1. Project Overview

We provide cutting-edge technology services to help businesses thrive in the digital age. This report details the end-to-end design and development process for the new corporate website of **TechSolution**, an IT services and consulting company. The primary goal is to create a user-friendly website that effectively communicates TechSolution's brand identity, showcasing our services, and generates leads.

2. Design Process

2.1. Objective & Target Audience

- **Primary Objectives:**
    - To establish a strong online presence for TechSolution.
    - To clearly articulate the company's services
    - To build trust and credibility with potential clients through a professional design.
    - To provide a clear and accessible contact point for lead generation.

- **Target Audience:**
    - **Primary:** IT Managers and business leaders and managers from medium to large companies.
    - **Secondary:** Potential investors and job seekers.

2.3. Wireframing & Prototyping

We first created rough wireframes to plan the basic layout and order of content for the main pages (Homepage, Services, and Contact). Then we turned them into detailed, clickable prototypes to show how users would move through the site, test the navigation, and get feedback before starting the actual development.

2.4. UI/UX Design & Branding

The website design uses a clean and modern tech style that matches TechSolution's image.

- **Colors:** The main colors are blue and white to show trust and professionalism. A blue is used to highlight buttons and important actions.
- **Text Style:** The inter font was used because it's easy to read and has a modern look. It's used for both titles and normal text.
- **Images:** The design includes custom drawings and good-quality stock photos to show innovation and focus on people and technology.

3. Development Process

3.1. Technology used

To build a strong and flexible website, the following tools and technologies were used:

- **Front-end:**

- HTML: Used to create the main structure of the web pages.

- CSS: Used to style the website, mainly using Flexbox and Grid to arrange content neatly.

- JavaScript : Used to make the site interactive, such as for the mobile menu, form validation, and dynamic content.

- **Back-end:**

  - PHP: Used to handle server-side functions like processing forms and managing data.

- **Version Control:** All of our project files stored safely on GitHub for easy collaboration.

- **Design:** The layout and design were planned and sketched before development to guide the website's look and structure.

3.2. Implementation Details

- **Responsive Design:** The website was designed for mobile devices first and adjusted for tablets and desktops using media queries, so it looks good on all screen sizes.

- **Navigation:** Implemented a responsive, multi-level dropdown menu for the 'Services' link.

- **Component-Based Structure:** Common elements like buttons, cards, and the navigation bar were made reusable with CSS and JavaScript to keep the code clean and consistent.

- **Performance Optimization:** Images were made smaller, and CSS/JS files were compressed to make the website load faster.

- **Accessibility :** The website was designed to be easy for everyone to use, following accessibility guidelines:

- Using proper HTML tags like <header>, <nav>, <main>, and <section>.

- Making sure colours have enough contrast.

- Adding descriptive text (alt text) for all images.

- Allowing users to navigate the site using a keyboard.

4. Challenges Faced & Solutions Implemented

Challenge	Solution Implemented
Creating a responsive navigation menu that works elegantly on both desktop and mobile.	Developed a custom "hamburger" menu for mobile views using CSS and JavaScript to toggle a slide-in navigation drawer. This provided a clean UI without sacrificing functionality.
Ensuring consistent styling across different browsers (Chrome, Firefox, Safari).	Used a CSS reset at the beginning of the stylesheet to normalize default styles across browsers. Extensive cross-browser testing was conducted during development.
Making the contact form send an email without a page reload..	Implemented a full-stack solution. We used JavaScript fetch to capture the form data on the front-end. This data was sent to a send_email.php script on the back-end. The PHP script securely validated the data and used the mail() function to send the email, returning a JSON success message to the user—all without reloading the page.
Optimizing page load speed with several high-quality images.	All images were run through compression tools (e.g., Squoosh) to reduce file size without noticeable quality loss.

5. Conclusion & Future Enhancements

The TechSolution website project was completed successfully. It is modern, works well on all devices, and is accessible to everyone. The site clearly shows the company's brand and services.

- **Content Management System (CMS):** Adding a CMS (like Strapi or Contentful) so staff can update the website easily without coding.
- **Blog Section:** Creating a blog to improve search engine ranking and show TechSolution as an expert in the industry.
- **Interactive Elements:** Adding more advanced animations with JavaScript or tools like GSAP for smoother effects and user interactions.