

LAB MANUAL

# Building an AI-Powered E-Commerce Landing Page



# Building an AI-Powered E-Commerce Landing Page

## Objective:

- To design and develop a modern and responsive E-commerce landing page using HTML, CSS, and JavaScript.
- To demonstrate interactive web development techniques such as smooth scrolling, navigation effects, and form validation.
- To conceptually showcase how Artificial Intelligence can improve online shopping through recommendations, personalization, and better user experience.

## Equipment Required:

- Computer or laptop with an installed code editor (VS Code recommended)
- A modern web browser (e.g., Chrome, Firefox, Edge)
- Internet connection

## Prerequisites:

- Familiarity with HTML5 semantic elements
- Understanding of CSS for styling and responsive layouts
- Basic knowledge of JavaScript for DOM manipulation and event handling

## Problem Statement:

Create an E-commerce landing page with the following features:

- Navigation bar that highlights scrolling behavior
- Hero section with text, a “Start Shopping” button, and a relevant image
- Featured Products section displaying product cards with images and descriptions
- About section explaining the concept of AI in e-commerce
- Contact form with validation (mandatory fields)
- Footer with copyright information

This webpage should have a clean, user-friendly layout and demonstrate modern design practices.

## Procedure:

### 1. Plan Page Layout

- Identify sections: Navbar, Hero, Products, About, Contact, Footer.

### 2. Write HTML Structure

- Create index.html with semantic sections.

- Add Unsplash image links for **Hero, Products, and About**.

### 3. Add CSS Styling

- Style the layout using CSS Grid/Flexbox.
- Define a color theme (dark for navbar, light for content).
- Add hover effects for buttons and product cards.
- Make the page responsive using media queries.

### 4. Enhance with JavaScript

- Smooth scrolling for navigation links.
- Validate the contact form.

### 5. Test and Debug

- Open index.html in a browser.
- Test scrolling behavior, button clicks, and form submission.

## Setting up the Environment

1. Install **VS Code** (or any text editor).
2. Create a folder and add the three files: index.html, styles.css, script.js.
3. Link styles.css in the HTML <head> and script.js before the closing </body> tag.

## Code

### HTML File: index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>ShopSmart - Your Online Store</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <!-- Navbar -->
  <nav class="navbar">
    <div class="logo">ShopSmart</div>
    <ul class="nav-links">
      <li><a href="#products">Products</a></li>
      <li><a href="#about">About</a></li>
      <li><a href="#contact">Contact</a></li>
    </ul>
  </nav>

  <!-- Hero Section -->
  <header class="hero-section">
    <div class="hero-content">
      <h1>Shop Smarter with AI-Powered E-Commerce</h1>
      <p>Discover, compare, and shop products with ease and confidence.</p>
      <button class="cta-btn" id="shopBtn">Start Shopping</button>
    </div>
    <div class="hero-image">
      
    </div>
  </header>

  <!-- Products -->
  <section id="products" class="products">
    <h2>Featured Products</h2>
    <div class="product-cards">
      <div class="card">
        
        <h3>Electronics</h3>
        <p>Latest gadgets with AI-driven recommendations for your needs.</p>
      </div>
    </div>
  </section>
</body>
</html>
```

```

    </div>
    <div class="card">
      
      <h3>Fashion</h3>
      <p>Personalized clothing suggestions based on trends and style.</p>
    </div>
    <div class="card">
      
      <h3>Home Decor</h3>
      <p>Smart suggestions to make your home modern and beautiful.</p>
    </div>
  </div>
</section>

<!-- About -->
<section id="about" class="about">
  <div class="about-text">
    <h2>About ShopSmart</h2>
    <p>ShopSmart uses Artificial Intelligence to provide a seamless online shopping experience.
    From tailored recommendations to smart price comparisons, our platform makes online shopping faster, safer, and more personal.</p>
  </div>
  <div class="about-image">
    
  </div>
</section>

<!-- Contact -->
<section id="contact" class="contact">
  <h2>Contact Us</h2>
  <form id="contactForm">
    <input type="text" name="name" placeholder="Your Name" required>
    <input type="email" name="email" placeholder="Email Address" required>
    <textarea name="message" placeholder="Your Message" rows="4" required></textarea>
    <button type="submit" class="cta-btn">Submit</button>
  </form>
  <p class="form-response" id="formResponse"></p>
</section>

```

