# Project Proposal for an Evacuation and Emergency System

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## Motivation

The main motivation for this project was, of course, to help ensure the safety of users. At this very moment, we have enough resources and technologies to implement this in real life. As of now, no such application appears to have been considered and there is a big market and range of consumers for this type of application. The idea of everyone having an easy way to escape from danger by just looking at their phone to show the quickest route, considering the popularity of phones now, is necessary.

## Description

With this project, we want to help people to gain knowledge about escape routes and evacuation plans in different buildings and points around the city in case of emergencies. We plan to develop a mobile app that gathers anonymous information about each user's position and movements. It will then analyze the data to work out optimal evacuation routes inside the buildings.

The system will analyze users' movements and positions during normal routine activities so as to detect the most crowded points and the users' ordinary routes inside the building; but it will also analyze this information during both emergency drills and real emergencies, obtaining very valuable data.

Users will be able to request this information in the app and the optimized routes generated will be provided to each user according to their position.

Certified registered building owners will be able to submit building plans so as to add new buildings to the system.

The system will have a data storage of all rooms and buildings and the statistics gathered during Test evacuations, to show and calculate the most convenient way of leaving the building at the time of an emergency.

# Requirements

We are committed to getting the core of the application on the right track. There is a possibility of complexity arising in this project, as there are many possible buildings, rooms and maps, so we need to be careful to keep the project as realistically feasible as possible in the time given to us. We are committed to documenting every aspect of the project and contacting the customer to see what they really want us to do, as well as maintaining talks with them to ensure that we are fulfilling the needs and wants of the person we are creating the application for.

In addition, if we have time, we are going to implement an environment for convenient use of the program (our commitment is to solve escape paths for the inputted map in a functional way that is not necessarily user-friendly).

## Commitments

User can register onto the system.
User can log in.
User can request escape instructions.
User can share their location.
Admin can modify a database of the system.
Admin can manage users.
Admin can give privileges to owners in order to manage a map.

## Extensions

Owner of building can submit a map of a building.
Owner of building can modify a map.
Owner of building can delete a map.

User can preview map of a building.