

## **SCOPE**

### **Functional Requirements**

#### **1. Location-Based Services**

- Requirement: The system shall provide location-based information for nearby emergency services during incidents.
- The system shall display the user's current location and nearby hospitals, police stations, and other emergency services.

#### **2. Alert Notifications**

- Requirement: The system shall send real-time alerts to users regarding natural disasters and man-made accidents.
- Users shall receive alerts through the application interface whenever he wants to know weather conditions in a locality regarding current emergencies.

#### **3. Anonymous Incident Reporting**

- Requirement: The system shall allow users to report sensitive incidents anonymously, such as child abuse or women's safety issues.
- The system shall confirm receipt of anonymous reports and ensure data confidentiality.

#### **4. SOS Button Functionality**

- Requirement: The system shall provide an SOS button for users to request immediate assistance during emergencies.
- Users must be able to activate the SOS button with a single tap/click, triggering an immediate alert to local emergency services and displaying the user's location.
- The system shall provide feedback confirming that the SOS alert has been sent.

#### **5. Admin Dashboard Functionality**

- Requirement: The system shall provide an admin dashboard for monitoring and managing incidents and alerts.
- Admin users must be able to log in to the dashboard to view active SOS situations and incident reports.
- The system shall allow admins to issue alerts, manage relief camp information, and respond to user-reported incidents.

### **Non-Functional Requirements**

#### **1. Performance:**

- Criteria:
  - Fast loading times, especially critical during emergencies.
  - Efficient geo-tracing to minimize delays in displaying location-based information.

- Purpose: To ensure users can access necessary information and functionalities swiftly when needed most.

## **2. Scalability:**

- Criteria: Ability to handle many concurrent users, particularly during widespread emergencies.
- Implementation: Design the application architecture to support horizontal and vertical scaling as demand increases.
- Purpose: To maintain performance and reliability under high load conditions.

## **3. Security:**

- Criteria:
  - Protect sensitive user data (e.g., names, mobile numbers, incident descriptions) through encryption and secure transmission protocols (e.g., HTTPS).
  - Implement robust authentication and authorization mechanisms, especially for the admin module.
  - Safeguard against common web vulnerabilities such as Cross-Site Scripting (XSS) and Cross-Site Request Forgery (CSRF).
- Purpose: To ensure data privacy, maintain user trust, and protect the application from malicious attacks.

## **4. Reliability and Availability:**

- Criteria:
  - Ensure high uptime (e.g., 99.9%) to guarantee that the application is accessible during emergencies.
  - Implement failover mechanisms and redundant systems to minimize downtime.
- Purpose: To provide dependable access to critical information when it's most needed.

## **5. Usability:**

- Criteria:
  - Design an intuitive and user-friendly interface that can be easily navigated, even under stress.
  - Ensure that forms and interactive elements are straightforward and accessible.
- Purpose: To facilitate quick and effective use of the application by individuals in emergency situations.

## **6. Compatibility:**

- Criteria:
  - Ensure the application functions correctly across various web browsers (e.g., Chrome, Firefox, Safari, Edge) and devices (desktops, tablets, smartphones).
  - Optimize responsive design to cater to different screen sizes and resolutions.
- Purpose: To provide a consistent experience to all users, regardless of their device or browser choice.

