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ROLL NO   : 1. 23CS029
                2. 23CS028
                3. 23CS044
                4. 23CS045
                5. 23CS032

DATE   : 31.09.2025

Completed the project named as Phase _04_ TECHNOLOGY
PROJECT NAME : PORTFOLIO WEBSITE
SUBMITTED BY,
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Phase 4 — Enhancements & Deployment

1.Additional Features

- The following features were added using JavaScript and CSS:
- Responsive Navigation Menu
  - o Hamburger toggle for mobile view.
  - o Closes automatically when a menu item is clicked.
- Smooth Scrolling
  - o Navigation links smoothly scroll to sections.
- Active Link Highlighting
  - o Current section link in navbar is highlighted while scrolling.
- Skill Bars Animation
  - o Progress bars animate on scroll using IntersectionObserver.
- Scroll-based Animations
  - o Project cards, tool cards, and contact items fade in on scroll.
- Typing Effect
  - o Hero section name (John Smith) animates with typewriter effect.
- Parallax Effect
  - o Hero section background moves slightly while scrolling.
- Navbar Background Change
  - o Transparent at top, becomes solid with shadow after scrolling.
- Contact Form Handling
  - o Submitting the form opens the default mail client via mailto:.
- Section Reveal Animations
  - o All sections smoothly fade in and slide up when visible on screen.
- Loading Animation
  - o Hero section content fades in on initial page load.

2. UI/UX Improvements

- Transparent navbar with blur effect and gradient active states.
- Hover effects on buttons, project cards, and tool cards.
- Responsive grid layouts for About, Skills, Projects, and Contact sections.
- Mobile-friendly design with media queries (hamburger menu, stacked layout).
- Consistent gradients and colors for brand identity.
- Subtle animations improve user experience without being distracting.

3. API Enhancements

- Not Applicable (The portfolio website is static and does not consume external APIs).
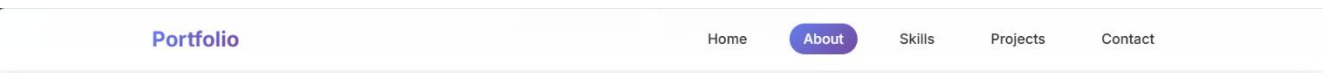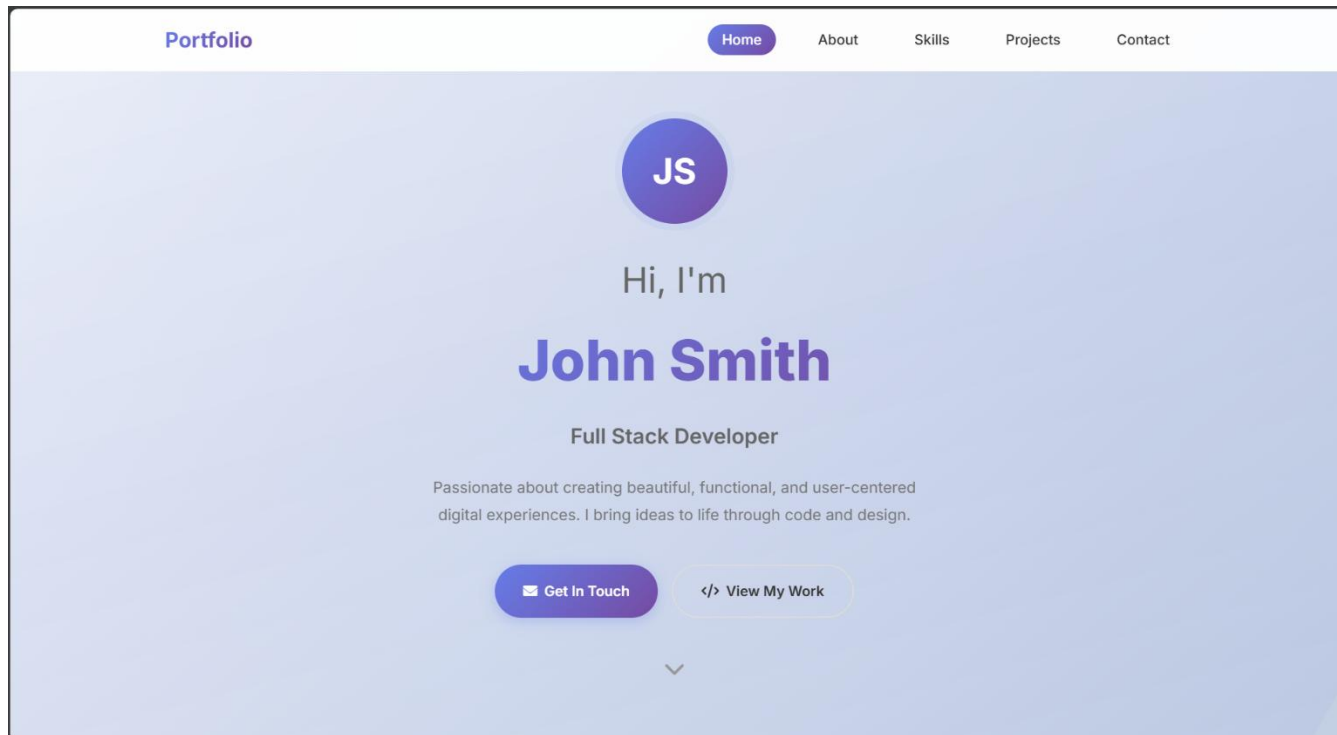
4. Performance & Security Checks

- All external resources (Google Fonts, Font Awesome) loaded over HTTPS.
- CSS and JS files separated from HTML for maintainability.
- IntersectionObserver API used instead of scroll events → improves performance.
- Responsive images with proper object-fit for optimized display.
- No sensitive data exposed in the source code (demo email/phone used).

