

AI ASSISTED CODING

Lab-14.5

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BATCH no:19

Task 1: 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.

- Use Copilot to generate an HTML structure for a personal portfolio page (sections: Home, About, Projects, Contact).
- Ask Copilot to suggest responsive CSS styling for the layout (e.g., grid/flexbox).
- Customize Copilot's suggestions to add a hover effect on project cards

PROMPT:

generate an HTML structure for a personal portfolio page (sections: Home, About, Projects, Contact).suggest responsive CSS styling for the layout (e.g., grid/flexbox).
add a hover effect on project cards give html css in same file

```

<> a.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" />
6    <title>Simra Tahseen - Portfolio</title>
7    <style>
8      :root{
9        --bg: #0f1724;
10       --card: #0b1220;
11       --accent: #4fd1c5;
12       --muted: #94a3b8;
13       --glass: rgba(255,255,255,0.04);
14       --radius:12px;
15       --max-width:1100px;
16       --gap:1.25rem;
17       --ff: "Segoe UI", Roboto, system-ui, -apple-system, "Helvetica Neue", Arial;
18     }
19
20     *{box-sizing:border-box}
21     html,body{height:100%;}
22     body{
23       margin:0;
24       font-family:var(--ff);
25       background: linear-gradient(180deg, #071025 0%, #0f1724 100%);
26       color: #e6eef6;
27       -webkit-font-smoothing:antialiased;
28       -moz-osx-font-smoothing:grayscale;
29       padding:2rem;
30       display:flex;
31       justify-content:center;
32     }
33
34     .site{
35       width:100%;
36       max-width:var(--max-width);
37       background: linear-gradient(180deg, rgba(255,255,255,0.02), rgba(255,255,255,0.01));

```

```

/* Contact form */
.contact{
  display:flex;
  flex-direction:column;
  gap:0.5rem;
  margin-top:0.5rem;
}
.contact input, .contact textarea{
  background:transparent;border:1px solid #0f1724;color:inherit;padding:0.6rem;border-radius:8px;
}
.contact textarea{min-height:90px;resize:vertical}

footer{margin-top:1.2rem;color:var(--muted);font-size:0.9rem;text-align:center}

/* Responsive */
@media (max-width:980px){
  main{grid-template-columns:1fr}
  .project{grid-template-columns:repeat(1,1fr)}
  .brand .name h1{font-size:1rem}
}

@media (max-width:520px){
  .avatar{width:40px;height:40px;font-size:0.95rem}
  body{padding:1rem}
  .site{padding:1rem}
}

</style>
</head>
<body>
  <div class="site" role="main">
    <header>
      <div class="brand">
        <div class="avatar">ST</div>
        <div class="name">
          <h1>Simra Tahseen</h1>
          <p>Backend & Cloud · Networking · Automation</p>
        </div>
      </div>
      <nav aria-label="Main">
        <a href="#home">Home</a>
        <a href="#about">About</a>
        <a href="#projects">Projects</a>
        <a href="#contact">Contact</a>
      </nav>
    </header>

    <main>
      <div class="content">
        <section id="home" class="hero" aria-labelledby="homeTitle">
          <div class="intro">
            <h2 id="homeTitle">Hi, I'm Simra - I build resilient cloud-backend solutions</h2>
            <p>Student and developer focused on hybrid cloud, automation, CLI tooling, and secure architectures. I turn complex problems into clear, working systems.</p>
          </div>
          <div class="cta">
            <a class="btn" href="#projects">View Projects</a>
            <a class="btn secondary" href="#contact">Get in touch</a>
          </div>
        </section>

        <section id="about" aria-labelledby="aboutTitle">
          <h3 class="section-title" id="aboutTitle">About</h3>
          <p style="color:var(--muted);margin-top:0.4rem">