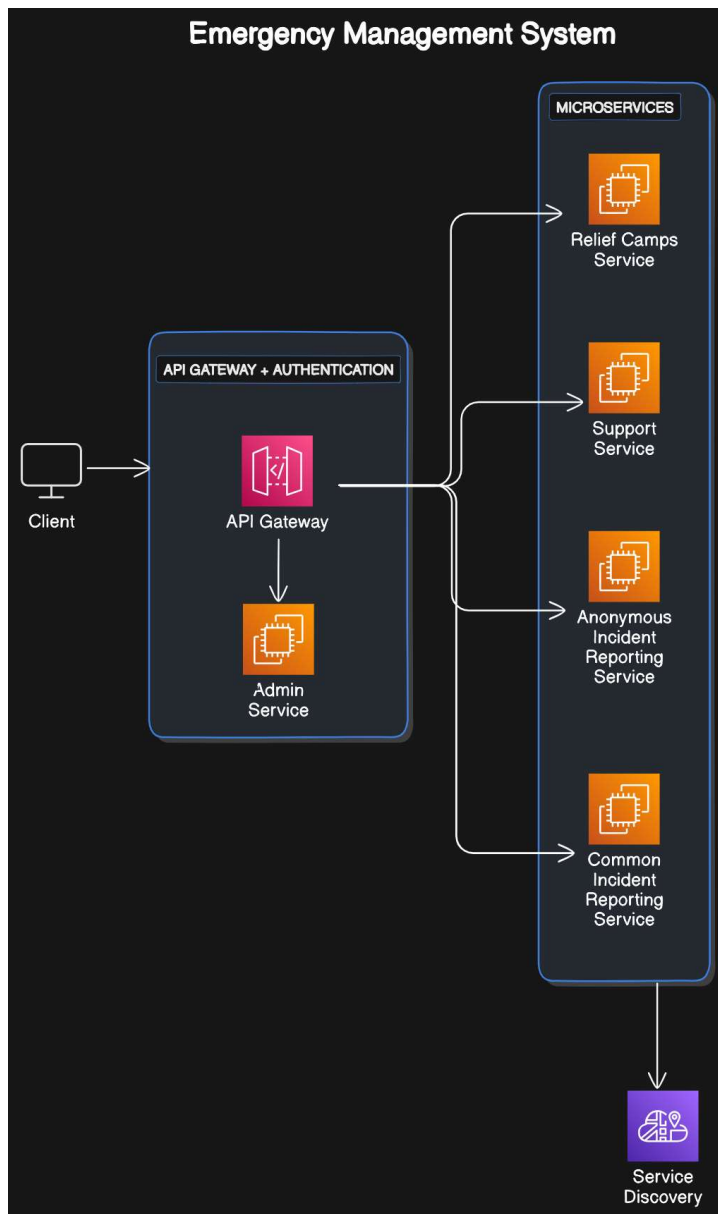
## **7. Accessibility:**

- Criteria:
  - Adhere to accessibility standards (e.g., WCAG) to make the application usable by individuals with disabilities.
  - Include features such as screen reader compatibility, keyboard navigation, and sufficient contrast ratios.
  - Purpose: To ensure that the application is inclusive and usable by as many people as possible.

