Team Name :Tech Veerangana

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Domain of Project : Health and Wellbeing
Inadequate ambulance services
Problem Statement : In event of medical emergency victims face significant challenges in receiving prompt medical attention due to:

- Inadequate ambulance services
- Lack of basic first aid
- Inefficient transportation
- Traffic congestion

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INTRODCTION

Project Overview:

The **MedaAssist** website is a health assistance platform that aims to provide users with various healthcare-related services in one place. It integrates multiple features to assist users in emergency situations and routine health inquiries:

- **Chatbot**: Provides immediate responses to healthcare-related queries.
- **Hospital Locator**: Helps users find nearby hospitals using location-based services.
- **Ambulance Locator**: Allows users to find the nearest ambulance available.
- **Additional Feature**: (Could be something like medical tips, appointment scheduling, etc.).

The purpose of the project is to create an easily accessible platform for medical assistance, especially in emergencies.

Technologies:

The website is built using the following technologies:

- **HTML**: For the structure and layout of the website.
- **CSS**: For styling and creating a user-friendly interface.
- **JavaScript**: For dynamic functionality like smooth scrolling, chatbot interaction, and API integrations.
- **Node.js (Backend)**: If your website requires server-side functionality for APIs or dynamic content.
- **APIs**: For integrating hospital and ambulance locators (e.g., Google Maps API, custom healthcare APIs).

ARCHITECTURE

System Architecture:

The MedaAssist website consists of multiple components working together:

- **Frontend (UI)**: The user interface consists of HTML, CSS, and JavaScript files. The UI includes different sections such as a chatbot, hospital locator, ambulance locator, and other features.
- **Backend (Optional)**: If you are using a backend, you will have a server running Node.js or another framework that handles API requests and manages dynamic content like user queries.
- **External APIs**: These are third-party services used to get data such as hospital locations and ambulance routes. They can be integrated using AJAX or RESTful API calls.

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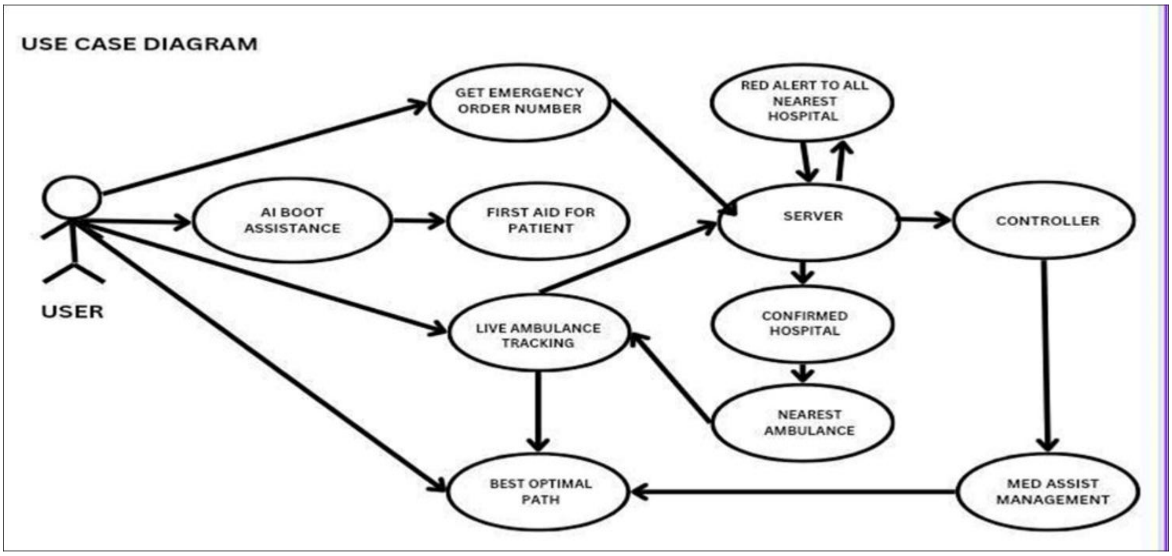

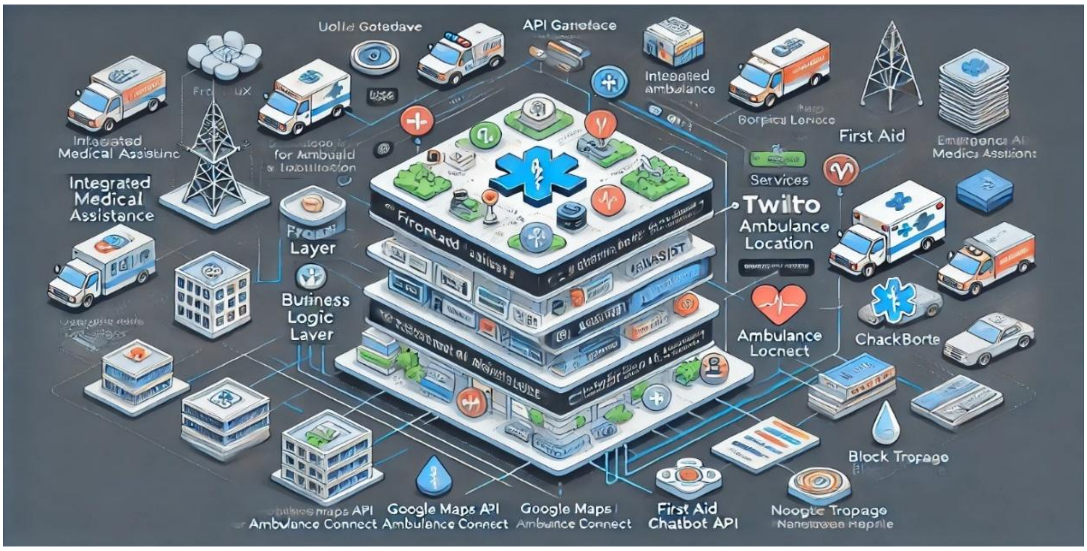
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FUNCTIONALITY

