



CSE471: System Analysis and Design
Assignment on Functional Requirements
Proposed Project Title: Nirapod (Fast response service)

Group No: 8, CSE471 Lab Section: 9, Spring 2025	
ID	Name
22101109	Saima Sobahan
22101182	Tawhid Chowdhury
22341082	Md Sakib Sadman Badhon

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Tech Stack:

- **Backend:** Spring Boot (Java)
- **Frontend:** React.js (with Vite)
- **Database:** PostgreSQL
- **ORM:** Hibernate (JPA)
- **Authentication:** Spring Security + JWT
- **Deployment:** Docker + AWS/GCP
- **External API:** Google Maps API (for live location tracking) / Twilio API (for emergency notifications)

Functional Requirements

Module 1: User Management & Community Engagement

- [Badhon] **User Authentication & Verification** (Signup/Login/Logout with multi-step verification)
- [Tawhid] **User Profile Management** (View, update profile details, change password)
- [Saima] **Community Service & Forum** (Discussion on social issues, initiatives, and community chat) → comment
- [Saima] **Crime Prevention & Neighborhood Watch** (Crime-tackling chat group and suspicious activity reporting)

Module 2: Emergency Services & Public Safety

- [Tawhid] **Emergency Service Requests** (Fire, police, ambulance requests with live location sharing)
- [Tawhid] **Case Progress Tracking** (Assigned officer details, status updates)
- [Badhon] **Public Complaints & Evidence Submission** (Crime reports with photo/video uploads)
- [Saima] **Amber Alerts & Missing Person Alerts** (Expanding notifications over time to a wider area)

Module 3: Public Services & API Integrations

- [Tawhid] **Animal Shelter & Protection** (Reporting stray/injured animals, shelter integration)

- [Saima] **City Corporation Updates** (Communication with Local government in forum posts on civic matters)
- [Badhon] **Community Chat for General Discussions** (Non-emergency discussions and help)
- [Badhon] **External API Integration** (Google Maps API for live location tracking / Twilio API for emergency notifications)

Rough Idea about Our Project

Here is our full project details that we are trying to build - [CSE471-Project Idea](#)