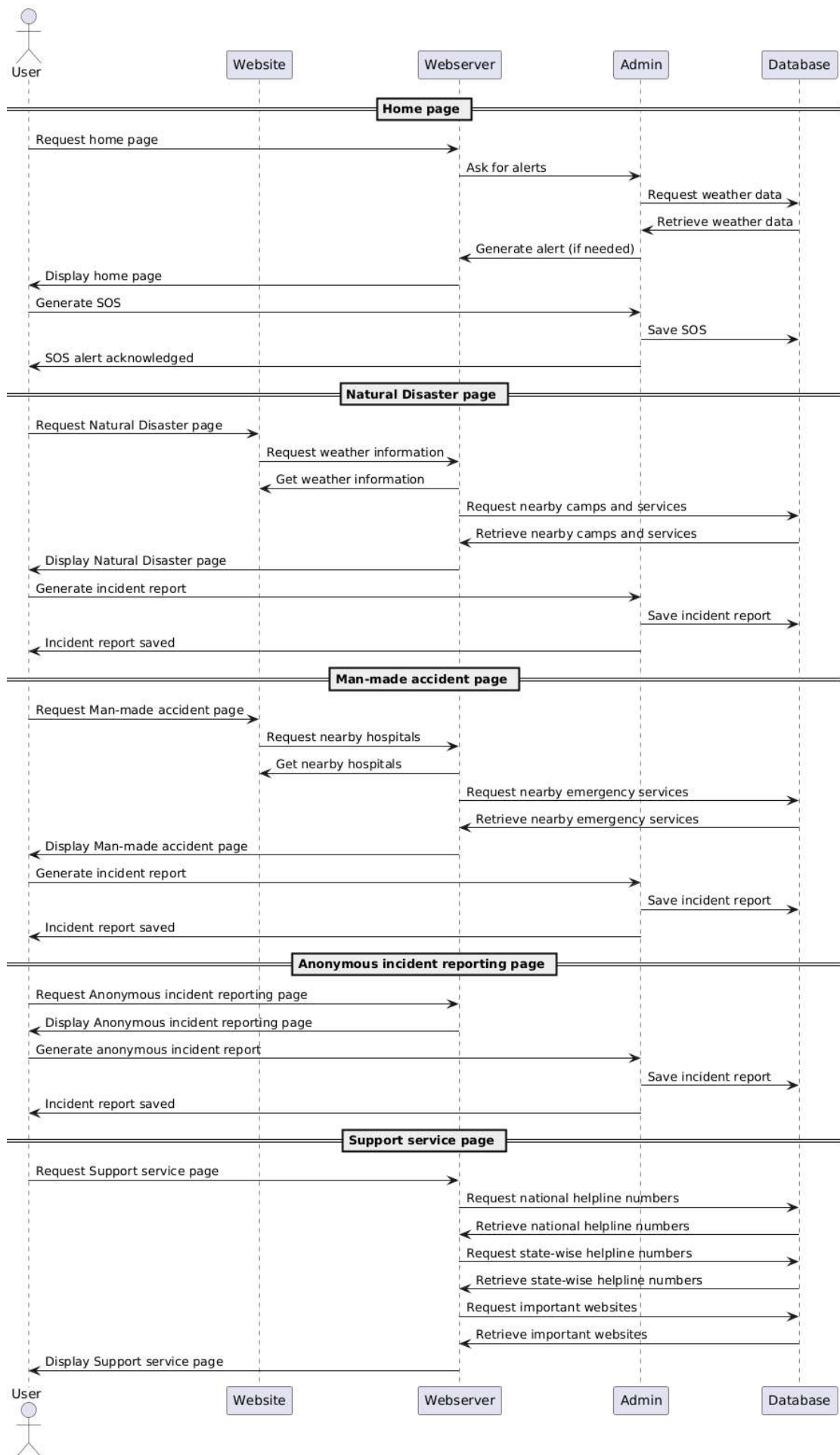
## Technologies

- Frontend – Angular
- Backend – Spring-boot
- Database – MySQL

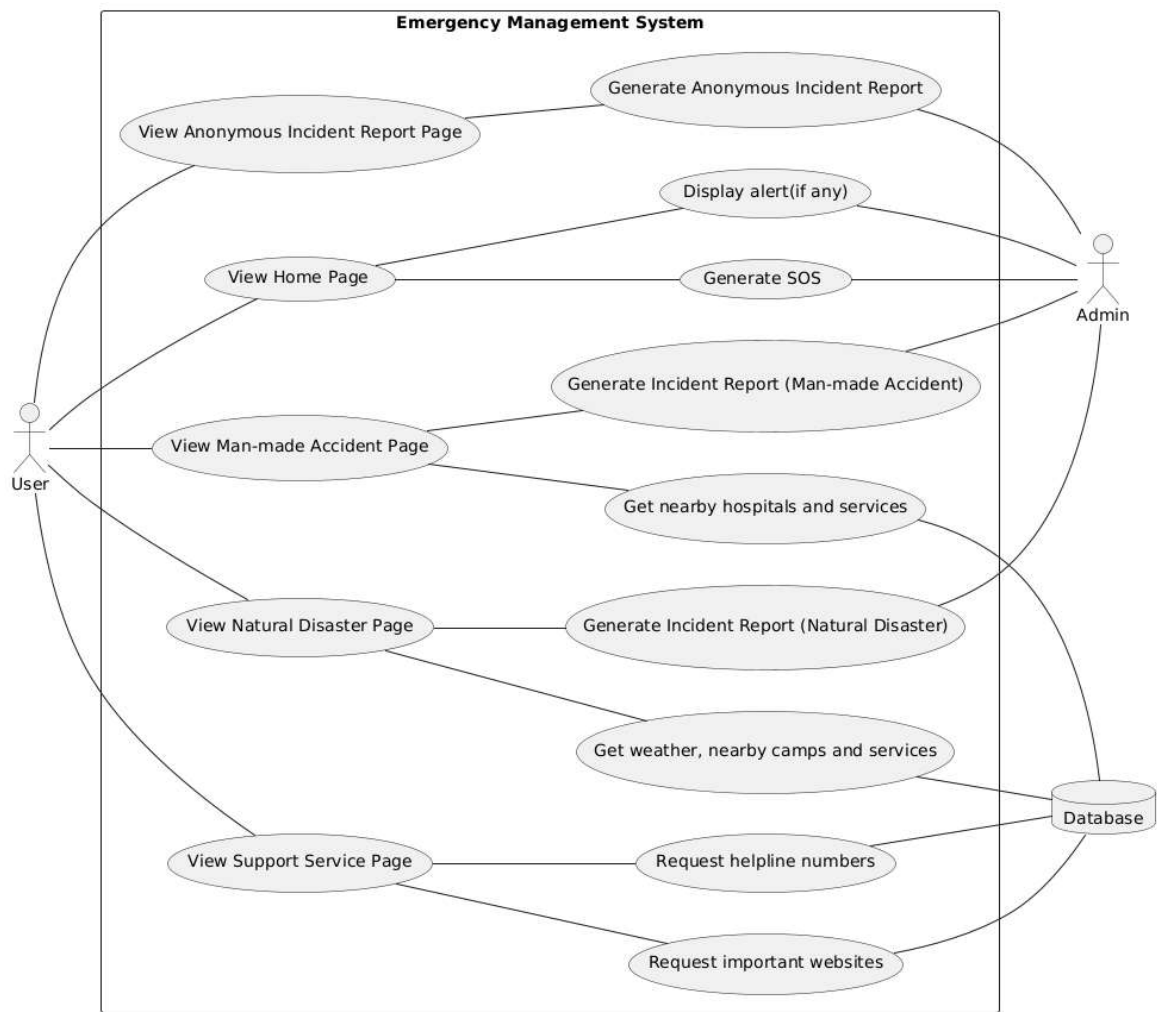
## Microservice- architecture



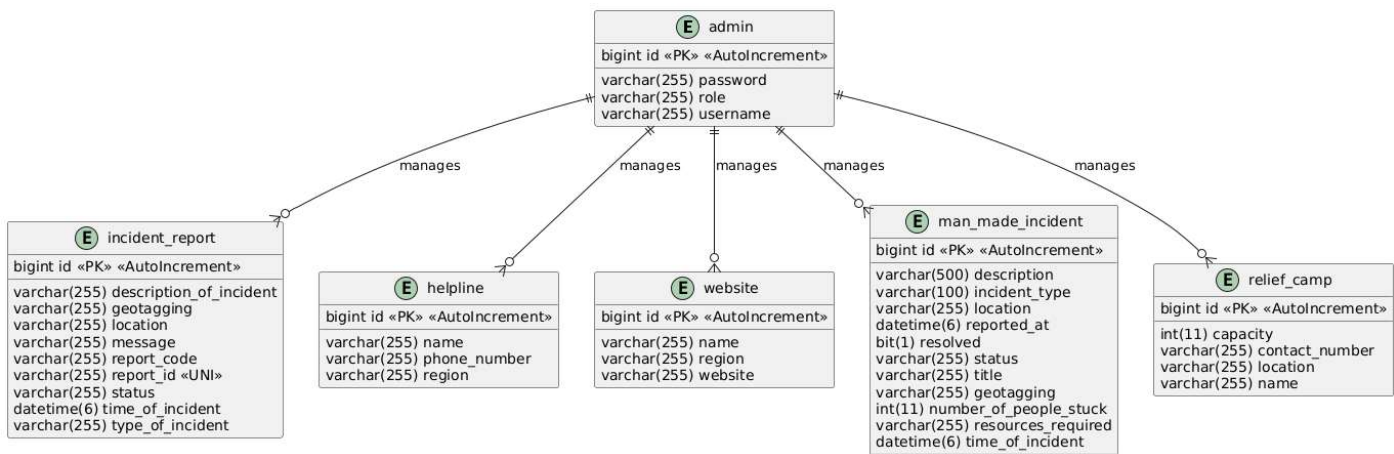
## Sequence Diagram



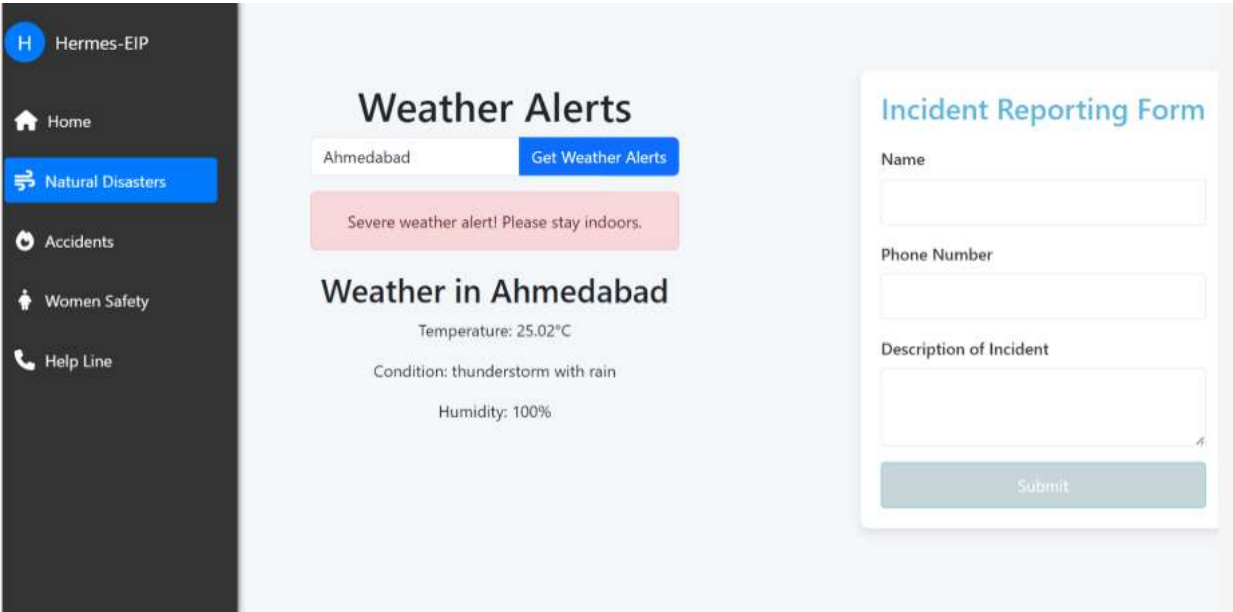
Usecase Diagram

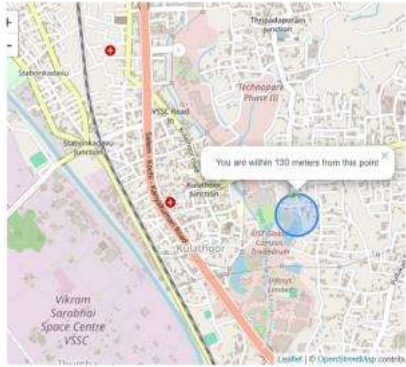
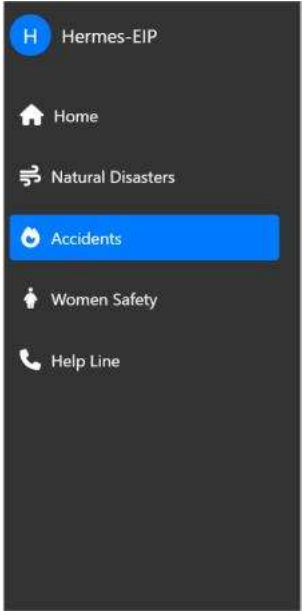


Database diagram



Wireframes





### Report an Incident

Incident Type

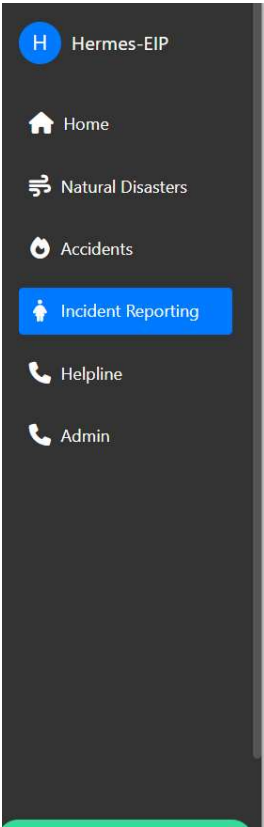
Description

Time of Incident:

Number of People Struck:

Resources Required:

Location



## Anonymous Incident Report

Report ID

Report Code

Type of Incident

Description of Incident

Time of Incident