5.Testing of Enhancements

Feature	Test Performed	Result
Responsive Navbar	Checked toggle on mobile	Works correctly
Smooth Scroll	Clicked all nav links	Scrolls smoothly
Active Link Highlighting	Scrolled through sections	Correct link highlighted
Skill Bars Animation	Scrolled to Skills section	Progress bars animated once
Typing Effect	Page load test	Name types correctly
Parallax Effect	Scrolled Hero section	Background moves smoothly
Contact Form	Submitted with data	Opens mail client
Section Reveal	Scrolled through all sections	Each section faded in
Loading Animation	Reloaded page	Hero fades in

DEPLOYMENT AND OUTPUT:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>John Smith - Portfolio</title>
    <link rel="stylesheet" href="styles.css">
```
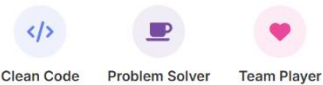
```html
    <link href="https://fonts.googleapis.com/css2?family=Inter:wght@300;400;500;600;700;800&display=swap"
rel="stylesheet">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0/css/all.min.css">
</head>

<body>
    <!-- Navigation -->
    <nav class="navbar" id="navbar">
        <div class="nav-container">
            <div class="nav-logo">
                <span class="logo-text">Portfolio</span>
            </div>

            <ul class="nav-menu" id="nav-menu">
                <li class="nav-item">
                    <a href="#home" class="nav-link">Home</a>
                </li>
                <li class="nav-item">
                    <a href="#about" class="nav-link">About</a>
                </li>
                <li class="nav-item">
                    <a href="#skills" class="nav-link">Skills</a>
                </li>
                <li class="nav-item">
                    <a href="#projects" class="nav-link">Projects</a>
                </li>
                <li class="nav-item">
                    <a href="#contact" class="nav-link">Contact</a>
                </li>
            </ul>

            <div class="hamburger" id="hamburger">
                <span class="bar"></span>
                <span class="bar"></span>
                <span class="bar"></span>
            </div>
        </div>
    </nav>

    <!-- Hero Section -->
    <section id="home" class="hero">
        <div class="hero-container">
            <div class="hero-content">
                <div class="hero-avatar">
                    <div class="avatar-ring">
                        <span class="avatar-text">JS</span>
                    </div>
                </div>

                <h1 class="hero-title">
                    <span class="greeting">Hi, I'm</span>
```

```html
        <span class="name">John Smith</span>
    </h1>

    <h2 class="hero-subtitle">Full Stack Developer</h2>

    <p class="hero-description">
        Passionate about creating beautiful, functional, and user-centered digital experiences.
        I bring ideas to life through code and design.
    </p>

    <div class="hero-buttons">
        <a href="#contact" class="btn btn-primary">
            <i class="fas fa-envelope"></i>
            Get In Touch
        </a>
        <a href="#projects" class="btn btn-secondary">
            <i class="fas fa-code"></i>
            View My Work
        </a>
    </div>

    <div class="scroll-indicator">
        <i class="fas fa-chevron-down"></i>
    </div>
    </div>
    </div>
</section>

<!-- About Section -->
<section id="about" class="about">
    <div class="container">
        <div class="section-header">
            <h2 class="section-title">About Me</h2>
            <div class="section-line"></div>
        </div>

        <div class="about-content">
            <div class="about-text">
                <h3 class="about-title">Crafting Digital Experiences with Passion</h3>

                <p class="about-description">
                    I'm a dedicated full-stack developer with over 5 years of experience in creating
                    web applications that combine beautiful design with robust functionality. My journey
                    in technology began with a curiosity about how things work, and it has evolved into
                    a passion for building solutions that make a difference.
                </p>

                <p class="about-description">
                    When I'm not coding, you'll find me exploring new technologies, contributing to
                    open-source projects, or sharing knowledge with the developer community. I believe
                    in continuous learning and staying current with industry trends.
```

```html
                </p>

                <div class="about-features">
                    <div class="feature">
                        <div class="feature-icon">
                            <i class="fas fa-code"></i>
                        </div>
                        <p class="feature-text">Clean Code</p>
                    </div>

                    <div class="feature">
                        <div class="feature-icon">
                            <i class="fas fa-coffee"></i>
                        </div>
                        <p class="feature-text">Problem Solver</p>
                    </div>

                    <div class="feature">
                        <div class="feature-icon">
                            <i class="fas fa-heart"></i>
                        </div>
                        <p class="feature-text">Team Player</p>
                    </div>
                </div>
            </div>

            <div class="about-image">
                <div class="image-container">
                    <img src="https://images.pexels.com/photos/2379004/pexels-photo-2379004.jpeg" alt="Profile" class="profile-img">
                    <div class="experience-badge">
                        <span class="experience-text">5+</span>
                        <span class="experience-label">Years</span>
                    </div>
                </div>
            </div>
        </div>
    </div>
</section>

<!-- Skills Section -->
<section id="skills" class="skills">
    <div class="container">
        <div class="section-header">
            <h2 class="section-title">Skills & Expertise</h2>
            <div class="section-line"></div>
            <p class="section-description">
                Here are the technologies and tools I work with to bring ideas to life
            </p>
        </div>
```
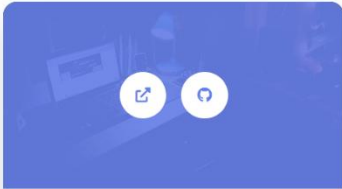
```html
<div class="skills-content">
  <div class="technical-skills">
    <h3 class="skills-subtitle">Technical Skills</h3>

    <div class="skills-list">
      <div class="skill-item">
        <div class="skill-header">
          <span class="skill-name">JavaScript</span>
          <span class="skill-percentage">90%</span>
        </div>
        <div class="skill-bar">
          <div class="skill-progress" data-width="90%"></div>
        </div>
      </div>

      <div class="skill-item">
        <div class="skill-header">
          <span class="skill-name">React</span>
          <span class="skill-percentage">85%</span>
        </div>
        <div class="skill-bar">
          <div class="skill-progress" data-width="85%"></div>
        </div>
      </div>

