# RAKSHA

## Contents

# 1 Introduction

## 1.1 Purpose

The purpose of this document is to give a detailed description of the require- ments for the "Raksha" application. It will illustrate the purpose and complete declaration for the development of system. It will also explain system con- straints, interface and interactions with other external applications. This doment is primarily intended to be proposed to a customer for its approval and a reference for developing the first version of the system for the developer.

## 1.2 Project Scope

In today's world, people using smart phones have increased rapidly and hence, a smartphone can be used efficiently for personal security or various other protec- tion purposes. The Raksha Application for the Safety of Women can be activated by a single click, whenever need arises. A single click on this app identifies the location of place through GPS and sends a message comprising this location URL to the registered contacts and also call on the first registered contact to help the one in dangerous situations. The unique feature of this ap- plication is to send the message to the registered contacts continuously for every three minutes until the "stop" button in the application is clicked. Continuous location tracking information via SMS helps to find the location of the victim quickly and can be rescued safely. The application makes an automatic phone call to the police which ensures to ask for help and protection during dangerous situations, thus ensuring the women safety.

There are few existing applications but they have some or the other draw- backs. Fightback, Abhayan applications they have issue while contacting; then there is another application called Glympse which is designed to share gps lo- cation but its not able to send it. Last one is Vanitha Alert- this app sends text message when clicked on a button.

# 2 Functional Requirements

This section includes the requirements that specify all the fundamental actions of the software system.

- **New User Registration:**
  Given that a user has downloaded the mobile application, then the user

should be able to register through the mobile application. The user must provide username, password, e-mail address and phone number. The user has to use these credentials for future login.

- **Login:**
  Given that a user has registered, then the user should be able to log in to the mobile application. The log-in information will be stored on the phone and in the future the user should be logged in automatically.

- **New User Registration:**
  Here, the user will have to enter one or more phone numbers who can be informed about the emergency. The contact numbers should be entered according to their priorities.

- **Edit Profile:**
  This function allows to edit the basic user information and update the contact list.

- **Tracker :**
  In the alarm mode, the GPS location of the device will be sent to all the contacts that were entered in the contact list for every 15 minutes. It will also make a call to highest priority contact.

- **Emergency alert (EA) mode:**
  In the Emergency alert mode, the GPS location is sent to all the contacts similar to Alarm mode but it will be sent for every 3 minutes. It then directly makes a call to the police so that immediate action can be taken.

# 3 Non functional Requirements

## 3.1 Performance Requirements

- The system will remain accessible 24x7.The system must be interactive and the delays involved must be less.So in every action-response of the system, there should not be immediate delays.

## 3.2 Security Requirements

- Information transmission will be securely transmitted to server without any changes in information.

