

## **AI ASSISTED CODING LAB**

**ASSIGNMENT: 14**

**ENROLLMENT NO : 2503A51L16**

**BATCH NO: 19**

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### **TASK1**

**TASK1 DESCRIPTION:- AI-Assisted Portfolio Website**

**Scenario:**

A student wants to showcase their projects, skills, and contact details in a portfolio website. Instead of writing all code manually, they want to speed up the process using GitHub Copilot.

**PROMPT:-** Create a simple and responsive student portfolio website with HTML and CSS. Include a navigation menu (Home, About, Projects, Contact), a projects grid with hover effects, and a contact form.

CODE:-

HTML:-


```
l14t1.html X # l14t1.css JS l14t1.js
l14t1.html > html > body > header > nav.navbar
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8" />
5   <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6   <title>Charan | Portfolio</title>
7   <link rel="stylesheet" href="l14t1.css" />
8 </head>
9 <body>
10  <header>
11    <nav class="navbar">
12      <h2 class="logo">Charan</span></h2>
13      <ul class="nav-links">
14        <li><a href="#about">About</a></li>
15        <li><a href="#projects">Projects</a></li>
16        <li><a href="#skills">Skills</a></li>
17        <li><a href="#contact">Contact</a></li>
18      </ul>
19    </nav>
20    <div class="hero">
21      <h1>Hi, I'm <span>Charan</span></h1>
22      <p>Beginner Developer & Tech Enthusiast</p>
23      <a href="#projects" class="btn">View My Work</a>
24    </div>
25  </header>
26  <section id="about" class="section">
27    <h2>About Me</h2>
28    <p>
29      I'm Charan, a passionate student learning web development and programming.
30      I love building creative and efficient solutions using modern technologies.
31    </p>
32  </section>
33  <section id="projects" class="section">
34    <h2>Projects</h2>
35    <div class="project-container">
36      <div class="project-card">
37        <h3>Portfolio Website</h3>
```







```
44     <a href="#">View Project</a>
45   </div>
46   <div class="project-card">
47     <h3>Networking Simulation</h3>
48     <p>Packet Tracer project simulating network topology and routing.</p>
49     <a href="#">View Project</a>
50   </div>
51 </div>
52 </section>
53 <section id="skills" class="section">
54   <h2>Skills</h2>
55   <ul class="skills-list">
56     <li>HTML</li>
57     <li>CSS</li>
58     <li>JavaScript</li>
59     <li>Python</li>
60     <li>SQL</li>
61     <li>Networking</li>
62   </ul>
63 </section>
64 <section id="contact" class="section">
65   <h2>Contact</h2>
66   <p>Let's connect! You can reach me at:</p>
67   <p><strong>Email:</strong> charan@example.com</p>
68   <p><strong>LinkedIn:</strong> linkedin.com/in/charan</p>
69 </section>
70 <footer>
71   <p>© 2025 Charan. Built with ❤️ using AI assistance.</p>
72 </footer>
73 <script src="l14t1.js"></script>
74 </body>
75 </html>
```

## CSS:

```
l14t1.html # l14t1.css X JS l14t1.js
# l14t1.css > *
1  * {
2    margin: 0;
3    padding: 0;
4    box-sizing: border-box;
5    font-family: "Poppins", sans-serif;
6  }
7  body {
8    background: #f5f5f5;
9    color: #333;
10   scroll-behavior: smooth;
11 }
12 header {
13   background: linear-gradient(120deg, #0078ff, #00c6ff);
14   color: white;
15   text-align: center;
16   padding: 100px 20px;
17 }
18 .navbar {
19   display: flex;
20   justify-content: space-between;
21   align-items: center;
22   background: transparent;
23   padding: 15px 50px;
24   position: fixed;
25   width: 100%;
26   top: 0;
27   left: 0;
28   z-index: 1000;
29 }
30 .logo {
31   font-size: 24px;
32   font-weight: bold;
33 }
34 .logo span {
35   color: #00ffb3;
36 }
37 .nav-links {
```