      <div class="skill-item">
        <div class="skill-header">
          <span class="skill-name">TypeScript</span>
          <span class="skill-percentage">80%</span>
        </div>
        <div class="skill-bar">
          <div class="skill-progress" data-width="80%"></div>
        </div>
      </div>

      <div class="skill-item">
        <div class="skill-header">
          <span class="skill-name">Node.js</span>
          <span class="skill-percentage">85%</span>
        </div>
        <div class="skill-bar">
          <div class="skill-progress" data-width="85%"></div>
        </div>
      </div>

      <div class="skill-item">
        <div class="skill-header">
          <span class="skill-name">Python</span>
          <span class="skill-percentage">75%</span>
        </div>
        <div class="skill-bar">
```

```html
          <div class="skill-progress" data-width="75%"></div>
        </div>
      </div>

      <div class="skill-item">
        <div class="skill-header">
          <span class="skill-name">CSS/SASS</span>
          <span class="skill-percentage">90%</span>
        </div>
        <div class="skill-bar">
          <div class="skill-progress" data-width="90%"></div>
        </div>
      </div>
    </div>
  </div>

  <div class="tools-technologies">
    <h3 class="skills-subtitle">Tools & Technologies</h3>

    <div class="tools-grid">
      <div class="tool-card">
        <i class="fab fa-git-alt"></i>
        <span>Git & GitHub</span>
      </div>

      <div class="tool-card">
        <i class="fab fa-docker"></i>
        <span>Docker</span>
      </div>

      <div class="tool-card">
        <i class="fab fa-aws"></i>
        <span>AWS</span>
      </div>

      <div class="tool-card">
        <i class="fas fa-database"></i>
        <span>MongoDB</span>
      </div>

      <div class="tool-card">
        <i class="fab fa-figma"></i>
        <span>Figma</span>
      </div>

      <div class="tool-card">
        <i class="fas fa-code"></i>
        <span>VS Code</span>
      </div>
    </div>
```

```html
            <div class="learning-card">
                <h4>Always Learning</h4>
                <p>Currently exploring GraphQL, Next.js, and cloud architecture patterns</p>
            </div>
        </div>
    </div>
</div>
</section>

<!-- Projects Section -->
<section id="projects" class="projects">
    <div class="container">
        <div class="section-header">
            <h2 class="section-title">Featured Projects</h2>
            <div class="section-line"></div>
            <p class="section-description">
                A showcase of my recent work and personal projects
            </p>
        </div>

        <div class="projects-grid">
            <!-- Project 1: E-Commerce Platform -->
            <div class="project-card">
                <div class="project-image">
                    <img src="https://images.pexels.com/photos/230544/pexels-photo-230544.jpeg" alt="E-Commerce Platform">
                    <div class="project-overlay">
                        <div class="project-links">
                            <a href="#" class="project-link">
                                <i class="fas fa-external-link-alt"></i>
                            </a>
                            <a href="#" class="project-link">
                                <i class="fab fa-github"></i>
                            </a>
                        </div>
                    </div>
                </div>
                <div class="project-content">
                    <h3 class="project-title">E-Commerce Platform</h3>
                    <p class="project-description">
                        A full-stack e-commerce solution with React, Node.js, and PostgreSQL. Features include user authentication, payment processing, and admin dashboard.
                    </p>
                    <div class="project-tech">
                        <span class="tech-tag">React</span>
                        <span class="tech-tag">Node.js</span>
                        <span class="tech-tag">PostgreSQL</span>
                    </div>
                </div>
            </div>
```

```html
            <!-- Project 2: Task Management App -->
            <div class="project-card">
              <div class="project-image">
                    <img src="https://images.pexels.com/photos/265087/pexels-photo-265087.jpeg" alt="Task Management App">
                  <div class="project-overlay">
                    <div class="project-links">
                      <a href="#" class="project-link">
                        <i class="fas fa-external-link-alt"></i>
                      </a>
                      <a href="#" class="project-link">
                        <i class="fab fa-github"></i>
                      </a>
                    </div>
                  </div>
              </div>
              <div class="project-content">
                <h3 class="project-title">Task Management App</h3>
                <p class="project-description">
                  A collaborative task management application with real-time updates, drag-and-drop functionality, and team collaboration features.
                </p>
                <div class="project-tech">
                  <span class="tech-tag">Vue.js</span>
                  <span class="tech-tag">Socket.io</span>
                  <span class="tech-tag">MongoDB</span>
                </div>
              </div>
            </div>

            <!-- Project 3: Weather Dashboard -->
            <div class="project-card">
              <div class="project-image">
                    <img src="https://images.pexels.com/photos/669996/pexels-photo-669996.jpeg" alt="Weather Dashboard">
                  <div class="project-overlay">
                    <div class="project-links">
                      <a href="#" class="project-link">
                        <i class="fas fa-external-link-alt"></i>
                      </a>
                      <a href="#" class="project-link">
                        <i class="fab fa-github"></i>
                      </a>
                    </div>
                  </div>
              </div>
              <div class="project-content">
                <h3 class="project-title">Weather Dashboard</h3>
                <p class="project-description">
                  A responsive weather dashboard with location-based forecasts, interactive maps, and detailed weather analytics.
```

```html
            </p>
            <div class="project-tech">
               <span class="tech-tag">JavaScript</span>
               <span class="tech-tag">API Integration</span>
               <span class="tech-tag">Chart.js</span>
            </div>
         </div>
      </div>

      <!-- Project 4: Social Media Dashboard -->
      <div class="project-card">
         <div class="project-image">
            <img src="https://images.pexels.com/photos/1779487/pexels-photo-1779487.jpeg" alt="Social Media Dashboard">
               <div class="project-overlay">
                  <div class="project-links">
                     <a href="#" class="project-link">
                        <i class="fas fa-external-link-alt"></i>
                     </a>
                     <a href="#" class="project-link">
                        <i class="fab fa-github"></i>
                     </a>
                  </div>
               </div>
         </div>
         <div class="project-content">
            <h3 class="project-title">Social Media Dashboard</h3>
            <p class="project-description">
               A comprehensive social media management dashboard with analytics, post scheduling, and multi-platform integration.
            </p>
            <div class="project-tech">
               <span class="tech-tag">React</span>
               <span class="tech-tag">Express</span>
               <span class="tech-tag">Redis</span>
            </div>
         </div>
      </div>