```

Building completed



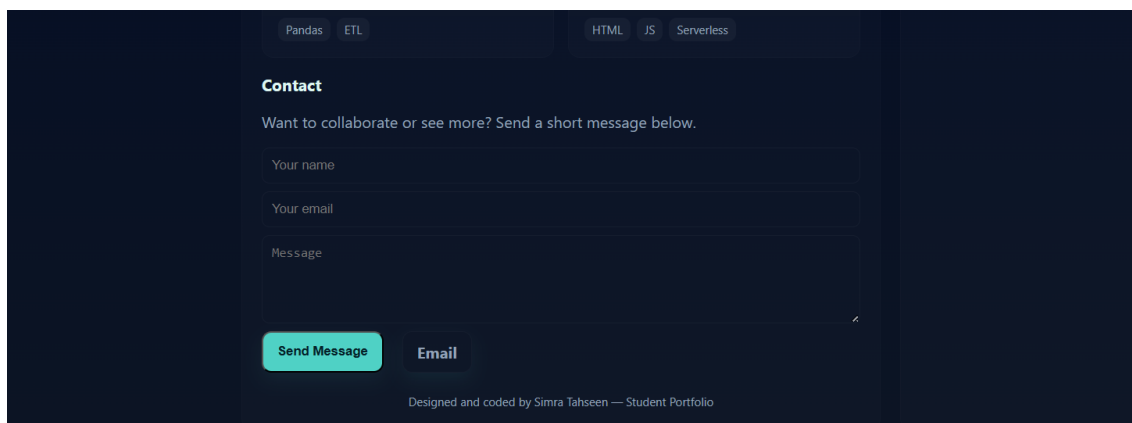
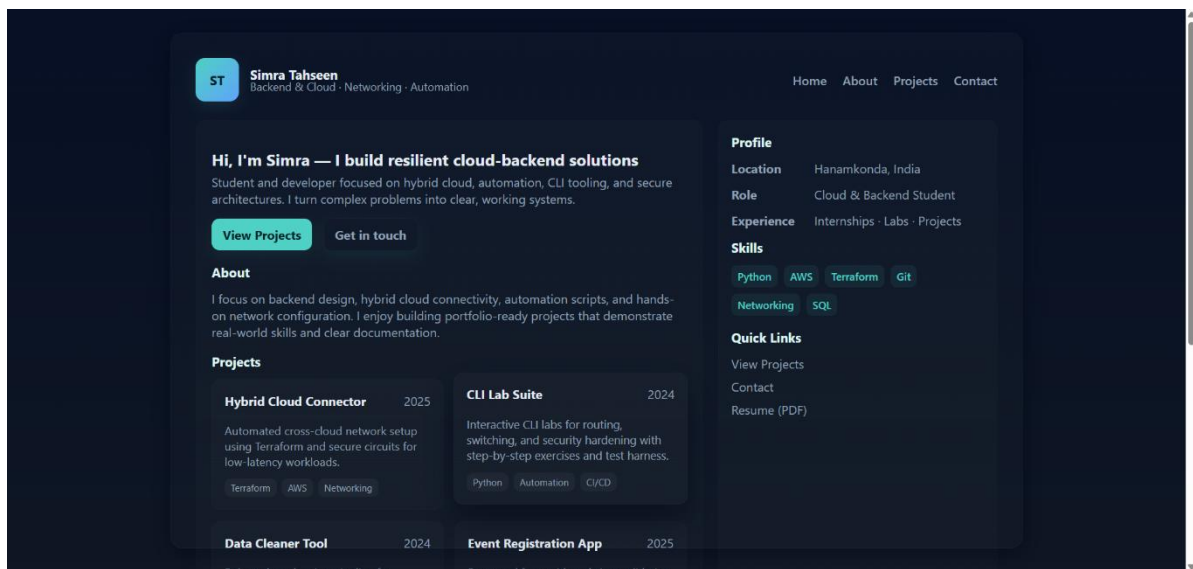
Search



```

148     <div class="projects-grid">
155         <p>A simple and intuitive task management app for productivity, using React and Firebase.</p>
156     </div>
157     <div class="project-card">
158         <h3>Blog Platform</h3>
159         <p>A full-featured blogging platform with user authentication and markdown support.</p>
160     </div>
161 </div>
162 </section>
163 <section id="contact">
164     <h2>Contact</h2>
165     <form class="contact-form">
166         <label for="name">Name</label>
167         <input type="text" id="name" name="name" required>
168
169         <label for="email">Email</label>
170         <input type="email" id="email" name="email" required>
171
172         <label for="message">Message</label>
173         <textarea id="message" name="message" rows="4" required></textarea>
174
175         <button type="submit">Send Message</button>
176     </form>
177 </section>
178 </main>
179 </body>
180 </html>

```



OBSERVATION:

The code builds a **responsive personal portfolio webpage** with four main sections: Home, About, Projects, and Contact. It uses **flexbox and CSS grid** for layout, ensuring adaptability across screen sizes. The navigation is sticky, the project cards include a **hover effect** (lift + shadow), and a simple contact form is provided, making the design clean, modern, and user-friendly.