<> l14t1.html # l14t1.css X JS l14t1.js

# l14t1.css >  \*

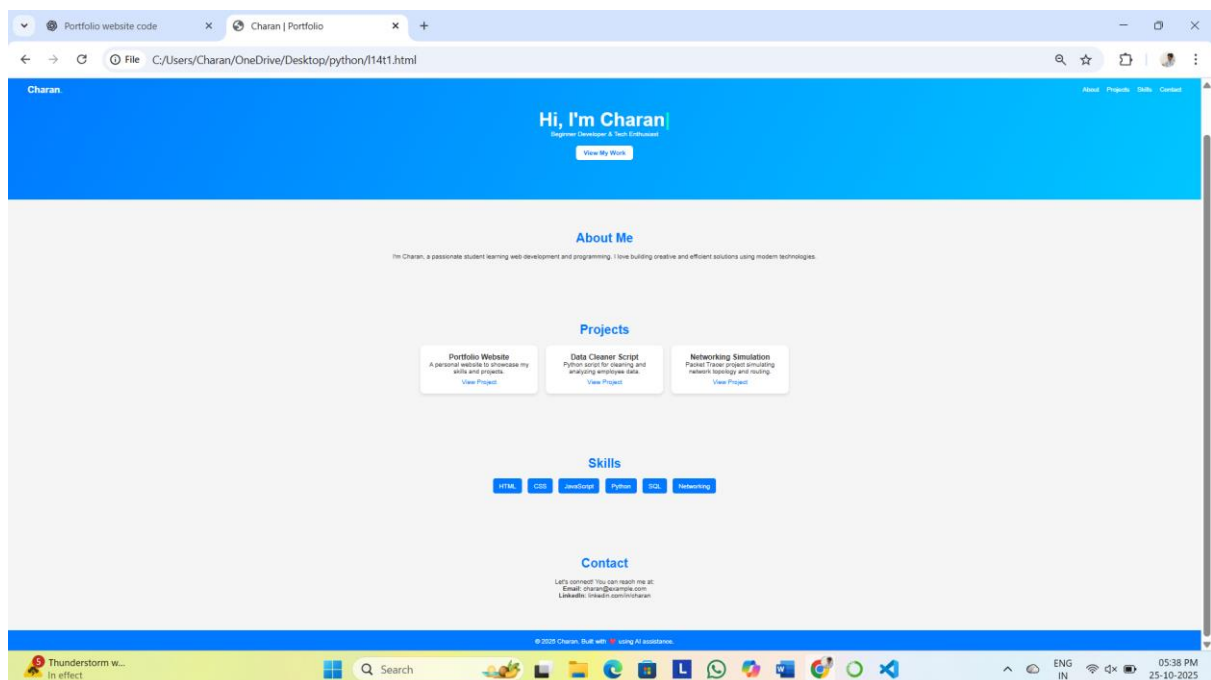
```
36 }
37 .nav-links {
38   list-style: none;
39   display: flex;
40   gap: 20px;
41 }
42 .nav-links a {
43   color:  white;
44   text-decoration: none;
45   font-weight: 500;
46   transition: color 0.3s ease;
47 }
48 .nav-links a:hover {
49   color:  #00ffb3;
50 }
51 .hero {
52   margin-top: 100px;
53 }
54 .hero h1 {
55   font-size: 3rem;
56 }
57 .hero span {
58   color:  #00ffb3;
59 }
60 .btn {
61   display: inline-block;
62   margin-top: 20px;
63   background:  white;
64   color:  #0078ff;
65   padding: 10px 20px;
66   border-radius: 8px;
67   text-decoration: none;
68   font-weight: 600;
69   transition: 0.3s;
70 }
71 .btn:hover {
72   background:  #00ffb3;
```

```
89     }
90     .project-card {
91         background: #fff;
92         width: 300px;
93         padding: 20px;
94         border-radius: 12px;
95         box-shadow: 0 4px 8px #0000001a;
96         transition: transform 0.3s ease;
97     }
98     .project-card:hover {
99         transform: translateY(-5px);
100     }
101     .project-card a {
102         display: inline-block;
103         margin-top: 10px;
104         color: #0078ff;
105         text-decoration: none;
106     }
107     .skills-list {
108         list-style: none;
109         display: flex;
110         justify-content: center;
111         flex-wrap: wrap;
112         gap: 15px;
113     }
114     .skills-list li {
115         background: #0078ff;
116         color: #fff;
117         padding: 10px 15px;
118         border-radius: 6px;
119     }
120     footer {
121         background: #0078ff;
122         color: #fff;
123         text-align: center;
124         padding: 15px;
125     }
```

