**FRONTEND**

The website was developed utilizing a robust combination of front-end technologies, including HTML, CSS, and JavaScript, to create an engaging user interface with seamless interactivity. These technologies were carefully chosen to ensure a rich and dynamic user experience while maintaining cross-platform compatibility and adhering to modern web standards.

HTML (Hypertext Markup Language) served as the foundation for structuring the website's content, allowing for the logical arrangement of text, images, videos, and other multimedia elements. It provided the necessary markup tags and attributes to define the semantic structure and hierarchy of the web pages, enabling optimal accessibility and search engine optimization.

CSS (Cascading Style Sheets) played a crucial role in designing and styling the website's visual presentation. With CSS, we were able to create visually appealing layouts, define color schemes, specify typography, and apply stunning visual effects. By separating the presentation layer from the content, CSS provided flexibility, consistency, and efficient management of the website's appearance across multiple pages.

JavaScript, being a versatile scripting language, empowered us to add dynamic functionality and interactivity to the website. Leveraging JavaScript, we implemented features such as form validation, client-side data manipulation, smooth animations, asynchronous communication with the server, and interactive user interfaces. These capabilities significantly enhanced the user experience, enabling real-time updates, responsive behavior, and intuitive interactions.

By combining the power of HTML, CSS, and JavaScript, we were able to craft an engaging and user-friendly website that seamlessly adapts to different devices and screen sizes. The front-end technologies employed in this project demonstrate a commitment to delivering an aesthetically pleasing, intuitive, and immersive experience for our users, while ensuring compatibility and adhering to modern web development practices. Like slideshare, forum request display ,contact form and profile page.

**BACKEND**

The website was developed using the Flask web framework, a popular Python framework known for its simplicity and flexibility. Flask served as the backbone of the web application, providing a solid foundation for handling HTTP requests, routing, and integrating various components seamlessly.

With Flask, the project implemented the Model-View-Controller (MVC) architectural pattern, allowing clear separation of concerns. The Flask framework facilitated the interaction between the front-end and back-end components, enabling efficient communication and data flow throughout the application.

Used features:

**Routing**

**Database Integration**

**Form Handling**

**Sending emails**

**Overall Backend**

This is a Flask web application that has multiple routes for different pages. It uses Flask\_SQLAlchemy for connecting to a database and storing user input data. The `config.json` file contains the configuration parameters for the application, including the database URI and Gmail credentials for sending emails. The application also uses Flask-Mail for sending emails and has a login system.

The `/login` route is used for logging in users with their email and password. If the login is successful, the user is redirected to the `/wtl` route.

The `/register` route is used for registering new users with their name, email, and password. After registration, the user is redirected to the `/wtl` route.

The `/home` route is used for displaying the home page of the web application.

The `/forum` route is used for displaying a forum page where users can post questions and messages. The page also has a form for submitting new questions and messages.

The `/contactus` route is used for displaying a contact us page where users can send a message to the website admin. The page has a form for submitting a message.

The `/profile` route is used for displaying the user's profile page.

The `/Needer` route is used for displaying the page for people who need help.

The `/Volunteer` route is used for displaying the page for people who want to volunteer.

The `/ngo\_form2` route is used for displaying the NGO form page.

The `/dashboard` route is used for displaying the admin dashboard. The page is accessible only to the admin user, who can view all the requests posted on the forum.

**DATABASE**

Later we use MySQL script that creates a database called `helpinghands` and defines several tables within that database: `contacts`, `posts`, `requests`, `users`, and `volunteer`. It also inserts data into these tables.

Here's a breakdown of the script:

1. The script starts with some configuration settings and transaction handling.

2. It creates the `contacts` table with columns `sno`, `name`, `email`, `phone\_no`, `msg`, and `date`.

3. It inserts data into the `contacts` table.

4. It creates the `posts` table with columns `sno`, `title`, `slug`, `content`, and `date`.

5. It inserts data into the `posts` table.

6. It creates the `requests` table with columns `sno`, `email`, `title`, `content`, and `date`.

7. It inserts data into the `requests` table.

8. It creates the `users` table with columns `name`, `email`, and `password`.

9. It inserts data into the `users` table.

10. It creates the `volunteer` table with columns `sno`, `name`, `email`, `phone\_no`, `msg`, and `date`.

11. It defines indexes for the tables.

12. It sets the auto-increment values for the tables.

13. Finally, it commits the transaction and restores the previous settings.

**FUTURE SCOPE**

**As we envision the future of our website, we aim to create a dynamic and inclusive platform that fosters a strong sense of community and provides intuitive features to facilitate seamless user interaction. By incorporating cutting-edge technologies such as voice recognition, lens integration, and advanced search filters, we are committed to enhancing the user experience and empowering our users to seek guidance and support more effectively. In this document, we outline the future scope of our website, highlighting the key features and improvements we plan to implement.**

**1. Building a Thriving Community:**

**Our primary focus is to establish a vibrant and supportive community on our website. By incorporating a dedicated forum section, users can connect with like-minded individuals, share experiences, and seek guidance. This forum will serve as a central hub for discussions, resource sharing, and fostering valuable relationships.**

**2. Intuitive and Accessible Applications:**

**To ensure ease of use, we will develop user-friendly applications that seamlessly integrate with our website. These applications will leverage voice recognition technology, enabling users to interact with the platform through voice commands, making it more accessible for individuals with different abilities. Additionally, lens integration will allow users to capture and upload images, further enriching their engagement and enabling visual communication.**

**3. Advanced Search Filters:**

**We recognize the importance of efficient search functionality in finding relevant information. To streamline the search process, we will implement advanced search filters. These filters will enable users to refine their search queries based on specific criteria such as topic, category, location, date, and more. This feature will save users' time and provide more accurate search results, improving the overall user experience.**

**4. Personalized Recommendations:**

**To further enhance user engagement, we will develop personalized recommendation algorithms. By analyzing user preferences, browsing history, and community interactions, our platform will offer tailored suggestions for relevant forum threads, resources, and users to connect with. This feature will help users discover valuable content and establish meaningful connections within the community.**

**Conclusion:**

**Embracing the future of our website involves building a strong community, incorporating user-friendly applications with voice recognition and lens integration, and implementing advanced search filters. By embracing these technological advancements and prioritizing user experience, we are committed to creating a platform that facilitates meaningful connections, empowers users to seek guidance, and fosters an inclusive and supportive community. We look forward to implementing these enhancements and providing our users with an unparalleled experience on our website.**