Project Title: Ambulance Tracker App

CATEGORY: Mobile Application

PURPOSE

The purpose of developing this app is to provide ease of accessibility to the user as many times, many students do not get access to the ambulance at the required moment of time.

SCOPE

It will make the access of an ambulance for the students easier with the convenience of being able to see the availability of the ambulance and the facility to directly call the driver currently on duty to get the estimated time of availability. Also, the authorities can keep a track of where the ambulance is at a particular time as its live location with necessary credentials would be shared.
And this can be implemented on a larger scale as well. We can build such an application on which various hospitals/private vendors in a particular city can register their ambulances, which common people can have access to.

INTRODUCTION

Proposed System:

The Ambulance Tracking System aims to give the student a hassle-free experience of using the ambulance when in need. There are obviously many advantages of this system to the student as well as the teacher and the associated educational institution. The system after certain analysis contains 3 segments - Students, Authorities and Driver. Each segment will have a different interface and different features accordingly.

Students :
 ● Each student will be provided with a username and password.
 ● They can login, track and book the ambulance(if available on campus) or call the driver(if not available).

Authorities:
 ● Each faculty member in charge will be provided with a username and password.
 ● They can login and track the ambulance 24*7.
 ● The live location and roll number of the student would be shared with authorities whenever the ambulance will be in use.
 ● Authority can add or remove vehicles.

Driver:
 ● Each Driver will be provided with a username and password.

- Whenever a student books an ambulance, the driver would receive a call from that student and in case there is some network issue, there will always be an option to call the caretaker on duty.
- As soon as the driver starts the ride, his GPS will be used to track the course of the ride and as soon as he ends the ride, the data will be logged into the database.

Advantages for Students

- **Time-saving:** Students can easily use the service of the ambulance when in need without much hassle.
- **Accessibility:** Students will be able to see whether an ambulance is available at that moment or not and can proceed accordingly. If in case of an emergency they would not have to wait around for very long and make the process easy.
- **Call:** Users can directly call the driver on duty to take more information about the availability of the ambulance.

Advantages for Authority

- **Tracking:** Authority will be able to keep track of the location of the ambulance and which user is currently using the service.
- **Record Log:** Authority can access all the records of the distance traveled and time by all the users.

FUNCTIONAL REQUIREMENTS

1. Users must have a valid User ID and password to login thus creating their individual profiles.
2. Separate interface for Authority, Students and Drivers.
3. Students can check the availability of the ambulance in case of an emergency and book it or call the driver.
4. After a student's request for an ambulance, the driver can initiate and end the ride upon the completion of which a POST request would be generated to the server with appropriate information accordingly.
5. Location tracking facility is available for authorities.
6. Authorities will have full access to the records.
7. Authorities can register new users.

NON FUNCTIONAL REQUIREMENTS

1. The flexible service-based architecture will be highly desirable for future extensions.
2. Maximum uptime.
3. User-friendly interface.

SOFTWARE TOOLS

Database: MySQL
Client: Browser / App
Tools: Android Studio, Apache Cordova
Language: HTML, CSS, JavaScript

DEPLOYMENT

Operating System Server: Android, Web App

HARDWARE SPECIFICATION

Processor: i5 7th Gen
RAM: 8 GB
Hard Disk: 1 TB