      <!-- Project 5: Portfolio Website -->
      <div class="project-card">
         <div class="project-image">
            <img src="https://images.pexels.com/photos/590020/pexels-photo-590020.jpeg" alt="Portfolio Website">
               <div class="project-overlay">
                  <div class="project-links">
                     <a href="#" class="project-link">
                        <i class="fas fa-external-link-alt"></i>
                     </a>
                     <a href="#" class="project-link">
                        <i class="fab fa-github"></i>
```

```html
                    </a>
                  </div>
                </div>
              </div>
              <div class="project-content">
                <h3 class="project-title">Portfolio Website</h3>
                <p class="project-description">
                 A modern, responsive portfolio website built with vanilla JavaScript, featuring smooth animations and mobile-first design.
                </p>
                <div class="project-tech">
                  <span class="tech-tag">HTML5</span>
                  <span class="tech-tag">CSS3</span>
                  <span class="tech-tag">JavaScript</span>
                </div>
              </div>
            </div>

            <!-- Project 6: API Documentation Tool -->
            <div class="project-card">
              <div class="project-image">
                    <img src="https://images.pexels.com/photos/159888/pexels-photo-159888.jpeg" alt="API Documentation Tool">
                <div class="project-overlay">
                  <div class="project-links">
                    <a href="#" class="project-link">
                      <i class="fas fa-external-link-alt"></i>
                    </a>
                    <a href="#" class="project-link">
                      <i class="fab fa-github"></i>
                    </a>
                  </div>
                </div>
              </div>
              <div class="project-content">
                <h3 class="project-title">API Documentation Tool</h3>
                <p class="project-description">
                  An interactive API documentation generator with live testing capabilities, code examples, and automatic endpoint discovery.
                </p>
                <div class="project-tech">
                  <span class="tech-tag">TypeScript</span>
                  <span class="tech-tag">Swagger</span>
                  <span class="tech-tag">Docker</span>
                </div>
              </div>
            </div>
          </div>
        </div>
    </section>
```

```html
<!-- Contact Section -->
<section id="contact" class="contact">
   <div class="container">
      <div class="section-header">
         <h2 class="section-title">Get In Touch</h2>
         <div class="section-line"></div>
         <p class="section-description">
            Let's work together to bring your ideas to life
         </p>
      </div>

      <div class="contact-content">
         <div class="contact-info">
            <h3 class="contact-title">Let's Start a Conversation</h3>

            <p class="contact-description">
               I'm always interested in hearing about new projects and opportunities.
               Whether you have a project in mind or just want to chat about technology,
               feel free to reach out!
            </p>

            <div class="contact-details">
               <div class="contact-item">
                  <div class="contact-icon">
                     <i class="fas fa-envelope"></i>
                  </div>
                  <div class="contact-text">
                     <span>Email</span>
                     <a href="mailto:john.smith@example.com">john.smith@example.com</a>
                  </div>
               </div>

               <div class="contact-item">
                  <div class="contact-icon">
                     <i class="fas fa-phone"></i>
                  </div>
                  <div class="contact-text">
                     <span>Phone</span>
                     <a href="tel:+1234567890">+1 (234) 567-890</a>
                  </div>
               </div>

               <div class="contact-item">
                  <div class="contact-icon">
                     <i class="fas fa-map-marker-alt"></i>
                  </div>
                  <div class="contact-text">
                     <span>Location</span>
                     <span>San Francisco, CA</span>
                  </div>
               </div>
```

```html
            </div>

            <div class="social-links">
               <a href="#" class="social-link">
                  <i class="fab fa-linkedin"></i>
               </a>
               <a href="#" class="social-link">
                  <i class="fab fa-github"></i>
               </a>
               <a href="#" class="social-link">
                  <i class="fab fa-twitter"></i>
               </a>
               <a href="#" class="social-link">
                  <i class="fas fa-envelope"></i>
               </a>
            </div>
         </div>

         <div class="contact-form-container">
            <form class="contact-form" id="contact-form">
               <div class="form-group">
                  <label for="name">Name</label>
                  <input type="text" id="name" name="name" required>
               </div>

               <div class="form-group">
                  <label for="email">Email</label>
                  <input type="email" id="email" name="email" required>
               </div>

               <div class="form-group">
                  <label for="message">Message</label>
                  <textarea id="message" name="message" rows="5" required></textarea>
               </div>

               <button type="submit" class="btn btn-primary btn-full">
                  <i class="fas fa-paper-plane"></i>
                  Send Message
               </button>
            </form>
         </div>
      </div>
   </div>
</section>

<!-- Footer -->
<footer class="footer">
   <div class="container">
      <div class="footer-content">
         <div class="footer-text">
            <p>&copy; 2024 John Smith. All rights reserved.</p>
```

```html
            </div>

            <div class="footer-links">
                <a href="#home">Home</a>
                <a href="#about">About</a>
                <a href="#projects">Projects</a>
                <a href="#contact">Contact</a>
            </div>
          </div>
        </div>
    </footer>