## JAVA SCRIPT:

```
JS l14t1.js > ...
1 // Smooth scroll for navigation links
2 document.querySelectorAll('.nav-links a').forEach(link => {
3   link.addEventListener('click', e => {
4     e.preventDefault();
5     const target = document.querySelector(link.getAttribute('href'));
6     target.scrollIntoView({ behavior: 'smooth' });
7   });
8 });
9
10 // Typing animation for hero text (optional)
11 const text = "Hi, I'm Charan";
12 let i = 0;
13 function typeEffect() {
14   if (i < text.length) {
15     document.querySelector('.hero h1').innerHTML = text.slice(0, i + 1) + "<span>|</span>";
16     i++;
17     setTimeout(typeEffect, 100);
18   }
19 }
20 window.onload = typeEffect;
21 |
```

OUTPUT: -



**OBSERVATION:-** I observed that using AI tools like GitHub Copilot significantly reduces the time required to create a portfolio website. The AI suggested responsive HTML and CSS code for navigation, project grids, and contact forms. This task demonstrated how AI can speed up the development process while still requiring human review for customization and styling.

## TASK2

### TASK2 DESCRIPTION:- AI-Generated Restaurant Landing Page

#### Scenario:

A local restaurant needs a simple landing page with a navigation bar, menu highlights, and an image gallery. The developer wants to quickly generate it using AI assistance.

**PROMPT:-** Generate a responsive restaurant website with navigation, menu cards, image slider, contact info, and hover effects using HTML, CSS, and JavaScript.

CODE:-

HTML:-

```
<> l14t2.html X
<> l14t2.html > html > body > section#gallery.gallery > div.slider
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>STREET BYTE</title>
7      <link rel="stylesheet" href="l14t2.css">
8  </head>
9  <body>
10     <!-- Navigation Bar -->
11     <nav class="navbar">
12         <div class="logo">!! STREET BYTE</div>
13         <ul class="nav-links">
14             <li><a href="#home">Home</a></li>
15             <li><a href="#menu">Menu</a></li>
16             <li><a href="#gallery">Gallery</a></li>
17             <li><a href="#contact">Contact</a></li>
18         </ul>
19     </nav>
20
21     <!-- Hero Section -->
22     <section id="home" class="hero">
23         <h1>Welcome to Our Restaurant</h1>
24         <p>Delicious food, cozy vibes, and unforgettable memories</p>
25     </section>
26
27     <!-- Menu Section -->
28     <section id="menu" class="menu">
29         <h2>Our Menu</h2>
30         <div class="menu-cards">
31             <div class="card">
32                 <h3>Margherita Pizza</h3>
33                 <p>Classic cheese pizza with fresh basil</p>
34                 <span>$10</span>
35             </div>
36             <div class="card">
```



```

48     <p>SPICY HYDERABADI CHICKEN DUM BIRYANI</p>
49     <span>$105</span>
50 </div>
51 </div>
52 </section>
53
54 <!-- Gallery Section -->
55 <section id="gallery" class="gallery">
56   <h2>Gallery</h2>
57   <div class="slider">
58     <div class="slides">
59       
60       
61       
62       
63     </div>
64     <button class="prev">&#10094;</button>
65     <button class="next">&#10095;</button>
66   </div>
67 </section>
68
69 <!-- Contact Section -->
70 <section id="contact" class="contact">
71   <h2>Contact Us</h2>
72   <p>Email: info@localrestaurant.com</p>
73   <p>Phone: +91 98765 43210</p>
74 </section>
75
76 <script src="l14t2.js"></script>
77 </body>
78 </html>