Task 2: 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.

- Use Copilot to create a navigation bar with links (Home, Menu, Gallery, Contact).
- Generate a menu section styled with CSS cards.
- Add a JavaScript-based image slider for the gallery, with Copilot suggesting the base code

PROMPT:

a local restaurant needs a simple landing page with a navigation bar, menu highlights, and an image gallery.

- create a navigation bar with links (home, menu, gallery, contact).
- generate a menu section styled with css cards.
- add a javascript-based image slider for the gallery, give all three codes in a single file

```

TASK2-14.HTML > > html > > body > > nav > > a
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <title>Local Restaurant Landing Page</title>
6 <meta name="viewport" content="width=device-width, initial-scale=1.0">
7 <style>
8 /* Reset and base styles */
9 * { box-sizing: border-box; margin: 0; padding: 0; }
10 body { font-family: 'Segoe UI', Arial, sans-serif; background: #f8f8f8; color: #222; }
11 header { background: #b71c1c; color: #fff; padding: 2rem 0; text-align: center; }
12 nav {
13   background: #880808;
14   display: flex;
15   justify-content: center;
16   gap: 2rem;
17 }
18 nav a {
19   color: #fff;
20   text-decoration: none;
21   padding: 1rem 0.5rem;
22   font-weight: 500;
23   transition: color 0.2s;
24 }
25 nav a:hover {
26   color: #ffd54f;
27 }
28 main {
29   max-width: 1000px;
30   margin: 2rem auto;
31   padding: 0 1rem;
32 }
33 section { margin-bottom: 3rem; }
34 h2 { margin-bottom: 1rem; color: #b71c1c; }
35 /* Menu cards */
36 .menu-cards {
37   display: grid;
38   grid-template-columns: repeat(auto-fit, minmax(220px, 1fr));
39   gap: 2rem;
40 }
41 .menu-card {
42   background: #fff;
43   border-radius: 10px;
44   box-shadow: 0 2px 8px rgba(0,0,0,0.08);
45   padding: 1.5rem;
46   text-align: center;
47   transition: transform 0.2s, box-shadow 0.2s;
48 }
49 .menu-card:hover {
50   transform: translateY(-8px) scale(1.03);
51   box-shadow: 0 6px 20px rgba(183,28,28,0.15);
52   border: 1.5px solid #b71c1c;
53 }
54 .menu-card img {
55   width: 80px;
56   height: 80px;
57   object-fit: cover;
58   border-radius: 50%;
59   margin-bottom: 1rem;
60 }
61 .menu-card h3 {
62   margin-bottom: 0.5rem;
63   color: #880808;
64 }
65 .menu-card p {

```

```

65 .menu-card p {
66   margin-bottom: 0.5rem;
67   font-size: 1rem;
68 }
69 .menu-card .price {
70   color: #b71c1c;
71   font-weight: bold;
72   font-size: 1.1rem;
73 }
74 /* Gallery slider */
75 .gallery-slider {
76   position: relative;
77   max-width: 600px;
78   margin: 2rem auto;
79   background: #fff;
80   border-radius: 10px;
81   box-shadow: 0 2px 8px rgba(0,0,0,0.08);
82   overflow: hidden;
83 }
84 .gallery-slider img {
85   width: 100%;
86   height: 350px;
87   object-fit: cover;
88   display: block;
89 }
90 .slider-btn {
91   position: absolute;
92   top: 50%;
93   transform: translateY(-50%);
94   background: rgba(183,28,28,0.7);
95   color: #fff;
96   border: none;
97   font-size: 2rem;
98   padding: 0.5rem 1rem;
99   cursor: pointer;
100   border-radius: 50%;
101   z-index: 2;
102   transition: background 0.2s;
103 }
104 .slider-btn:hover {
105   background: #ffd54f;
106   color: #b71c1c;
107 }
108 .slider-btn.left { left: 10px; }
109 .slider-btn.right { right: 10px; }
110 /* Contact section */
111 .contact-info {
112   background: #fff;
113   padding: 1.5rem;
114   border-radius: 10px;
115   box-shadow: 0 2px 8px rgba(0,0,0,0.08);
116   max-width: 500px;
117   margin: auto;
118 }
119 .contact-info p {
120   margin-bottom: 0.5rem;
121 }
122 /* Responsive adjustments */
123 @media (max-width: 600px) {
124   nav { flex-direction: column; gap: 0; }
125   main { padding: 0 0.5rem; }
126   .gallery-slider img { height: 200px; }
127 }
128 </style>
129 </head>