Chatbot:

The **Chatbot** is designed to provide instant replies to users' queries related to health, emergency contacts, and general medical information. It listens to user inputs and responds accordingly. The chatbot's functionality includes:

- **Message handling**: The user types a query, and the chatbot processes it to provide a response (either predefined or fetched dynamically).
- **API Integration (Optional)**: If you're integrating an AI-based or medical database API, the chatbot can fetch real-time data, like doctor recommendations or symptoms checkers.

Hospital Locator:

The **Hospital Locator** uses an API (e.g., Google Maps API or a healthcare-specific service) to find hospitals based on the user's location. Key features include:

- **Location-based search**: The user allows the website to access their location.
- **API Call**: The frontend sends the location data to the API, which returns a list of nearby hospitals.
- **Display results**: The hospitals are displayed on the map or in a list with details such as distance, contact, and ratings.

Ambulance Locator:

The **Ambulance Locator** operates similarly to the hospital locator. It uses an API to track nearby ambulances:

- **Real-time tracking**: The user can view available ambulances in real-time.
- **Integration with Map APIs**: The ambulance locations are shown on a map, and users can call or request an ambulance.

1. **Start Your Server**: If using Node.js, run node app.js or npm start on the server.
2. **Configure Domain and SSL** (optional): Set up your domain name (e.g., medaassist.com) and secure it with an SSL certificate.

Files

1. chatboot.css

Purpose: Contains styling for a chatbot interface, setting styles for the body, chat container, chat header, chat window, and other UI elements. It defines a light background and positions a chat box at the center of the page with a modern, minimalist look.

2. chatboot.html

Purpose: Provides the HTML structure for the chatbot interface, titled "MedAssist Chatbot." It includes a container for chat messages, an input box for user input, and basic sections for displaying responses.

3. chatboot.js

Purpose: Implements the functionality of the chatbot by defining a basic first aid guidance database. The chatbot responds with guidance for common injuries and symptoms like heart attack, head injury, burns, etc., based on user input.

4. index.html

Purpose: Serves as the main landing page for MedAssist, themed with a pink color scheme. The page has a welcoming appearance with basic information and navigation options, likely linking to other functions or pages within the MedAssist system.

5. index (2).html

Purpose: This page is designed as a "Nearest Hospital Locator" using LocationIQ for map functionality. It includes a map rendered with Leaflet.js and likely displays nearby hospitals using geolocation.

6. index (3).html

Purpose: Provides a "Nearest Ambulance Locator" feature, also implemented using Leaflet.js. It displays a map with an interface for locating ambulances, likely utilizing real-time location or static ambulance locations.

7. RTN.html

Purpose: Implements a "Real-Time Navigation with Traffic-Based Rerouting" feature. The page includes a map and likely supports traffic-based route adjustments, allowing for better real-time navigation.

8. RTN.js

Purpose: JavaScript code for calculating routes, leveraging the OpenRouteService API to retrieve directions with traffic data. This file includes asynchronous functions to fetch traffic-influenced routes, providing rerouting options based on live conditions.

TESTING AND DEBBUGING

Testing Procedures:

1. **Manual Testing**: Verify the functionality of each feature (chatbot, hospital locator, ambulance locator).
2. **User Interaction Testing**: Ensure the site is user-friendly, with proper navigation and error handling.
3. **API Testing**: Use tools like **Postman** to test external APIs and make sure they return the correct data.
4. **Cross-browser testing**: Ensure the website works across all major browsers.

Bug Fixing:

- **Issue**: Chatbot not responding to user queries.
    - **Fix**: Verify API integration and make sure the frontend is correctly sending data to the backend.
- **Issue**: Hospital locator API returning no results.
    - **Fix**: Check the API key and ensure location permissions are enabled in the browser.

CONCLUSION

The **MedaAssist** project achieved its primary goal of providing users with a centralized health assistance platform. Key features such as the **chatbot**, **hospital locator**, and **ambulance locator** were successfully integrated, offering users valuable services in emergency situations. The website was deployed on **Vultr** and is accessible to the public.

Future Improvements:

- Add more features like appointment scheduling or virtual consultations.
- Improve chatbot intelligence by integrating AI-based APIs for better user interactions.

Challenges Encountered:

- API integration issues, especially with real-time location-based services.
- Ensuring smooth UI/UX across different devices and browsers.