```

CSS: -

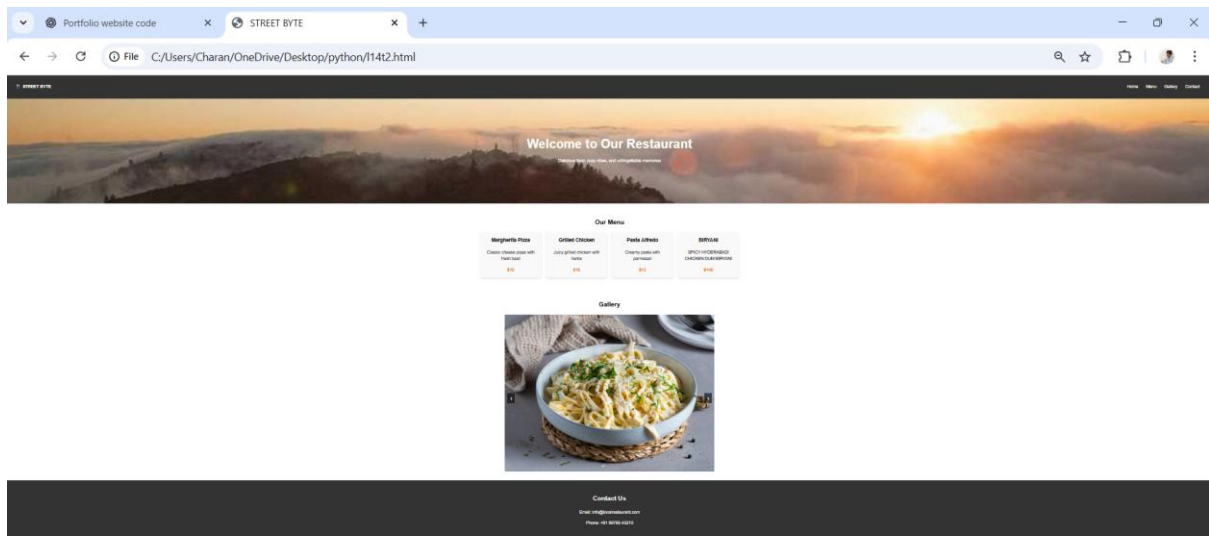
```

# l14t2.css  X
# l14t2.css >  .hero h1
1  /* General */
2  body {
3    margin: 0;
4    font-family: Arial, sans-serif;
5    line-height: 1.6;
6  }
7  /* Navbar */
8  .navbar {
9    display: flex;
10   justify-content: space-between;
11   align-items: center;
12   background: #333;
13   padding: 1rem 2rem;
14 }
15 .navbar .logo {
16   color: #fff;
17   font-weight: bold;
18 }
19 .navbar .nav-links {
20   list-style: none;
21   display: flex;
22 }
23 .navbar .nav-links li {
24   margin: 0 15px;
25 }
26 .navbar .nav-links a {
27   text-decoration: none;
28   color: #fff;
29   transition: color 0.3s;
30 }
31 .navbar .nav-links a:hover {
32   color: #ffcc00;
33 }
34 /* Hero */
35 .hero {
36   background: url("https://picsum.photos/1200/500?restaurant") center/cover no-repeat;
37   height: 400px;

```

```
35  .hero {
36    height: 400px;
37    color: ■ #fff;
38    text-align: center;
39    display: flex;
40    flex-direction: column;
41    justify-content: center;
42  }
43  .hero h1 {
44    font-size: 3rem;
45    margin: 0;
46  }
47  /* Menu */
48  .menu {
49    padding: 2rem;
50    text-align: center;
51  }
52  .menu-cards {
53    display: flex;
54    justify-content: center;
55    gap: 20px;
56  }
57  .card {
58    background: ■ #f9f9f9;
59    padding: 1rem;
60    border-radius: 10px;
61    box-shadow: 0 4px 8px ■ rgba(0,0,0,0.1);
62    width: 200px;
63  }
64  .card h3 {
65    margin-top: 0;
66  }
67  .card span {
68    font-weight: bold;
69    color: ■ #e67e22;
70  }
71 }
```

## OUTPUT:



**OBSERVATION:-** I learned how AI can assist in generating a restaurant landing page with a navigation bar, menu highlights, and an image gallery. The code produced by AI was responsive and included hover effects. However, I observed that while AI provided the basic structure, additional manual refinements were needed to match the design expectations.

## TASK3

### **TASK3 DESCRIPTION:- AI-Powered Event Registration Form**

#### **Scenario:**

SR University is hosting a tech fest. They need a web-based registration form for students. The form must validate user input in real-time.

**PROMPT:-** Create a restaurant landing page with a navigation bar, menu highlights styled as cards, and a JavaScript image slider for the gallery section.