```

```

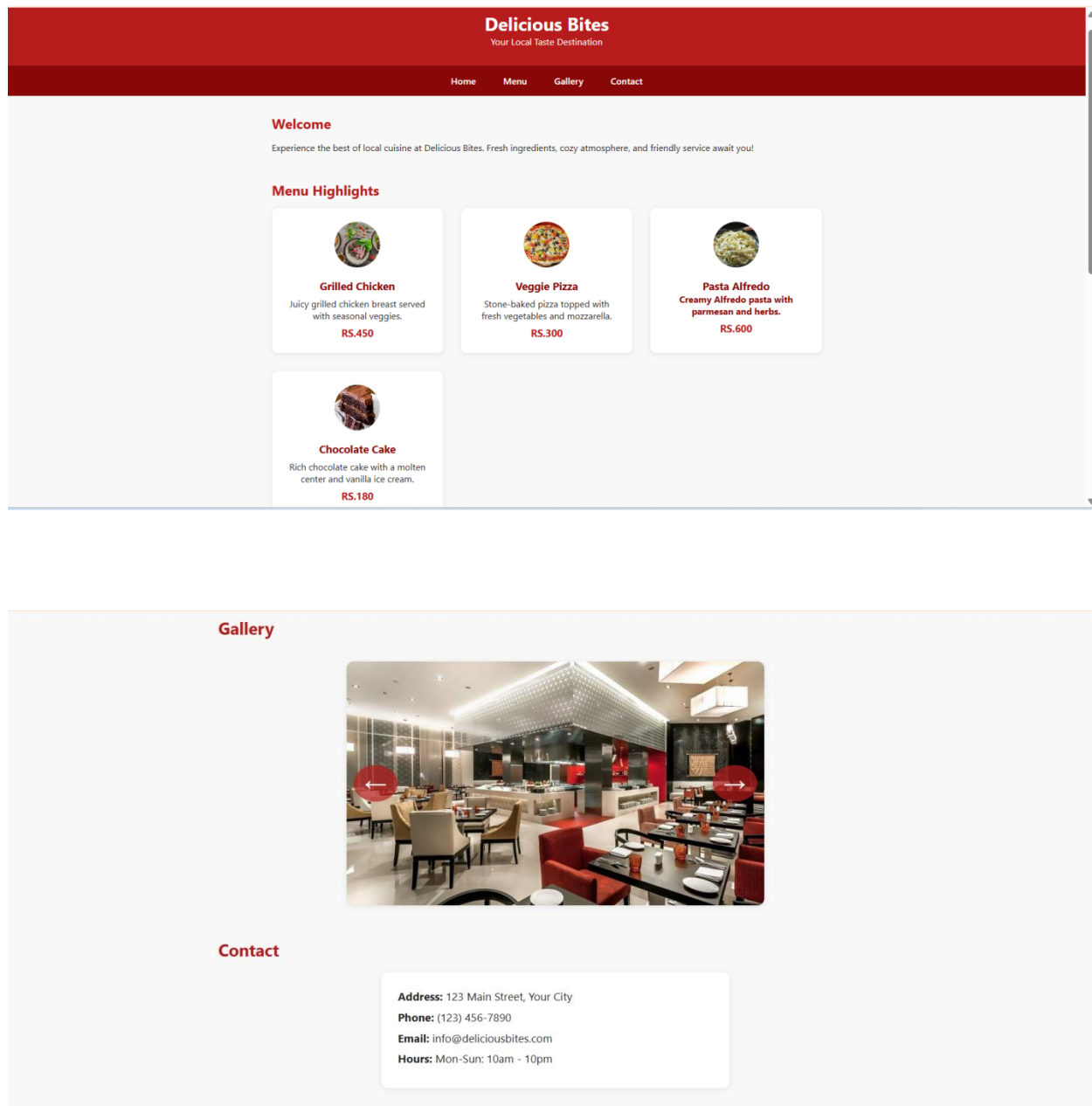
129 </head>
130 <body>
131   <header>
132     <h1>Delicious Bites</h1>
133     <p>Your Local Taste Destination</p>
134   </header>
135   <nav>
136     <a href="#home">Home</a>
137     <a href="#menu">Menu</a>
138     <a href="#gallery">Gallery</a>
139     <a href="#contact">Contact</a>
140   </nav>
141   <main>
142     <section id="home">
143       <h2>Welcome</h2>
144       <p>
145         Experience the best of local cuisine at Delicious Bites. Fresh ingredients, cozy atmosphere, and friendly service await you!
146       </p>
147     </section>
148     <section id="menu">
149       <h2>Menu Highlights</h2>
150       <div class="menu-cards">
151         <div class="menu-card">
152           
153           <h3>Grilled Chicken</h3>
154           <p>Juicy grilled chicken breast served with seasonal veggies.</p>
155           <div class="price">RS.450</div>
156         </div>
157         <div class="menu-card">
158           
159           <h3>Veggie Pizza</h3>
160           <p>Stone-baked pizza topped with fresh vegetables and mozzarella.</p>
161           <div class="price">RS.300</div>
162         </div>
163         <div class="menu-card">
164           
165           <h3>Pasta Alfredo</h3>
166           <p>Creamy Alfredo pasta with parmesan and herbs.</p>
167           <div class="price">RS.600</div>
168         </div>
169         <div class="menu-card">
170           
171           <h3>Chocolate Cake</h3>
172           <p>Rich chocolate cake with a molten center and vanilla ice cream.</p>
173           <div class="price">RS.180</div>
174         </div>
175       </div>
176     </section>
177     <section id="gallery">
178       <h2>Gallery</h2>
179       <div class="gallery-slider" id="galleryslider">
180         <button class="slider-btn left" onclick="prevSlide()"><#8592</button>
181         
182         <button class="slider-btn right" onclick="nextSlide()"><#8594</button>
183       </div>
184     </section>
185     <section id="contact">
186       <h2>Contact</h2>
187       <div class="contact-info">
188         <p><strong>Address:</strong> 123 Main Street, Your City</p>
189         <p><strong>Phone:</strong> (123) 456-7890</p>
190         <p><strong>Email:</strong> info@deliciousbites.com</p>
191         <p><strong>Hours:</strong> Mon-Sun: 10am - 10pm</p>
192       </div>
193     </section>
194   </main>

