

PROJECT LOG

30th October 2024 :

Problem Statement 7: Scenario: During emergency situations, such as natural disasters, accidents, or medical emergencies, effective coordination among first responders, victims, and support services is crucial. However, the current methods of communication and coordination often fall short, leading to delays in response, overlapping efforts, and confusion. For example, in the aftermath of a natural disaster, rescue teams might struggle to locate victims due to a lack of real-time information, while victims may have difficulty accessing the help they need. Similarly, medical emergencies may see delays in care because responders and hospitals are not fully synchronized. The chaos that often accompanies emergencies exacerbates these issues, making it clear that a more streamlined, technology-driven approach is needed.

Team Members :

Team NO	First Learner	Second Learner	Project No
7	Dhanush R	Thushar Vinod V	7

01 November 2024 :

AGENDA :

📌 Frontend (Angular):

- Key components:
 - Home Page
 - Victim Reporting
 - Rescuer Dashboard
 - Resource Management

📌 Backend (ASP.NET Core Web API):

- Overview of the three custom APIs:
 - Victim Reporting API
 - Rescuer Dashboard API
 - Resource Management API
- Discussion on the public API for location services (Google Maps).

📌 Database (SQL Server):

- Review of database schema and models for victims, responders, resources, and reports.

☐ Cloud Deployment (Azure):

- Discuss deployment strategies and hosting on Azure.

ABSTRACT :

The Disaster Management System aims to enhance the efficiency of emergency response and resource allocation during disasters. This system leverages modern web technologies, including Angular for the frontend, ASP.NET Core for the backend, and SQL Server for data management, hosted on Azure cloud infrastructure. Key features include a victim reporting interface, a rescuer dashboard for real-time data access, and a resource management module for emergency managers. The integration of a public API, such as Google Maps, will facilitate location tracking and improve situational awareness. This project seeks to provide a comprehensive solution for coordinating disaster response efforts, ultimately aiming to save lives and reduce the impact of emergencies.

Discussion about project :

Key Features

- 1. Victim Reporting:**
 - An intuitive interface for victims to report their status and location, facilitating rapid identification of those in need of assistance.
 - Status options include "Safe," "Injured," and "Missing," enabling targeted response efforts.
- 2. Rescuer Dashboard:**
 - Provides real-time updates on victim statuses, allowing responders to prioritize their efforts based on the most urgent needs.
 - Integration of mapping services (e.g., Google Maps API) to visualize victim locations enhances situational awareness.
- 3. Resource Management:**
 - A dedicated interface for emergency managers to track resources, such as personnel and equipment, improving deployment strategies.
 - Real-time inventory updates help ensure adequate resources are available where needed.
- 4. Notifications:**
 - An alert system to keep all users informed about critical updates, including changes in victim status and resource availability.

04 November 2024:

ARCHITECTURE DIAGRAM :

The **Rescue Service Project** follows a **microservices architecture** with a **separation of concerns** across various services and layers. Below is a detailed explanation of each component and how they interact within the system.