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

CSS:

```css
/* Reset and Base Styles */
* {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
}

html {
    scroll-behavior: smooth;
}

body {
    font-family: 'Inter', sans-serif;
    line-height: 1.6;
    color: #333;
    overflow-x: hidden;
}

/* Utility Classes */
.container {
    max-width: 1200px;
    margin: 0 auto;
    padding: 0 20px;
}

/* Navigation */
.navbar {
    position: fixed;
    top: 0;
    width: 100%;
    background: rgba(255, 255, 255, 0.95);
    backdrop-filter: blur(10px);
    border-bottom: 1px solid rgba(255, 255, 255, 0.2);
    z-index: 1000;
    transition: all 0.3s ease;
}
```

```css
.nav-container {
  max-width: 1200px;
  margin: 0 auto;
  padding: 0 20px;
  display: flex;
  justify-content: space-between;
  align-items: center;
  height: 70px;
}

.nav-logo .logo-text {
  font-size: 1.5rem;
  font-weight: 700;
  background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
  -webkit-background-clip: text;
  -webkit-text-fill-color: transparent;
  background-clip: text;
}

.nav-menu {
  display: flex;
  list-style: none;
  gap: 2rem;
}

.nav-link {
  text-decoration: none;
  color: #333;
  font-weight: 500;
  padding: 0.5rem 1rem;
  border-radius: 25px;
  transition: all 0.3s ease;
  position: relative;
}

.nav-link:hover,
.nav-link.active {
  background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
  color: white;
  transform: translateY(-2px);
}

/* Hamburger Menu */
.hamburger {
  display: none;
  flex-direction: column;
  cursor: pointer;
}

.bar {
  width: 25px;
  height: 3px;
  background: #333;
  margin: 3px 0;
  transition: 0.3s;
```

```css
    border-radius: 2px;
}

/* Hero Section */
.hero {
    min-height: 100vh;
    background: linear-gradient(135deg, #f5f7fa 0%, #c3cfe2 100%);
    display: flex;
    align-items: center;
    justify-content: center;
    padding-top: 70px;
    position: relative;
    overflow: hidden;
}

.hero::before {
    content: '';
    position: absolute;
    width: 200%;
    height: 200%;
    background: linear-gradient(45deg, transparent, rgba(102, 126, 234, 0.1), transparent);
    animation: rotate 20s linear infinite;
    top: -50%;
    left: -50%;
}

@keyframes rotate {
    0% { transform: rotate(0deg); }
    100% { transform: rotate(360deg); }
}

.hero-container {
    position: relative;
    z-index: 2;
}

.hero-content {
    text-align: center;
    animation: fadeInUp 1s ease;
}

.hero-avatar {
    margin-bottom: 2rem;
}

.avatar-ring {
    width: 120px;
    height: 120px;
    border-radius: 50%;
    background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
    display: flex;
    align-items: center;
    justify-content: center;
    margin: 0 auto;
    position: relative;
    animation: pulse 2s infinite;
```

```css
        }

        .avatar-text {
            color: white;
            font-size: 2.5rem;
            font-weight: 700;
        }

        @keyframes pulse {
            0% { box-shadow: 0 0 0 0 rgba(102, 126, 234, 0.4); }
            70% { box-shadow: 0 0 0 10px rgba(102, 126, 234, 0); }
            100% { box-shadow: 0 0 0 0 rgba(102, 126, 234, 0); }
        }

        .hero-title {
            margin-bottom: 1rem;
        }

        .greeting {
            display: block;
            font-size: 2.5rem;
            font-weight: 400;
            color: #666;
            margin-bottom: 0.5rem;
        }

        .name {
            display: block;
            font-size: 4rem;
            font-weight: 800;
            background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
            -webkit-background-clip: text;
            -webkit-text-fill-color: transparent;
            background-clip: text;
        }

        .hero-subtitle {
            font-size: 1.5rem;
            font-weight: 600;
            color: #666;
            margin-bottom: 1.5rem;
        }

        .hero-description {
            font-size: 1.1rem;
            color: #777;
            max-width: 600px;
            margin: 0 auto 2.5rem;
            line-height: 1.8;
        }

        .hero-buttons {
            display: flex;
            gap: 1rem;
            justify-content: center;
            margin-bottom: 3rem;
```

```css
        }

        .btn {
            display: inline-flex;
            align-items: center;
            gap: 0.5rem;
            padding: 1rem 2rem;
            border: none;
            border-radius: 50px;
            font-size: 1rem;
            font-weight: 600;
            text-decoration: none;
            transition: all 0.3s ease;
            cursor: pointer;
        }

        .btn-primary {
            background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
            color: white;
            box-shadow: 0 4px 15px rgba(102, 126, 234, 0.3);
        }

        .btn-primary:hover {
            transform: translateY(-3px);
            box-shadow: 0 8px 25px rgba(102, 126, 234, 0.4);
        }

        .btn-secondary {
            background: transparent;
            color: #333;
            border: 2px solid #ddd;
        }

        .btn-secondary:hover {
            border-color: #667eea;
            color: #667eea;
            transform: translateY(-3px);
            box-shadow: 0 8px 25px rgba(102, 126, 234, 0.2);
        }

        .scroll-indicator {
            animation: bounce 2s infinite;
            color: #999;
            font-size: 1.5rem;
        }

        @keyframes bounce {
            0%, 20%, 50%, 80%, 100% { transform: translateY(0); }
            40% { transform: translateY(-10px); }
            60% { transform: translateY(-5px); }
        }

        @keyframes fadeInUp {
            from {
                opacity: 0;
                transform: translateY(50px);