```
<!-- Footer -->
<footer>
  <p>&copy; 2025 ShopSmart. All Rights Reserved.</p>
</footer>

<script src="script.js"></script>
</body>
</html>
```

### JavaScript File: script.js

```
const navbar=document.querySelector(".navbar");
const links=document.querySelectorAll(".nav-links a");
const shopBtn=document.getElementById("shopBtn");
const form=document.getElementById("contactForm");
const response=document.getElementById("formResponse");

window.addEventListener("scroll",()=>navbar.classList.toggle("scrolled",window.scrollY>50));

[...links,shopBtn].forEach(el=>
  el.addEventListener("click",e=>{
    e.preventDefault();
    const target=el.id=="shopBtn"?"#products":el.getAttribute("href");
    document.querySelector(target).scrollIntoView({behavior:"smooth"});
  })
);

form.addEventListener("submit",e=>{
  e.preventDefault();
  const name=form.name.value.trim();
  const email=form.email.value.trim();
  const message=form.message.value.trim();
  if(!name||!email||!message){
    response.style.color="red";
    response.textContent="Please fill out all fields.";
  }else{
    response.style.color="green";
    response.textContent="Thank you! We will get back to you soon.";
    form.reset();
  }
});
```

**CSS File: styles.css**

```
/*{margin:0;padding:0;box-sizing:border-box}
body{font-family:'Segoe UI',Tahoma,sans-serif;background:#f9fbff;color:#333;line-
height:1.6;scroll-behavior:smooth}

/* Navbar */
.navbar{display:flex;justify-content:space-between;align-
items:center;background:#222;color:#fff;padding:15px 10%;position:sticky;top:0;z-
index:1000;transition:background .3s}
.navbar.scrolled{background:#111}
.logo{font-size:1.8rem;font-weight:bold}
.nav-links{list-style:none;display:flex;gap:25px}
.nav-links a{color:#fff;text-decoration:none;font-weight:500;transition:color
.3s}
.nav-links a:hover{color:#ffd700}

/* Hero */
.hero-section{background:linear-gradient(to
right,#444,#666);color:#fff;padding:100px 10%;display:grid;grid-template-
columns:1fr 1fr;gap:40px;align-items:center;min-height:70vh}
.hero-content h1{font-size:2.8rem;margin-bottom:20px}
.hero-content p{font-size:1.2rem;margin-bottom:30px}
.hero-image img{max-width:100%;border-radius:12px;box-shadow:0 4px 12px
rgba(0,0,0,0.3)}
.cta-btn{background:#ffd700;color:#222;padding:12px 30px;border:none;border-
radius:30px;font-size:1rem;cursor:pointer;transition:.3s}
.cta-btn:hover{background:#ffcc00;transform:scale(1.05)}

/* Products */
.products{padding:60px 10%;text-align:center}
.products h2{font-size:2rem;color:#222;margin-bottom:40px}
.product-cards{display:grid;grid-template-columns:repeat(auto-
fit,minmax(260px,1fr));gap:25px}
.card{background:#fff;border-radius:12px;padding:25px;box-shadow:0 4px 12px
rgba(0,0,0,.1);transition:.3s}
.card:hover{transform:translateY(-6px)}
.card img{width:100%;border-radius:8px;margin-bottom:15px}
.card h3{color:#222;margin-bottom:10px}

/* About */
.about{display:grid;grid-template-columns:1fr 1fr;padding:60px
10%;gap:40px;align-items:center;background:#eef3f9}
.about h2{color:#222;font-size:2rem;margin-bottom:20px}
```

```
.about-image img{width:100%;border-radius:12px;box-shadow:0 4px 12px
rgba(0,0,0,.1)}

/* Contact */
.contact{padding:60px 10%;text-align:center}
.contact h2{font-size:2rem;color:#222;margin-bottom:30px}
.contact form{max-width:450px;margin:0 auto;display:flex;flex-
direction:column;gap:15px}
.contact input,.contact textarea{padding:12px;border:1px solid #ccc;border-
radius:6px;font-size:1rem}
.form-response{margin-top:15px;font-weight:bold;color:green}

/* Footer */
footer{background:#222;color:#fff;text-align:center;padding:15px}

/* Responsive */
@media(max-width:900px){
  .hero-section{grid-template-columns:1fr;text-align:center}
  .about{grid-template-columns:1fr;text-align:center}
}
```

## Output