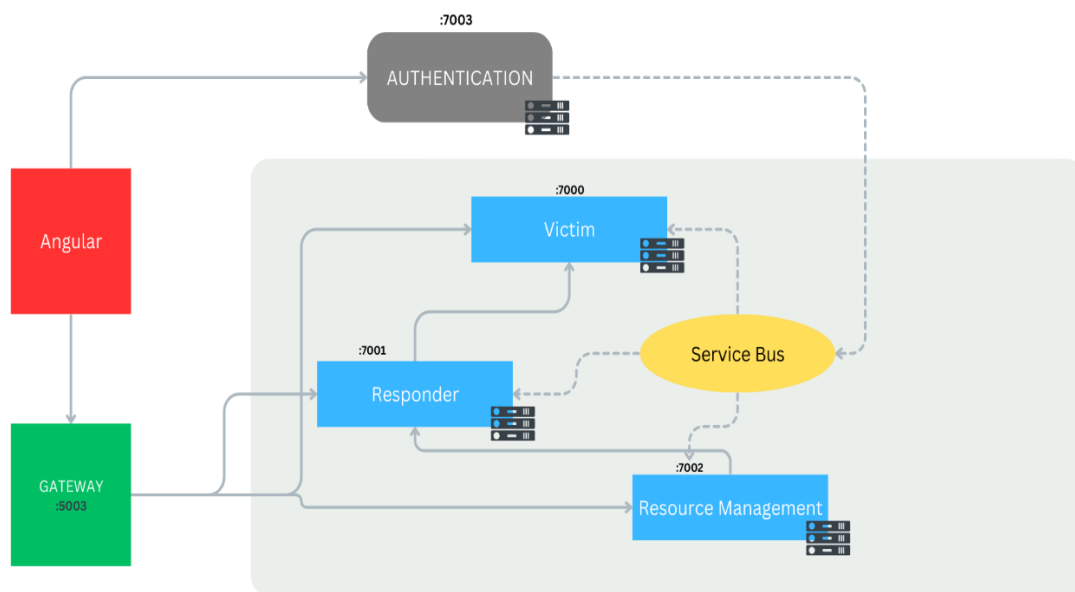
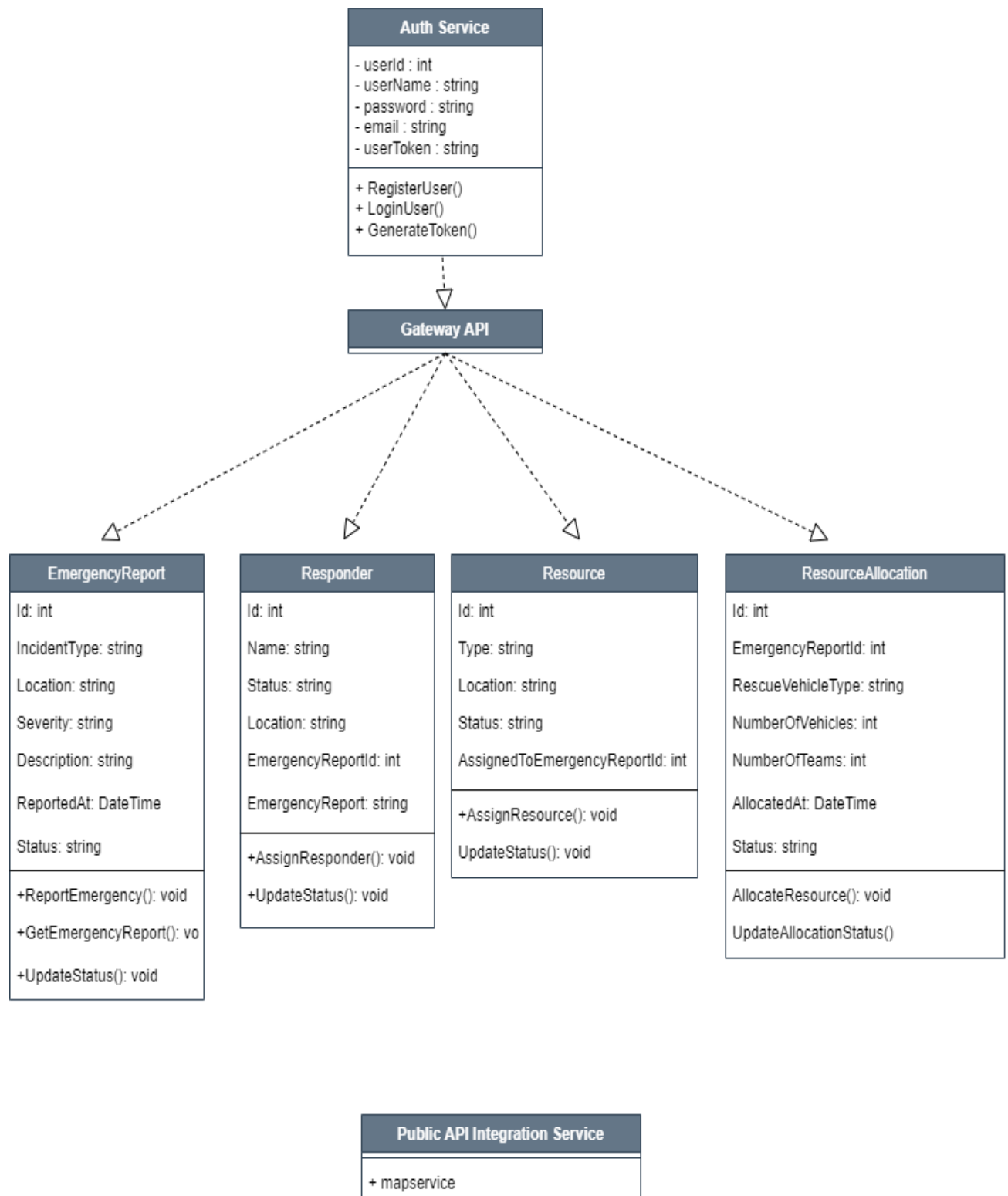