```

```css
        }
        to {
            opacity: 1;
            transform: translateY(0);
        }
    }

    /* Section Styles */
    .section-header {
        text-align: center;
        margin-bottom: 4rem;
    }

    .section-title {
        font-size: 2.5rem;
        font-weight: 700;
        color: #333;
        margin-bottom: 1rem;
    }

    .section-line {
        width: 60px;
        height: 4px;
        background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
        margin: 0 auto 1rem;
        border-radius: 2px;
    }

    .section-description {
        font-size: 1.1rem;
        color: #666;
        max-width: 600px;
        margin: 0 auto;
    }

    /* About Section */
    .about {
        padding: 5rem 0;
        background: #fff;
    }

    .about-content {
        display: grid;
        grid-template-columns: 1fr 1fr;
        gap: 4rem;
        align-items: center;
    }

    .about-title {
        font-size: 1.8rem;
        font-weight: 700;
        color: #333;
        margin-bottom: 1.5rem;
    }

    .about-description {
```

```css
      color: #666;
      margin-bottom: 1.5rem;
      line-height: 1.8;
   }

   .about-features {
      display: flex;
      gap: 2rem;
   }

   .feature {
      text-align: center;
   }

   .feature-icon {
      width: 60px;
      height: 60px;
      border-radius: 50%;
      display: flex;
      align-items: center;
      justify-content: center;
      margin: 0 auto 0.5rem;
      font-size: 1.5rem;
   }

   .feature:nth-child(1) .feature-icon {
      background: rgba(102, 126, 234, 0.1);
      color: #667eea;
   }

   .feature:nth-child(2) .feature-icon {
      background: rgba(118, 75, 162, 0.1);
      color: #764ba2;
   }

   .feature:nth-child(3) .feature-icon {
      background: rgba(236, 72, 153, 0.1);
      color: #ec4899;
   }

   .feature-text {
      font-weight: 600;
      color: #333;
   }

   .about-image {
      position: relative;
   }

   .image-container {
      position: relative;
      border-radius: 20px;
      overflow: hidden;
      box-shadow: 0 20px 40px rgba(0, 0, 0, 0.1);
   }
```

```css
.profile-img {
  width: 100%;
  height: 400px;
  object-fit: cover;
}

.experience-badge {
  position: absolute;
  bottom: -20px;
  right: -20px;
  background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
  color: white;
  padding: 1rem;
  border-radius: 15px;
  text-align: center;
  box-shadow: 0 10px 30px rgba(102, 126, 234, 0.3);
}

.experience-text {
  display: block;
  font-size: 1.5rem;
  font-weight: 700;
}

.experience-label {
  display: block;
  font-size: 0.9rem;
  opacity: 0.9;
}

/* Skills Section */
.skills {
  padding: 5rem 0;
  background: #f8fafc;
}

.skills-content {
  display: grid;
  grid-template-columns: 1fr 1fr;
  gap: 4rem;
}

.skills-subtitle {
  font-size: 1.5rem;
  font-weight: 700;
  color: #333;
  margin-bottom: 2rem;
}

.skills-list {
  gap: 1.5rem;
}

.skill-item {
  margin-bottom: 1.5rem;
}
```

```css
.skill-header {
    display: flex;
    justify-content: space-between;
    align-items: center;
    margin-bottom: 0.5rem;
}

.skill-name {
    font-weight: 600;
    color: #333;
}

.skill-percentage {
    font-size: 0.9rem;
    color: #666;
}

.skill-bar {
    height: 8px;
    background: #e2e8f0;
    border-radius: 4px;
    overflow: hidden;
}

.skill-progress {
    height: 100%;
    background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
    border-radius: 4px;
    width: 0;
    transition: width 2s ease-in-out;
}

.tools-grid {
    display: grid;
    grid-template-columns: repeat(2, 1fr);
    gap: 1rem;
    margin-bottom: 2rem;
}

.tool-card {
    background: white;
    padding: 1.5rem;
    border-radius: 10px;
    box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1);
    display: flex;
    flex-direction: column;
    align-items: center;
    text-align: center;
    transition: all 0.3s ease;
}

.tool-card:hover {
    transform: translateY(-5px);
    box-shadow: 0 10px 25px rgba(0, 0, 0, 0.15);
}
```

```css
.tool-card i {
    font-size: 2rem;
    color: #667eea;
    margin-bottom: 0.5rem;
}

.tool-card span {
    font-weight: 600;
    color: #333;
}

.learning-card {
    background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
    padding: 1.5rem;
    border-radius: 15px;
    color: white;
}

.learning-card h4 {
    font-size: 1.2rem;
    margin-bottom: 0.5rem;
}

.learning-card p {
    opacity: 0.9;
    line-height: 1.6;
}

/* Projects Section */
.projects {
    padding: 5rem 0;
    background: white;
}

.projects-grid {
    display: grid;
    grid-template-columns: repeat(auto-fit, minmax(350px, 1fr));
    gap: 2rem;
}

.project-card {
    background: white;
    border-radius: 15px;
    overflow: hidden;
    box-shadow: 0 5px 20px rgba(0, 0, 0, 0.1);
    transition: all 0.3s ease;
}

.project-card:hover {
    transform: translateY(-10px);
    box-shadow: 0 20px 40px rgba(0, 0, 0, 0.15);
}

.project-image {
    position: relative;
```

```css
    height: 200px;
    overflow: hidden;
}

.project-image img {
    width: 100%;
    height: 100%;
    object-fit: cover;
    transition: transform 0.3s ease;
}

.project-card:hover .project-image img {
    transform: scale(1.1);
}

.project-overlay {
    position: absolute;
    top: 0;
    left: 0;
    right: 0;
    bottom: 0;
    background: rgba(102, 126, 234, 0.9);
    display: flex;
    align-items: center;
    justify-content: center;
    opacity: 0;
    transition: opacity 0.3s ease;
}

.project-card:hover .project-overlay {
    opacity: 1;
}

.project-links {
    display: flex;
    gap: 1rem;
}

.project-link {
    width: 50px;
    height: 50px;
    border-radius: 50%;
    background: white;
    display: flex;
    align-items: center;
