div class="product-container">

    <div class="product-image">

        <div class="slider-container" id="slider">

        </div>

        <button class="slider-control" onclick="prevSlide()">prev</button>

        <button class="slider-control" onclick="nextSlide()">next</button>

    </div>

    <div class="product-details">

        <h2>Product Name</h2>

        <p>iPhone 16 128 GB: 5G Mobile Phone with Camera Control, A18 Chip and a Big Boost in Battery Life. Works with AirPods; Ultramarine</p>

        <div class="product-price">$841.75</div>

        <button class="add-to-cart">Add to Cart</button>

    </div>

</div>

<div class="reviews">

    <h3>Customer Reviews</h3>

    <div class="review">
```



```
<p>"Great product! Highly recommended."</p>

<p>- Austin</p>

</div>

<div class="review">

    <p>"Excellent quality and fast delivery."</p>

    <p>- Raja</p>

</div>

</div>

<div class="related-products">

    <h3>Related Products</h3>

    <div class="related-products-list">

        <div class="related-product">

            iPhone 15 128 GB: 5G Mobile Phone</p>

        </div>

        <div class="related-product">

            iPhone 14 128 GB: 5G Mobile Phone</p>

        </div>

        <div class="related-product">

            iPhone 13 128 GB: 5G Mobile Phone</p>

        </div>

    </div>

</div>
```

```
</div>
```

```
</div>
```

```
<div class="contact-details">
```

```
  <h3>Contact Details</h3>
```

```
  <p>Email: example@gmail.com</p>
```

```
  <p>Phone: 123-456-7890</p>
```

```
  <p>Address: 123 Main St, City, State, ZIP</p>
```

```
</div>
```

```
<script>
```

```
  let slideIndex = 0;
```

```
  const slider = document.getElementById('slider');
```

```
  const slides = slider.children;
```

```
  function showSlide(index) {
```

```
    if (index < 0) {
```

```
      slideIndex = slides.length - 1;
```

```
    } else if (index >= slides.length) {
```

```
      slideIndex = 0;
```

```
    } else {
```

```
      slideIndex = index;
```

```
    }
```

```
    slider.style.transform = `translateX(-${slideIndex * 100}%)`;
```

```
  }
```

```

function nextSlide() {

    showSlide(slideIndex + 1);

}

function prevSlide() {

    showSlide(slideIndex - 1);