Fig.Architecture Diagram

06 NOVEMBER 2024:

CLASS DIAGRAM :

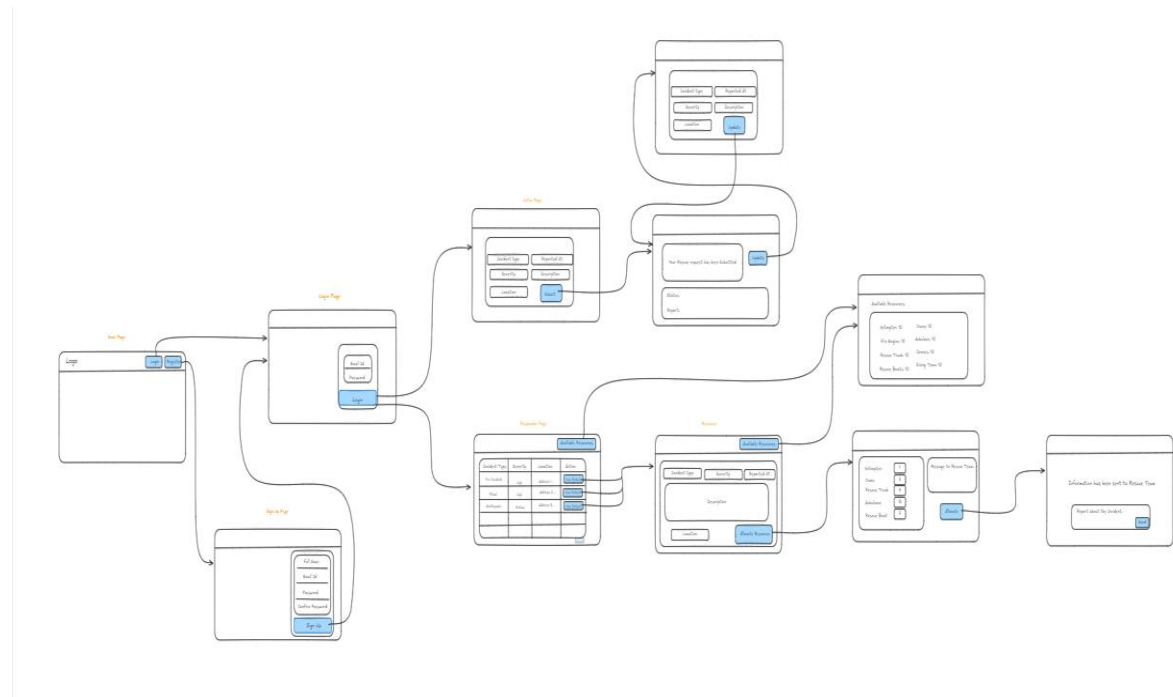
Created a class diagram for our Rescue operation project



07 November 2024 :

Prototype Diagram :

We worked collaboratively to design and implement the initial version. The prototype includes All the UI of the project . We completed the task and are now ready to move forward .



08 November 2024:

Started with the coding part for backend.

14 November 2024 :

Started with the coding part of frontend.