Location

H Hermes-EIP

Home

Natural Disasters

Accidents

Women Safety

Help Line

National Helplines and Websites

Search by Name

Search by Region

Helpline Numbers

Name: National emergency number

Phone numbers:112

Region: National

Name: Police

Phone numbers:100

Region: National

Name: Police

Phone numbers:112

Region: National

Name: Fire

Phone numbers:101

Region: National

H Hermes-EIP

Home

Natural Disasters

Accidents

Incident Reporting

Helpline

Admin

Login

Username:

Password:

Login



H

Hermes-EIP

Home

Natural Disasters

Accidents

Women Safety

Helpline

Admin

Natural Disaster Reports

ID	Incident Type	Description	Time of Incident	Location	Status
1	Flood	Severe flooding in the downtown area	2024-09-01 14:00	City Center	In Progress
2	Earthquake	5.8 magnitude earthquake reported	2024-09-02 03:30	Suburbs	Resolved

Man-Made Accident Reports

ID	Incident Type	Description	Time of Incident	Location	Status
1	Fire	Warehouse fire with significant damage	2024-09-01 16:45	Industrial Area	Pending
2	Traffic Accident	Multi-car collision on the highway	2024-09-02 08:20	Highway 17	In Progress

Anonymous Incident Reports

ID	Report ID	Report Code	Type of Incident	Description	Time of Incident	Location	Status
1	AR001	RC1001	Child Safety	Report of a missing child in the park	2024-09-01 19:00	Central Park	Resolved
2	AR002	RC1002	Women Safety	Harassment reported near the station	2024-09-02 22:15	Train Station	In Progress