```

```

195   <script>
196     // JavaScript Image Slider
197     const images = [
198       "iii.jpg",
199       "https://d18s1le4wlf9ku.cloudfront.net/theballantynehotel.com-1441752546/cms/imagepool/66944a6aeb951.jpg",
200       "https://encrypted-tbn0.gstatic.com/images?q=tbn:AND9GcQ6wMg8HI8puU9wF_IGNMAAzVWIG7VdgoXZdw&"
201     ];
202     let current = 0;
203     const sliderImage = document.getElementById('sliderImage');
204     function showSlide(idx) {
205       current = (idx + images.length) % images.length;
206       sliderImage.src = images[current];
207     }
208     function prevSlide() { showSlide(current - 1); }
209     function nextSlide() { showSlide(current + 1); }
210     // Optional: Auto-slide every 5 seconds
211     setInterval(() => { nextSlide(); }, 5000);
212   </script>
213 </body>
214 </html>

```



Observation:

The code designs a **simple and responsive restaurant landing page** with a sticky navigation bar, a menu section styled using CSS cards, and an interactive **JavaScript-based image slider** for the gallery. The layout is clean, user-friendly, and effectively highlights the restaurant's offerings while ensuring easy navigation.

Task 3: 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.

- Ask Copilot to generate an HTML form (fields: Name, Email, Phone, Department, Event Selection).
- Use Copilot to assist in adding CSS styling for an attractive form layout.
- Implement JavaScript validation (e.g., email format check, phone number length check) using Copilot's suggestions.

PROMPT:

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.