    justify-content: center;
    color: #667eea;
    text-decoration: none;
    transition: all 0.3s ease;
}

.project-link:hover {
    transform: scale(1.1);
    background: #667eea;
    color: white;
}
```

```css
.project-content {
  padding: 2rem;
}

.project-title {
  font-size: 1.3rem;
  font-weight: 700;
  color: #333;
  margin-bottom: 1rem;
}

.project-description {
  color: #666;
  line-height: 1.6;
  margin-bottom: 1.5rem;
}

.project-tech {
  display: flex;
  flex-wrap: wrap;
  gap: 0.5rem;
}

.tech-tag {
  background: rgba(102, 126, 234, 0.1);
  color: #667eea;
  padding: 0.3rem 0.8rem;
  border-radius: 15px;
  font-size: 0.85rem;
  font-weight: 500;
}

/* Contact Section */
.contact {
  padding: 5rem 0;
  background: linear-gradient(135deg, #f8fafc 0%, #e2e8f0 100%);
}

.contact-content {
  display: grid;
  grid-template-columns: 1fr 1fr;
  gap: 4rem;
}

.contact-title {
  font-size: 1.8rem;
  font-weight: 700;
  color: #333;
  margin-bottom: 1rem;
}

.contact-description {
  color: #666;
  line-height: 1.8;
  margin-bottom: 2rem;
```

```css
        }

        .contact-details {
            margin-bottom: 2rem;
        }

        .contact-item {
            display: flex;
            align-items: center;
            gap: 1rem;
            margin-bottom: 1.5rem;
        }

        .contact-icon {
            width: 50px;
            height: 50px;
            border-radius: 50%;
            background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
            display: flex;
            align-items: center;
            justify-content: center;
            color: white;
            font-size: 1.2rem;
        }

        .contact-text span:first-child {
            display: block;
            font-weight: 600;
            color: #333;
            margin-bottom: 0.2rem;
        }

        .contact-text a,
        .contact-text span:last-child {
            color: #666;
            text-decoration: none;
        }

        .contact-text a:hover {
            color: #667eea;
        }

        .social-links {
            display: flex;
            gap: 1rem;
        }

        .social-link {
            width: 50px;
            height: 50px;
            border-radius: 50%;
            background: white;
            display: flex;
            align-items: center;
            justify-content: center;
            color: #667eea;
```

```css
    text-decoration: none;
    box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1);
    transition: all 0.3s ease;
}

.social-link:hover {
    background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
    color: white;
    transform: translateY(-3px);
    box-shadow: 0 5px 20px rgba(102, 126, 234, 0.3);
}

/* Contact Form */
.contact-form-container {
    background: white;
    padding: 2.5rem;
    border-radius: 15px;
    box-shadow: 0 10px 30px rgba(0, 0, 0, 0.1);
}

.form-group {
    margin-bottom: 1.5rem;
}

.form-group label {
    display: block;
    font-weight: 600;
    color: #333;
    margin-bottom: 0.5rem;
}

.form-group input,
.form-group textarea {
    width: 100%;
    padding: 0.8rem 1rem;
    border: 2px solid #e2e8f0;
    border-radius: 8px;
    font-size: 1rem;
    transition: border-color 0.3s ease;
    font-family: inherit;
}

.form-group input:focus,
.form-group textarea:focus {
    outline: none;
    border-color: #667eea;
}

.form-group textarea {
    resize: vertical;
    min-height: 120px;
}

.btn-full {
    width: 100%;
    justify-content: center;
```

```css
}

/* Footer */
.footer {
  background: #1a202c;
  color: white;
  padding: 2rem 0;
}

.footer-content {
  display: flex;
  justify-content: space-between;
  align-items: center;
}

.footer-links {
  display: flex;
  gap: 2rem;
}

.footer-links a {
  color: #a0aec0;
  text-decoration: none;
  transition: color 0.3s ease;
}

.footer-links a:hover {
  color: white;
}

/* Responsive Design */
@media (max-width: 1024px) {
  .about-content,
  .skills-content,
  .contact-content {
    grid-template-columns: 1fr;
    gap: 2rem;
  }

  .about-image {
    order: -1;
  }

  .projects-grid {
    grid-template-columns: repeat(auto-fit, minmax(300px, 1fr));
  }
}

@media (max-width: 768px) {
  .hamburger {
    display: flex;
  }

  .nav-menu {
    position: fixed;
    left: -100%;
```

```css
    top: 70px;
    flex-direction: column;
    background-color: rgba(255, 255, 255, 0.95);
    backdrop-filter: blur(10px);
    width: 100%;
    text-align: center;
    transition: 0.3s;
    box-shadow: 0 10px 27px rgba(0, 0, 0, 0.05);
    padding: 2rem 0;
}

.nav-menu.active {
    left: 0;
}

.hamburger.active .bar:nth-child(2) {
    opacity: 0;
}

.hamburger.active .bar:nth-child(1) {
    transform: translateY(8px) rotate(45deg);
}

.hamburger.active .bar:nth-child(3) {
    transform: translateY(-8px) rotate(-45deg);
}

.greeting {
    font-size: 2rem;
}

.name {
    font-size: 3rem;
}

.hero-subtitle {
    font-size: 1.2rem;
}

.hero-buttons {
    flex-direction: column;
    align-items: center;
}

.about-features {
    justify-content: center;
}
.tools-grid {
    grid-template-columns: 1fr;
}

.projects-grid {
    grid-template-columns: 1fr;
}

.footer-content {
```

```css
      flex-direction: column;
      gap: 1rem;
      text-align: center;
    }

    .footer-links {
      justify-content: center;
    }
  }

  @media (max-width: 480px) {
    .container {
      padding: 0 15px;
    }

    .section-title {
      font-size: 2rem;
    }

    .greeting {
      font-size: 1.5rem;
    }

    .name {
      font-size: 2.5rem;
    }

    .btn {
      padding: 0.8rem 1.5rem;
      font-size: 0.9rem;
    }

    .about-features {
      flex-direction: column;
      gap: 1rem;
    }

    .contact-form-container {
      padding: 1.5rem;
    }
  }
```