}

</script>

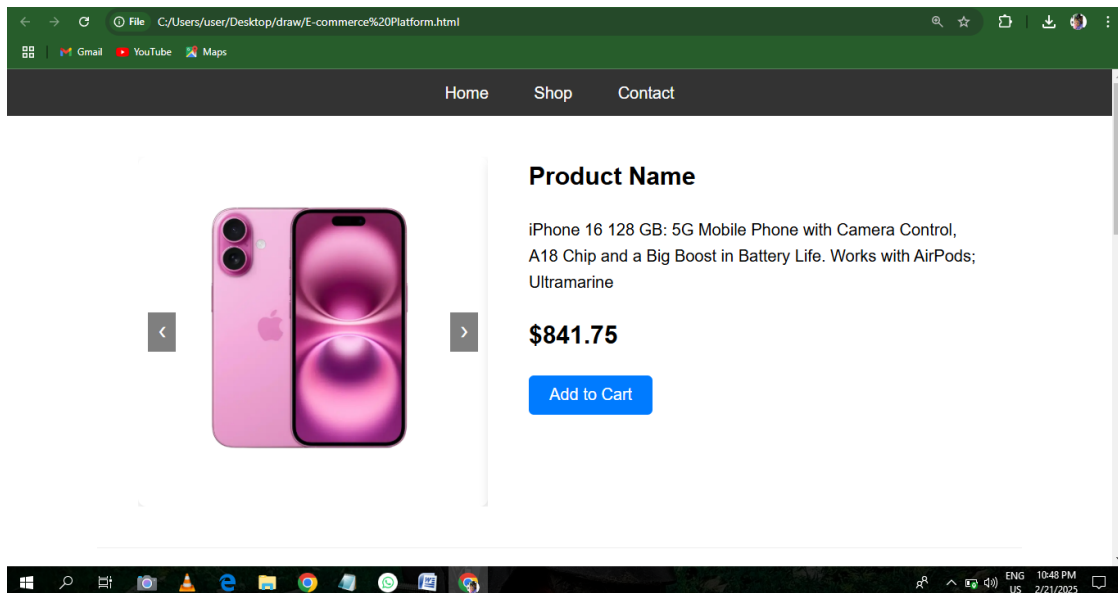
</body>

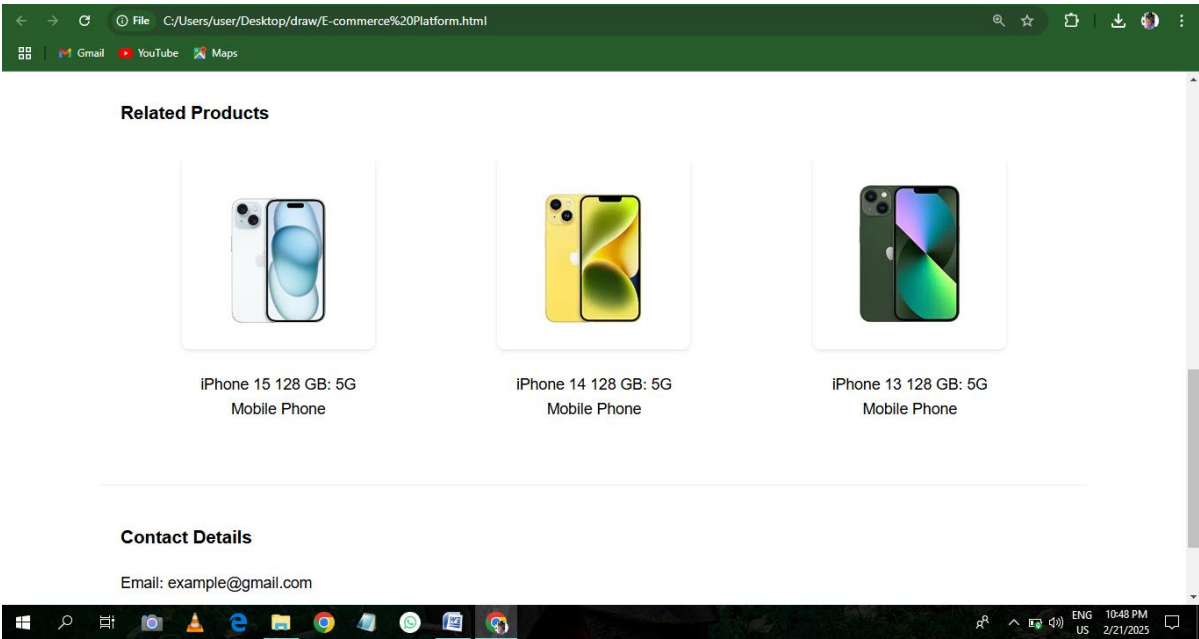
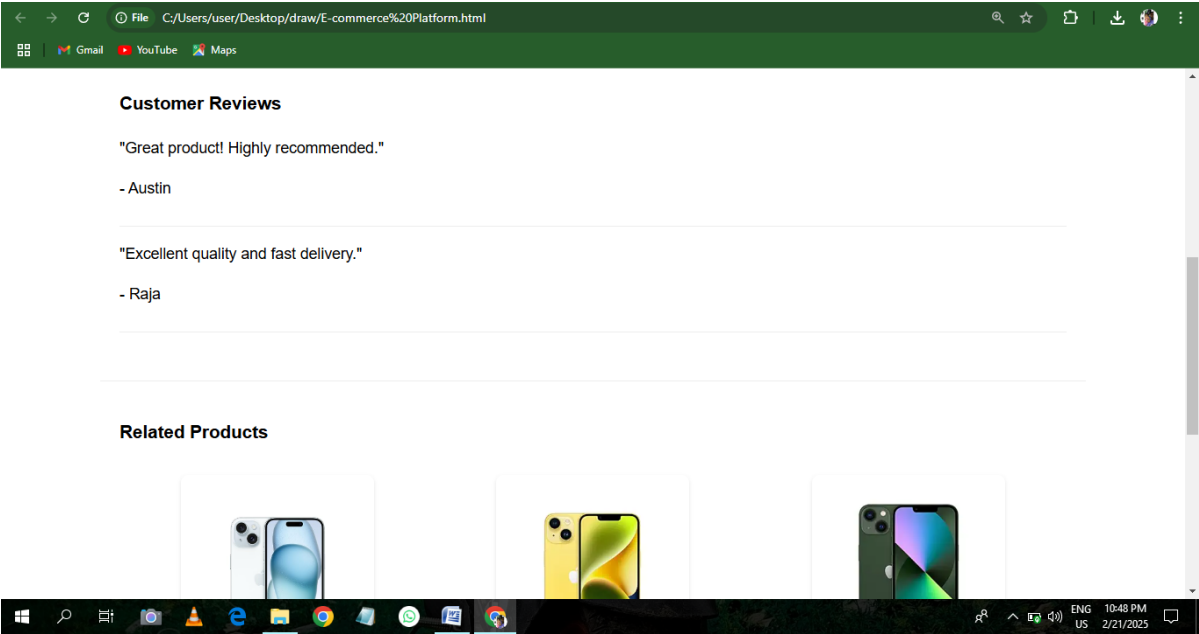
</html>