**CODE:-**

**HTML:-**

✎ L14T3.HTML ✕

✎ L14T3.HTML > html

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>SR University Tech Fest Registration</title>
7      <link rel="stylesheet" href="l14t3.css">
8  </head>
9  <body>
10     <div class="form-container">
11         <h2>Tech Fest Registration</h2>
12         <form id="registrationForm">
13             <label for="name">Full Name:</label>
14             <input type="text" id="name" name="name" placeholder="Enter your full name" required>
15
16             <label for="email">Email Address:</label>
17             <input type="email" id="email" name="email" placeholder="Enter your email" required>
18
19             <label for="phone">Phone Number:</label>
20             <input type="tel" id="phone" name="phone" placeholder="10-digit phone number" required>
21
22             <label for="department">Department:</label>
23             <select id="department" name="department" required>
24                 <option value="">Select Department</option>
25                 <option value="cse">CSE</option>
26                 <option value="ece">ECE</option>
27                 <option value="eee">EEE</option>
28                 <option value="mech">Mechanical</option>
29                 <option value="civil">Civil</option>
30             </select>
31
32             <label for="event">Event Selection:</label>
33             <select id="event" name="event" required>
34                 <option value="">Select Event</option>
35                 <option value="hackathon">Hackathon</option>
36                 <option value="coding">Coding Contest</option>
37                 <option value="robotics">Robotics Challenge</option>
38                 <option value="quiz">Tech Quiz</option>
39             </select>
40
41             <button type="submit">Register</button>
42             <p id="message"></p>
43         </form>
44     </div>
45     <script src="l14t3.js"></script>
46 </body>
47 </html>
```

CSS:-

```
# l14t3.css X
# l14t3.css > button:hover
1  body {
2      font-family: Arial, sans-serif;
3      background: linear-gradient(to right, #4facfe, #00f2fe);
4      display: flex;
5      justify-content: center;
6      align-items: center;
7      height: 100vh;
8      margin: 0;
9  }
10 .form-container {
11     background: #fff;
12     padding: 30px;
13     border-radius: 15px;
14     box-shadow: 0px 4px 12px rgba(0,0,0,0.2);
15     width: 350px;
16 }
17 h2 {
18     text-align: center;
19     margin-bottom: 20px;
20     color: #333;
21 }
22 label {
23     font-weight: bold;
24     display: block;
25     margin-top: 10px;
26 }
27 input, select {
28     width: 100%;
29     padding: 10px;
30     margin-top: 5px;
31     border-radius: 8px;
32     border: 1px solid #ccc;
33     outline: none;
34     transition: 0.3s;
35 }
36 input:focus, select:focus {
37     border-color: #4facfe;
```