- generate an HTML form (fields: Name, Email, Phone, Department, Event Selection).
- assist in adding CSS styling for an attractive form layout.
- Implement JavaScript validation (e.g., email format check, phone number length check) using Copilot's suggestions. Give js html css in single file


```

TASK3-14.HTML > @html > @head > @style > .container
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <title>SR University Tech Fest Registration</title>
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <style>
8     body {
9       background: #f4f8fb;
10      font-family: 'Segoe UI', Arial, sans-serif;
11      color: #222;
12    }
13    .container {
14      max-width: 420px;
15      margin: 40px auto;
16      background: #fff;
17      border-radius: 12px;
18      box-shadow: 0 4px 24px rgba(0,0,0,0.08);
19      padding: 2rem 2.5rem 2rem 2.5rem;
20    }
21    h2 {
22      text-align: center;
23      color: #1976d2;
24      margin-bottom: 1.5rem;
25    }
26    form label {
27      display: block;
28      margin-bottom: 0.3rem;
29      font-weight: 500;
30    }
31    form input, form select {
32      width: 100%;
33      padding: 0.7rem;
34      margin-bottom: 1.1rem;
35      border: 1px solid #bdbdbd;
36      border-radius: 6px;
37      font-size: 1rem;
38      transition: border 0.2s;
39    }
40    form input:focus, form select:focus {
41      border: 1.5px solid #1976d2;
42      outline: none;
43    }
44    .error {
45      color: #d32f2f;
46      font-size: 0.95em;
47      margin-top: -0.8rem;
48      margin-bottom: 0.8rem;
49      display: none;
50    }
51    button {
52      width: 100%;
53      background: #1976d2;
54      color: #fff;
55      border: none;
56      padding: 0.9rem;
57      border-radius: 6px;
58      font-size: 1.1rem;
59      font-weight: 600;
60      cursor: pointer;
61      transition: background 0.2s;
62    }
63    button:hover {
64      background: #125ea7;
65    }
66    @media (max-width: 500px) {
67      .container { padding: 1rem; }
68    }
69  </style>
70 </head>
71 <body>
72   <div class="container">
73     <h2>Tech Fest Registration</h2>
74     <form id="regForm" autocomplete="off" novalidate>
75       <label for="name">Name</label>
76       <input type="text" id="name" name="name" required>
77       <div class="error" id="nameError">Please enter your name.</div>
78
79       <label for="email">Email</label>
80       <input type="email" id="email" name="email" required>
81       <div class="error" id="emailError">Please enter a valid email address.</div>
82
83       <label for="phone">Phone</label>
84       <input type="tel" id="phone" name="phone" maxlength="10" required>
85       <div class="error" id="phoneError">Please enter a valid 10-digit phone number.</div>
86
87       <label for="dept">Department</label>
88       <select id="dept" name="dept" required>
89         <option value="">--Select Department--</option>
90         <option value="CSE">CSE</option>
91         <option value="ECE">ECE</option>
92         <option value="EEE">EEE</option>
93         <option value="MECH">MECH</option>
94         <option value="CIVIL">CIVIL</option>
95         <option value="MBA">MBA</option>
96       </select>
