iVari Security Systems Website Development Documentation

This document is split into two sections: **Functional Documentation** for non-technical readers and **Technical Documentation** for developers. Both sections detail the design, development, and deployment phases, challenges encountered, and the solutions implemented.

Functional Documentation

Overview

The iVari Security Systems website is a platform that highlights the company's services, client projects, and contact options, providing seamless navigation and responsiveness.

Phases:

- 1. Design Phase
- 2. Development Phase
- 3. Deployment Phase

1. Design Phase

Objective:

Create a professional, user-friendly, and visually appealing website that reflects the company's services and brand identity.

Key Design Decisions:

- Navigation: Implemented a navbar for Home, Services, About, Group Companies, and Contact Us sections.
- Theme: Used dark-themed colors with accents of red and white to maintain a professional look.
- Typography: Used custom fonts such as SulphurPoint and Astoria to enhance readability.
- Responsiveness: Ensured compatibility with various devices and screen sizes.

Tools Used:

• Figma: For wireframing and prototyping.

2. Development Phase

Objective:

Convert the design into a fully functional and responsive website using modern web technologies.

Key Features:

- Dynamic navigation with links to services such as Fire Extinguishers, Suppression Systems, and Client Projects.
- Contact form integrated with email functionality.
- Smooth animations for user interaction.
- Font optimizations for better UX.

Errors Encountered:

- Fonts Not Loading:
 - Issue: Fonts like SulphurPoint and Astoria were not being rendered.
 - Solution: Corrected paths in @font-face declarations and updated vite.config.js to include assetsInclude for .ttf files.

2. Animation Issues:

- Issue: Animations were not triggering as intended.
- Solution: Integrated the Intersection Observer API in animations.js to handle smooth scrolling animations. Added defer logic to ensure animations loaded after the DOM.
- 3. Deployment DNS Issues:
 - Issue: Emails stopped working after connecting Vercel's nameservers.
 - Solution: Switched to A and CNAME records in GoDaddy for hosting while retaining email functionality via MX records.

Tools and Libraries Used:

- React.js: For building components and managing state.
- Vite: For fast builds and efficient development.
- SweetAlert2: For user-friendly pop-ups.
- CSS: For styling and animations.

3. Deployment Phase

Objective:

Host the website live for users while ensuring smooth performance and accessibility.

Steps:

- 1. Hosting Platform: Deployed using Vercel for automatic builds and deployment.
- 2. DNS Configuration:
 - Added A record pointing to Vercel's IP for ivari.in.
 - Added CNAME for www pointing to cname.vercel-dns.com.
- 3. Testing: Conducted thorough checks to ensure all links, forms, and animations worked correctly.

Technical Documentation

Design Phase

Wireframes:

- Created wireframes in **Figma** detailing each page's layout.
- Finalized design after stakeholder approval.

Color Palette and Fonts:

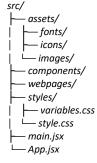
- Colors:
 - Black (#000000)
 - White (#FFFFF)
 - Blood Red (#CC0118)
 - Dusty Grey (#878787)
 - Dark Void (#151419)
 - Smoky Black (#1B1B1E)
 - Flash White (#FBFBFB)
- Fonts:
 - SulphurPoint (Light, Regular, Bold)
 - Astoria (Light, Regular, Medium, Bold)

Development Phase

Project Setup:

- 1. Initialization:
 - Set up the project using *npm* create *vite@latest*.
 - Installed dependencies like react-router-dom and sweetalert2.

2. Folder Structure:



3. Key Functionalities:

- Animations: Integrated animations. js with Intersection Observer for smooth scrolling animations.
- Contact Form: Implemented email functionality using mailto links.
- Responsive Design: Used CSS media queries for adaptability across devices.

Challenges and Solutions:

- 1. Font Errors:
 - Problem: Fonts failed to load due to incorrect paths.
 - **Solution:** Updated variables.css and ensured fonts were correctly referenced using relative paths. Included assets Include in vite.config. is for .ttf files.

2. Animation Delays:

- Problem: Animations didn't trigger properly on some components.
- Solution: Used the Intersection Observer API in animations.js to add animations dynamically
 when elements became visible in the viewport.

3. DNS and Email Issues:

- **Problem:** Connecting *Vercel's nameservers* disrupted email services.
- Solution: Used A records for hosting and retained MX records for email configuration in GoDaddv.

4. 404 Errors on Deployment:

- Problem: Assets like images and fonts returned 404 errors.
- Solution: Ensured asset paths were correctly set relative to the project's base URL in vite.config.js.

Deployment Phase

- 1. Build Command:
 - Ran vite build to generate production files in the dist/ directory.
- 2. Hosting:
 - Deployed via Vercel with GitHub integration for continuous deployment.
- 3. **DNS Configuration:**
 - Configured A and CNAME records in GoDaddy for domain connectivity.
- 4. Testing and Verification:
 - Verified animations, forms, and navigation links worked seamlessly.
 - Ensured responsive design across devices.

Conclusion

The iVari Security Systems website now serves as a professional and accessible platform that highlights the company's services and values. This documentation provides a comprehensive guide to understanding the entire lifecycle of the project, ensuring smooth handoffs and future enhancements.