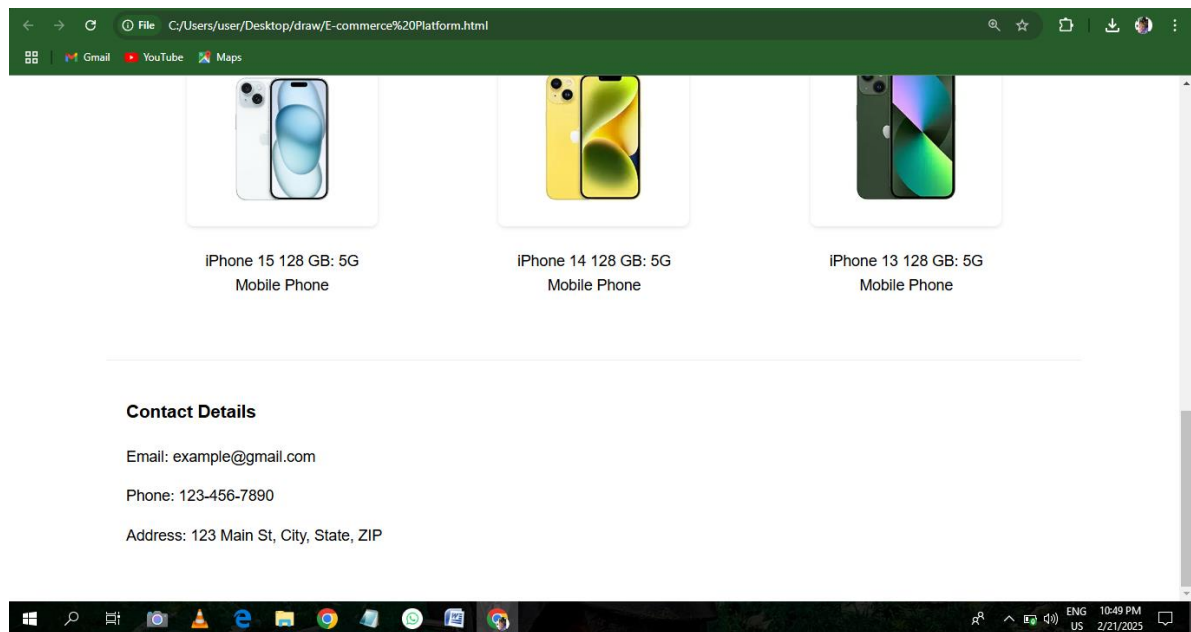
```

Expected Output

- A fully functional **product page** with an image slider.
- A visually appealing **responsive design**.
- Smooth navigation through different sections of the page.
- Easy-to-read product descriptions and pricing details.
- Enhanced user interaction through an "Add to Cart" button.







Challenges Faced

- Ensuring smooth transitions for the image slider.
- Managing the responsive design for different screen sizes.
- Proper alignment of elements to enhance user experience.

Future Enhancements

- Adding a **shopping cart functionality**.
- Integrating a **backend system** for dynamic product management.
- Implementing **user authentication and personalized recommendations**.
- Enhancing the design with **CSS animations and hover effects**.
- Adding a **review submission system** for customer feedback.

Conclusion

This project successfully implements a simple yet effective E-commerce product page with interactive features. By leveraging HTML, CSS, and JavaScript, the page offers a user-friendly experience. Future improvements can make it more dynamic and engaging, leading to a fully functional online shopping platform.