97       <div class="error" id="deptError">Please select your department.</div>
98
99       <label for="event">Event Selection</label>
100      <select id="event" name="event" required>
101        <option value="">--Select Event--</option>
102        <option value="Hackathon">Hackathon</option>

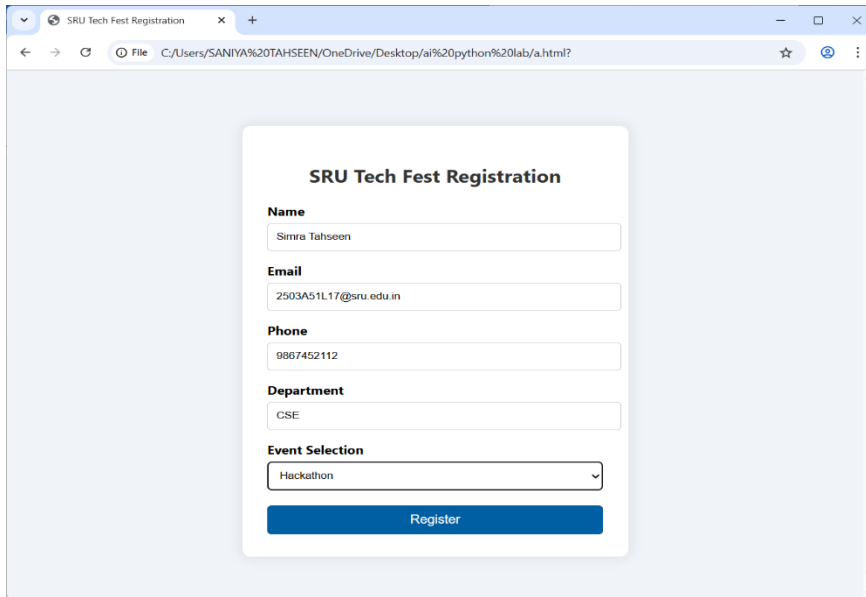
```

```

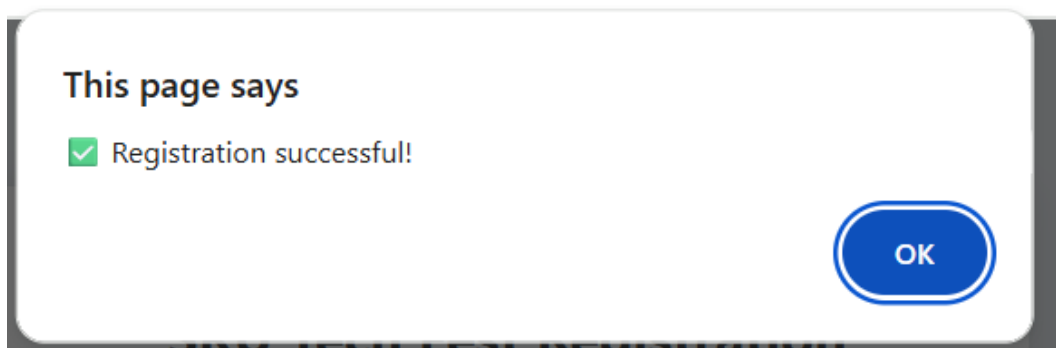
116 <script>
117     // Helper functions for validation
118     function validateName(name) {
119         return name.trim().length > 0;
120     }
121     function validateEmail(email) {
122         // Simple email regex
123         return /^[^\s@]+@[^\s@]+\.[^\s@]+$/i.test(email);
124     }
125     function validatePhone(phone) {
126         // Only digits, length 10
127         return /^\d{10}$/i.test(phone);
128     }
129     function validateSelect(value) {
130         return value !== '';
131     }
132
133     // Real-time validation
134     document.getElementById('name').addEventListener('input', function() {
135         document.getElementById('nameError').style.display = validateName(this.value) ? 'none' : 'block';
136     });
137     document.getElementById('email').addEventListener('input', function() {
138         document.getElementById('emailError').style.display = validateEmail(this.value) ? 'none' : 'block';
139     });
140     document.getElementById('phone').addEventListener('input', function() {
141         document.getElementById('phoneError').style.display = validatePhone(this.value) ? 'none' : 'block';
142     });
143     document.getElementById('dept').addEventListener('change', function() {
144         document.getElementById('deptError').style.display = validateSelect(this.value) ? 'none' : 'block';
145     });
146     document.getElementById('event').addEventListener('change', function() {
147         document.getElementById('eventError').style.display = validateSelect(this.value) ? 'none' : 'block';
148     });
149
150     // On form submit
151     document.getElementById('regForm').addEventListener('submit', function(e) {
152         e.preventDefault();
153         let valid = true;
154
155         // Validate all fields
156         if (!validateName(this.name.value)) {
157             document.getElementById('nameError').style.display = 'block';
158             valid = false;
159         }
160         if (!validateEmail(this.email.value)) {
161             document.getElementById('emailError').style.display = 'block';
162             valid = false;
163         }
164         if (!validatePhone(this.phone.value)) {
165             document.getElementById('phoneError').style.display = 'block';
166             valid = false;
167         }
168         if (!validateSelect(this.dept.value)) {
169             document.getElementById('deptError').style.display = 'block';
170             valid = false;
171         }
172         if (!validateSelect(this.event.value)) {
173             document.getElementById('eventError').style.display = 'block';
174             valid = false;
175         }
176
177         if (valid) {
178             this.style.display = 'none';
179             document.getElementById('successMsg').style.display = 'block';
180         }
181     });
182 </script>
183 </body>
184 </html>

