**1. Project Overview**

**Project Name:** E Tech Solution IT Website  
**Purpose:** To create a dynamic and responsive website for E Tech Solution, an IT services business. The site will provide information about the company, services offered, contact details, client resources, and a blog section for tech updates. The website will be user-friendly, accessible, and optimized for performance.

**2. Project Objectives**

The website project is designed to achieve the following learning outcomes:

* **Develop dynamic and accessible websites using valid HTML and CSS that comply with industry standards.**  
  *Implementation:* Constructing the website's structure with semantic HTML5 elements and styling it using modern CSS techniques, ensuring adherence to best practices and web standards.
* **Implement browser APIs, JSON, and remote APIs to create interactive and data-driven web experiences.**  
  *Implementation:* Enhancing interactivity by utilizing browser APIs, fetching data from remote APIs, and handling JSON data to dynamically update content.
* **Utilize performance monitoring tools to optimize usability, responsiveness, and user engagement.**  
  *Implementation:* Employing tools like Google Lighthouse to assess and improve site performance, ensuring quick load times and a responsive design across devices.
* **Exhibit effective teamwork through clear communication, collaboration, task management, and adherence to project deadlines.**  
  *Implementation:* Collaborating using version control systems like Git, maintaining clear communication through platforms such as Slack or Microsoft Teams, and managing tasks with tools like Trello or Asana to ensure timely project completion.

**3. Project Scope**

**Pages & Structure:**

* **Home Page:** Overview of E Tech Solution, mission, and services.
* **Services Page:** Detailed descriptions of IT services offered.
* **Contact Page:** Contact form, business information, and social media links.
* **Blog Page:** Regularly updated tech-related articles and company news.

**Additional Features:**

* Responsive navigation with expandable links for small screens.
* A favicon and social media metadata.
* Optimized images with lazy loading.
* Accessible design and content structure.
* Dark mode toggle for enhanced user experience.
* **Animated Elements:** Utilize CSS animations to create interactive and engaging user experiences. For instance, implement hover effects on buttons and smooth transitions between sections.
* **Background Images:** Incorporate subtle background images or patterns to enhance visual appeal without compromising readability. Ensure these images are optimized for different screen sizes.

**4. Hosting & Deployment**

* **Repository:** Hosted on GitHub within the wdd231 repository, stored in a dedicated subfolder.
* **Hosting Service:** GitHub Pages (publicly accessible).

**5. Design & Development Standards**

**HTML & CSS**

* Valid, standards-based HTML markup.
* CSS follows best practices with responsiveness and design principles (proximity, alignment, repetition, contrast, and white space).
* No horizontal scrolling on any screen size.
* **CSS Animations and Transitions:** Implement smooth animations to enhance user interaction. For example, use keyframe animations for element entrances and exits, and transitions for hover effects.
* **Background Images:** Use high-quality, optimized background images that adapt to various screen sizes. Consider implementing a subtle parallax effect to add depth.

**JavaScript Features**

* Use of ES modules and well-organized code.
* Minimum of three functions handling DOM interactions and event listeners.
* Conditional branching for interactive elements.
* Array methods for dynamic content population.
* Use of template literals for efficient string management.
* Local storage to save user preferences.
* Fetching JSON data from a remote API and a local JSON file.
* 1-2 asynchronous functions with error handling (try/catch block).
* 15+ dynamically generated items, displaying at least 4 data points each.
* Implementation of a modal dialog structure.
* Dark mode preference saved using local storage.
* **JavaScript Animations:** Enhance user interaction with animations such as content sliders or interactive form validations.

**6. Performance & Optimization**

* Total page size under 500kB for optimal loading speed.
* Image compression and lazy loading.
* Efficient JavaScript execution to improve user experience.
* **Optimized Background Images:** Ensure background images are compressed and use responsive techniques to serve appropriate sizes based on device.

**7. HTML Form & User Interaction**

* A well-structured HTML form meeting accessibility and usability standards.
* Form data displayed on a separate action page.

**8. Color Scheme & Design Style**

**Color Scheme:**

* **Primary Color:** Electric Blue (#007BFF) – Represents technology, trust, and innovation.
* **Secondary Color:** Dark Navy (#0A192F) – A deep, professional shade for contrast.
* **Accent Color:** Neon Green (#00FF7F) – Adds a futuristic, high-tech feel.
* **Background Color:** Off-White (#F8F9FA) – Keeps the site clean and readable.

**Design Style:**

* **Minimalist and Sleek:** Focus on clear typography, whitespace,

Integrating the specified learning outcomes into the E Tech Solution IT Website project plan will ensure a comprehensive educational experience. Here's how each objective aligns with the project's components:

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