```

38     box-shadow: 0px 0px 5px rgba(79,172,254,0.5);
39 }
40 button {
41     width: 100%;
42     padding: 12px;
43     margin-top: 20px;
44     background: #4facfe;
45     color: #fff;
46     font-size: 16px;
47     font-weight: bold;
48     border: none;
49     border-radius: 8px;
50     cursor: pointer;
51     transition: 0.3s;
52 }
53 button:hover {
54     background: #00c6ff;
55 }
56 #message {
57     margin-top: 15px;
58     font-size: 14px;
59     text-align: center;
60 }

```

## OUTPUT:

Portfolio website code x SR University Tech Fest Registr...

C:/Users/Charan/OneDrive/Desktop/python/L14T3.HTML

**Tech Fest Registration**

**Full Name:**

**Email Address:**

**Phone Number:**

**Department:**

**Event Selection:**

**Register**

Registration successful!

32°C Mostly sunny 05:49 PM 25-10-2025

**OBSERVATION:-** This task highlighted the use of AI in generating a registration form with real-time input validation. I observed that AI-generated JavaScript handled input checks effectively, reducing coding effort. The task also showed that AI assistance can improve form usability by suggesting features like error messages and validation prompts, which enhance user experience.

## TASK4

### TASK4 DESCRIPTION:- AI-Assisted E-Commerce Product Page

#### Scenario:

A startup wants a basic e-commerce product page to display products with prices and an “Add to Cart” button.

**PROMPT:-** Generate a restaurant landing page with a navigation bar, menu highlights as styled cards, and a JavaScript image slider for the gallery section.

CODE:-

HTML:-

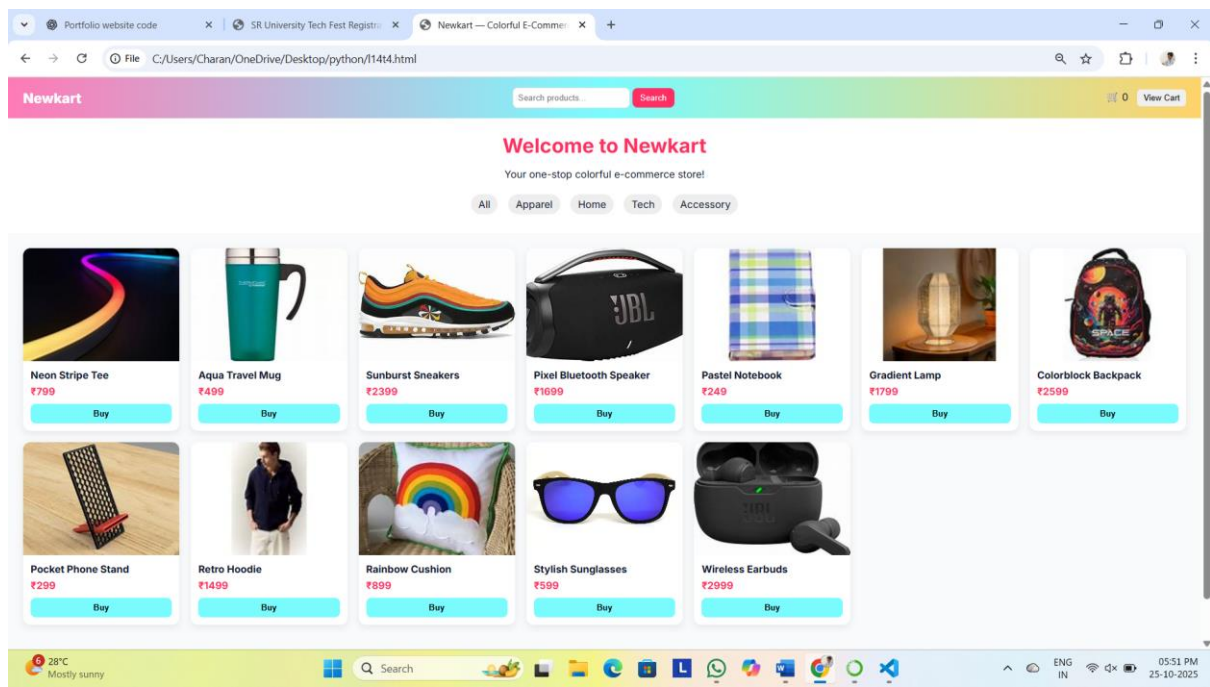
```
<> product.html > html > body > main > div.product-grid
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <meta charset="UTF-8">
5    <meta name="viewport" content="width=device-width, initial-scale=1.0">
6    <title>Startup E-Commerce</title>
7    <link rel="stylesheet" href="product.css">
8  </head>
9  <body>
10   <header>
11     <h1>Shop Products</h1>
12     <div class="cart-counter">
13       Cart: <span id="cartCount">0</span>
14     </div>
15   </header>
16   <main>
17 >   <div class="product-grid">...
42   </div>
43 </main>
44 <script>
45   // Add to Cart functionality with cart counter
46   let cartCount = 0;
47   const cartCountSpan = document.getElementById('cartCount');
48   const addCartBtns = document.querySelectorAll('.add-cart-btn');
49
50   addCartBtns.forEach(btn => {
51     btn.addEventListener('click', () => {
52       cartCount++;
53       cartCountSpan.textContent = cartCount;
54     });
55   });
56 </script>
57 </body>
58 </html>
```

CSS: -

```
# product.css > {} @media (max-width: 700px)
1 > body { ...
6   }
7
8 > header { ...
18  }
19
20 > .cart-counter { ...
28  }
29
30 > main { ...
34  }
35
36 > .product-grid { ...
40  }
41
42 > .product-card { ...
49  }
50
51 > .product-card:hover { ...
54  }
55
56 > .product-card img { ...
61  }
62
63 > .product-card h3 { ...
67  }
68
69 > .product-card p { ...
74  }
75
76 > .add-cart-btn { ...
86  }
87
88   .add-cart-btn:hover {
89     |   background: #1565c0;
90   }
91
92 @media (max-width: 700px) {
93 >   header { ...
97   }
98 >   main { ...
100  }
101 >   .product-grid { ...
103  }
104 }
```



## OUTPUT:



**OBSERVATION:** - I observed that AI-generated code provided a quick way to design a product display page with prices and “Add to Cart” functionality. The structure was simple yet functional. However, I noticed that while AI generated the HTML and CSS effectively, integrating dynamic cart functionality would still require additional logic and backend support.