```

OUTPUT:



A screenshot of a web browser displaying a registration form titled "SRU Tech Fest Registration". The form is centered on a light blue background. It contains the following fields: "Name" (filled with "Simra Tahseen"), "Email" (filled with "2503A51L17@srw.edu.in"), "Phone" (filled with "9867452112"), "Department" (filled with "CSE"), and "Event Selection" (a dropdown menu with "Hackathon" selected). A blue "Register" button is at the bottom of the form. The browser's address bar shows the file path: "C:/Users/SANIYA%20TAHSEEN/OneDrive/Desktop/ai%20python%20lab/a.html?".



Observation:

The code provides a **modern, responsive registration form** with fields for student details and event selection. It uses **CSS for an attractive layout** and **JavaScript for real-time validation** (checking email format, phone length, and required fields). Error messages are displayed instantly, and a success message confirms registration, making the form both user-friendly and reliable.

Task 4: 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.

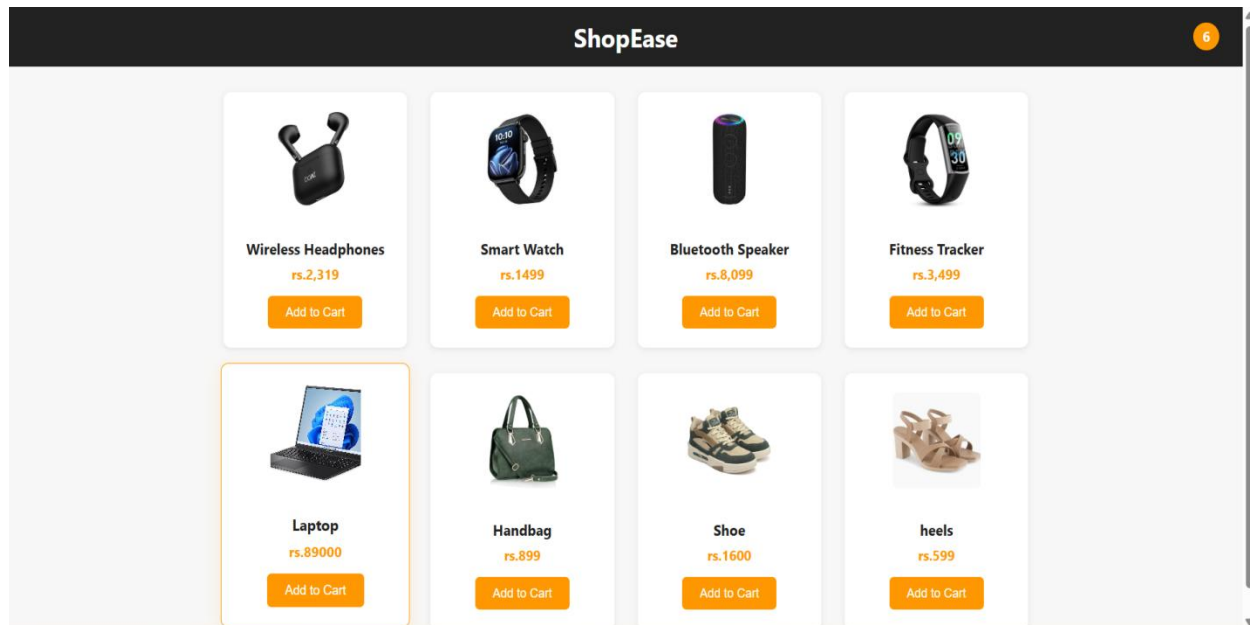
- Use Copilot to generate a grid-based product catalog in HTML/CSS.
- Implement a JavaScript “Add to Cart” functionality with Copilot’s guidance.
- Modify Copilot’s suggestions to include a cart counter at the top-right corner of the page.

PROMPT:

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

- generate a grid-based product catalog in HTML/CSS.
- Implement a JavaScript “Add to Cart” functionality
- include a cart counter at the top-right corner of the page. give html,css and js in the same file

OUTPUT:



OBSERVATION:

The code creates a **basic e-commerce product page** using HTML, CSS, and JavaScript in a single file. It displays products in a **responsive grid layout** with images, names, prices, and an **“Add to Cart”** button. A **cart counter** is placed at the top-right corner inside the header and dynamically updates whenever the user clicks “Add to Cart.” The implementation is simple, lightweight, and serves as a starting point for building a full shopping cart system.