JavaScript:

```javascript
// Mobile Navigation Toggle
const hamburger = document.querySelector('#hamburger');
const navMenu = document.querySelector('#nav-menu');

hamburger.addEventListener('click', () => {
  hamburger.classList.toggle('active');
  navMenu.classList.toggle('active');
```

```javascript
    });

    // Close mobile menu when clicking on a link
    document.querySelectorAll('.nav-link').forEach(n => n.addEventListener('click', () => {
        hamburger.classList.remove('active');
        navMenu.classList.remove('active');
    }));

    // Smooth Scrolling for Navigation Links
    document.querySelectorAll('a[href^="#"]').forEach(anchor => {
        anchor.addEventListener('click', function (e) {
            e.preventDefault();
            const target = document.querySelector(this.getAttribute('href'));
            if (target) {
                target.scrollIntoView({
                    behavior: 'smooth',
                    block: 'start'
                });
            }
        });
    });

    // Active Navigation Link Highlighting
    window.addEventListener('scroll', () => {
        let current = '';
        const sections = document.querySelectorAll('section');

        sections.forEach(section => {
            const sectionTop = section.offsetTop;
            const sectionHeight = section.clientHeight;
            if (scrollY >= sectionTop - 200) {
                current = section.getAttribute('id');
            }
        });

        document.querySelectorAll('.nav-link').forEach(link => {
            link.classList.remove('active');
            if (link.getAttribute('href') === `#${current}`) {
                link.classList.add('active');
            }
        });
    });

    // Animate Skill Bars on Scroll
    const observerOptions = {
        threshold: 0.3,
        rootMargin: '0px 0px -50px 0px'
    };

    const skillsObserver = new IntersectionObserver((entries) => {
        entries.forEach(entry => {
            if (entry.isIntersecting) {
                const skillBars = entry.target.querySelectorAll('.skill-progress');
                skillBars.forEach(bar => {
                    const width = bar.getAttribute('data-width');
                    setTimeout(() => {
```

```
                    bar.style.width = width;
                }, 200);
            });
            skillsObserver.unobserve(entry.target);
        }
    });
}, observerOptions);

const skillsSection = document.querySelector('#skills');
if (skillsSection) {
    skillsObserver.observe(skillsSection);
}

// Animate Elements on Scroll
const animateObserver = new IntersectionObserver((entries) => {
    entries.forEach(entry => {
        if (entry.isIntersecting) {
            entry.target.style.opacity = '1';
            entry.target.style.transform = 'translateY(0)';
        }
    });
}, {
    threshold: 0.1,
    rootMargin: '0px 0px -50px 0px'
});

// Add animation to elements
document.addEventListener('DOMContentLoaded', () => {
    const animatedElements = document.querySelectorAll('.project-card, .tool-card, .contact-item');

    animatedElements.forEach(el => {
        el.style.opacity = '0';
        el.style.transform = 'translateY(30px)';
        el.style.transition = 'opacity 0.6s ease, transform 0.6s ease';
        animateObserver.observe(el);
    });
});

// Contact Form Handling
const contactForm = document.getElementById('contact-form');
if (contactForm) {
    contactForm.addEventListener('submit', function(e) {
        e.preventDefault();

        const name = document.getElementById('name').value;
        const email = document.getElementById('email').value;
        const message = document.getElementById('message').value;

        if (name && email && message) {
            // Create mailto link
            const subject = encodeURIComponent(`Portfolio Contact from ${name}`);
            const body = encodeURIComponent(`Name: ${name}\nEmail: ${email}\n\nMessage:\n${message}`);
            const mailtoLink = `mailto:john.smith@example.com?subject=${subject}&body=${body}`;

            // Open default email client
            window.location.href = mailtoLink;
```

```javascript
        // Show success message
        alert('Thank you for your message! Your default email client should open now.');

        // Reset form
        contactForm.reset();
      } else {
        alert('Please fill in all fields.');
      }
    });
  }

  // Navbar Background on Scroll
  window.addEventListener('scroll', () => {
    const navbar = document.querySelector('.navbar');
    if (window.scrollY > 100) {
      navbar.style.background = 'rgba(255, 255, 255, 0.98)';
      navbar.style.boxShadow = '0 2px 20px rgba(0, 0, 0, 0.1)';
    } else {
      navbar.style.background = 'rgba(255, 255, 255, 0.95)';
      navbar.style.boxShadow = 'none';
    }
  });

  // Typing Effect for Hero Section (Optional Enhancement)
  document.addEventListener('DOMContentLoaded', () => {
    const nameElement = document.querySelector('.name');
    if (nameElement) {
      const text = nameElement.textContent;
      nameElement.textContent = '';
      nameElement.style.borderRight = '2px solid #667eea';

      let i = 0;
      const typeWriter = () => {
        if (i < text.length) {
          nameElement.textContent += text.charAt(i);
          i++;
          setTimeout(typeWriter, 100);
        } else {
          setTimeout(() => {
            nameElement.style.borderRight = 'none';
          }, 1000);
        }
      };

      setTimeout(typeWriter, 1000);
    }
  });

  // Parallax Effect for Hero Section
  window.addEventListener('scroll', () => {
    const scrolled = window.pageYOffset;
    const hero = document.querySelector('.hero');
    if (hero) {
      const parallax = scrolled * 0.5;
      hero.style.transform = `translateY(${parallax}px)`;
```

```
        }
    });

    // Add Loading Animation
    window.addEventListener('load', () => {
        document.body.classList.add('loaded');

        // Add some initial animations
        const heroContent = document.querySelector('.hero-content');
        if (heroContent) {
            heroContent.style.animation = 'fadeInUp 1s ease forwards';
        }
    });

    // Smooth Reveal Animation for Sections
    const revealObserver = new IntersectionObserver((entries) => {
        entries.forEach(entry => {
            if (entry.isIntersecting) {
                entry.target.classList.add('revealed');
            }
        });
    }, {
        threshold: 0.15
    });

    document.querySelectorAll('section').forEach(section => {
        revealObserver.observe(section);
    });

    // Add CSS for reveal animation
    const style = document.createElement('style');
    style.textContent = `
        section {
            opacity: 0;
            transform: translateY(50px);
            transition: opacity 0.8s ease, transform 0.8s ease;
        }

        section.revealed {
            opacity: 1;
            transform: translateY(0);
        }

        #home {
            opacity: 1;
            transform: translateY(0);
        }
    `;
    document.head.appendChild(style);
```