A SOFTWARE REQUIREMENT DOCUMENT ON

EMERGENCY AMBULANCE SERVICE ANDROID APP USING ANDROID STUDIO

Submitted to

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BACHELOR'S DEGREE IN COMPUTER SCIENCE & ENGINEERING

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ABSTRACT

An **emergency** is a situation that poses an immediate risk to health, life, property, or environment. Most emergencies require urgent intervention to prevent a worsening of the situation, although in some situations, mitigation may not be possible and agencies may only be able to offer palliative care for the aftermath.

While some emergencies are self-evident (such as a natural disaster that threatens many lives), many smaller incidents require that an observer (or affected party) decide whether it qualifies as an emergency. The precise definition of an emergency, the agencies involved and the procedures used, vary by jurisdiction, and this is usually set by the government, whose agencies (emergency services) are responsible for emergency planning and management.

An **ambulance** is a medically equipped vehicle which transports patients to treatment facilities, such as hospitals. In some instances, out-of-hospital medical care is provided to the patient.

Ambulances are used to respond to medical emergencies by emergency medical services. For this purpose, they are generally equipped with flashing warning lights and sirens. They can rapidly transport paramedics and other first responders to the scene, carry equipment for administering emergency care and transport patients to hospital or other definitive care. Most ambulances use a design based on vans or pick-up trucks. Others take the form of motorcycles, cars, buses, aircraft and boats.

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INTRODUCTION

1.1 Purpose

The primary focus of an **Ambulance Service** Team is two-fold: The first is to reach people in emergency situations as quickly as possible and administer life-saving first-aid on the spot. The second is to transport the sick or injured patient as quickly as possible to the appropriate healthcare facility for further care.

Emergency medical services (EMS), also known as ambulance services or paramedic services, are emergency services which treat illnesses and injuries that require an urgent medical response, providing out-of-hospital treatment and transport to definitive care. They may also be known as a first aid squad, FAST squad, emergency squad, rescue squad, ambulance squad, ambulance corps, life squad or by other initialisms such as EMAS or EMARS.

1.2 Document Conventions

The document is written on ARIAL font with font size of 12. Headings the written at BOLD. All diagrams are mentioned with TITLE.

1.3 Intended Audience and Reading Suggestions

The document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers. Describe what the rest of this SRS contains and how it is organized. The document should be read in the sequence that is to be written.

1.4 Project Scope

The project focus on the reducing the number of deaths caused due to emergency condition like accidents, heath problems of old people or pregnant women.

Overall Description

2.1 Product Perspective

This product is a new, self-contained product based on the present emergency condition of our society. It will help users to get ambulance services in any emergency condition. People will not have to call and wait for ambulance. Using this product users can track the ambulance.

2.2 Product Features

This product provides ambulance services to the users in emergency condition. In very serious case the software automatically selects the nearest located hospital from where the ambulance will come. Or user can even select the hospital from where user want an ambulance. This product only provides the ambulance services from respective hospitals in users locality

2.3 User Classes and Characteristics

This product has 4 users.

1. Customers :- Use the ambulance service provides by the product.
2. Hospitals :- Will register and add drivers for their respective hospitals.
3. Drivers :- Will pick up the customers from the location with their ambulance.
4. Admin :- Controls all activities.

2.4 Operating Environment

This products will primarily be launched on ANDROID operating system with primary working version of Android 4.4 KitKat. Later we will work on IOS as well as WINDOWS and WEB.

2.5 Design and Implementation Constraints

1. The global schema, fragmentation schema, and allocation schema.
2. There will be 3 application (one for hospital, one for drivers, one for customers)
3. FireBase Database commands for above queries/applications
4. How the response for application 1, 2 and 3 will be generated. Assuming these are global queries. Explain how various fragments will be combined to do so.
5. Implement the database at least using a centralized database management system.

System Features

This app possess a lot of features for the users and their health requirements. This app enables the ambulance to reach at an emergency service as fast as possible and thus may save many lives. This app not only rescues the accident victims but also the pregnant woman and old people with emergency need.

3.1 System Feature 1

This app eases the process of calling ambulance for an emergency patient in any remote location or any condition and thus helping the victim to reach nearest hospital in no time.

3.2 System Feature 2

This app can used in a huge scale and thus can enable its reach to help people to get faster ambulance services to save more lives. The app is completely reliable for the victims and the trespassers and the data is completely secured.

3.3 System Feature 3

The app also track the ambulance with GPS system which helps the victim to locate the ambulance and also can assess the ambulance and its driver. Thus the victims can feel secured and lives could be saved without problems.

External Interface Requirements

4.1 User Interfaces

Our software is an android app running on android OS. Any user having an android device with ANDROID version 4.4 and above can use this app.

4.2 Hardware Interfaces

User need a android device to use this software. Map is the most important interface in this software. All data are stored on online database.

4.3 Software Interfaces

The software is build on ANDROID operating system with minimum android version 4.4. The database use is FIREBASE realtime database.we have used google apis for maps and other purpose also. Its main component is GOOGLE MAPS services. Many libaries like GEOFIRE, GOOGLE MAPS, FIREBASE are used. The whole software is built on ANDROID STUDIO 3.4.

Other Nonfunctional Requirements

5.1 Performance Requirements

Performance of a system the following must be clearly specified:

• **Response Time**

The response time of the software depends upon the HOSPITAL response or can depend on the response of the driver of the ambulance.

• **Workload**

Since we are using firebase database therefore we have very limited querying and indexing, No aggregation, No map reduce, Can't query or list users or stored files.

• **Platform**

The products is android base so use should have a android smartphone with min android version 4.4.

5.2 Safety Requirements

There is no possible loss, damage or harm that user will have using this software. This app monitors your current location.

5.3 Security Requirements

The user need not to worry about his/her data. It is fully secured. User should have a gmail id and a working phone number for registration. OTP will be sent to the mobile number.

5.4 Software Quality Attributes

The software is very adaptable and weasy to use because of its simple design. The software is available easily on google play store. It is maintained regularly from our side. The products is very robust and is tested through various phases/

CONCLUSION

Our App will provide emegency ambulance service for the accident victims.
All Hospitals will use this app. When an accident occurs the request for ambulance service can be made by the victim or by any tracepasser when the victim is in serious condition. The request will be sent to the nearest hospital and then the ambulance will be sent from there to the location of the accident as soon as possible.