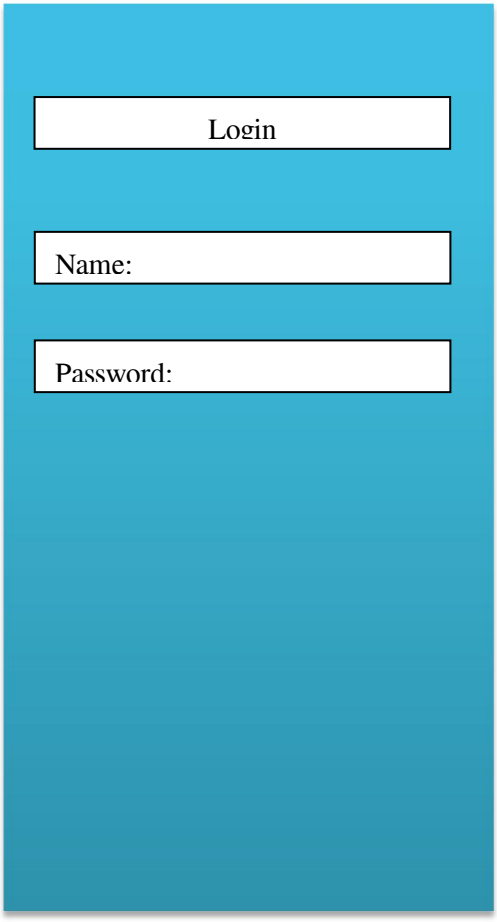
## 3.3 Software Quality Attributes

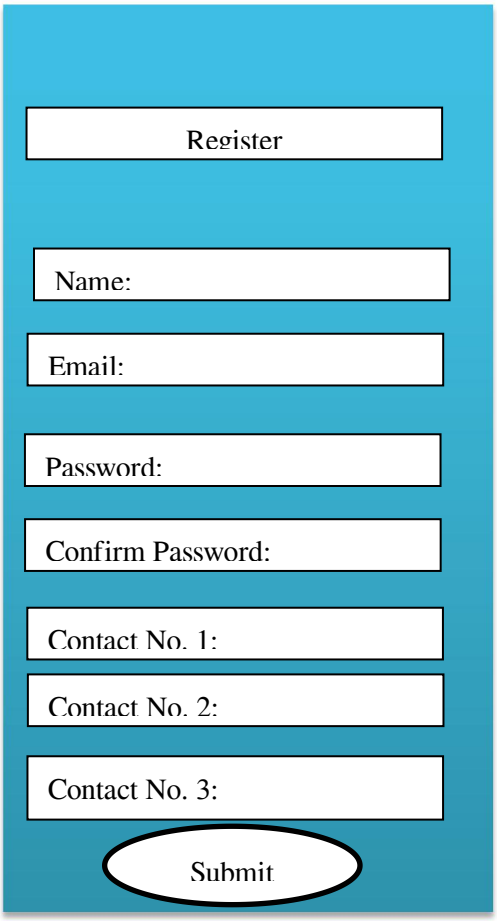
- **AVAILABILITY:**
  Proper backup of data is to be done to ensure that the important user data is not lost in case of database failure. This will ensure that the application is always available.
- **RELIABILITY:**
  The application should make calls and send messages to appropriate con- tacts which are present only in the contact list.thus making it more reliable.
- **MAINTAINABILITY:**
  The application will be easy to extend. The code will be written in a way that it favors implementation of new functions.
- **USABILITY:**
  The application will satisfy a maximum number of customers needs.
- **PORTABILITY:**
  The application will be portable with almost all the Android versions and devices.

# 4 External Interface Requirements

## 4.1 User Interface

- A first time user of the mobile application should see the login page when he/she opens the application. If the user has not registered, he/she should be able to do that on the log-in page.
- If the user is not a first-time user, he/she should be able to see the search page directly when the application is opened.
- Every user should have a profile page where they can edit their e-mail address, phone number and password.

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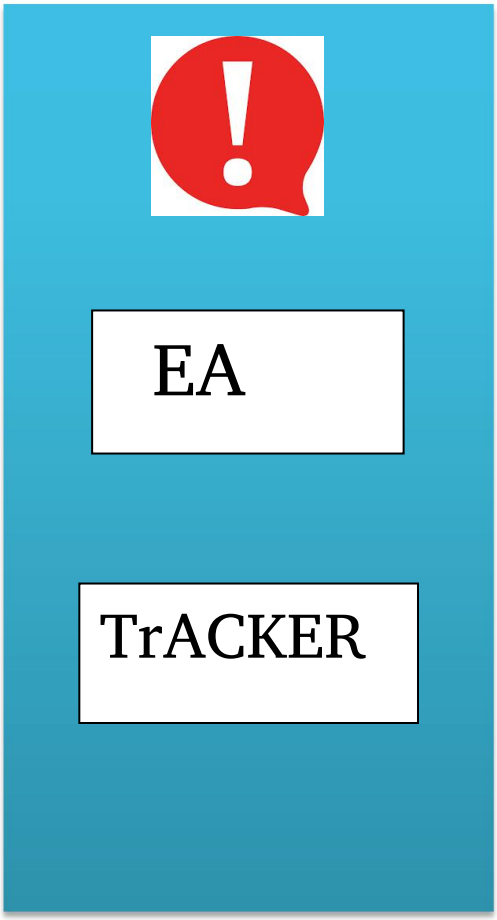
EA
TrACKER

### 4.2 Hardware Interface

No specific hardware required. Since neither the mobile application nor the web portal have any designated hardware, it does not have any direct hardware interfaces. The physical GPS is managed by the GPS application in the mobile phone and the hardware connection to the database server is managed by the underlying operating system on the mobile phone and the web server.

### 4.3 Software Interface

The mobile application communicates with the GPS application in order to get geographical information about where the user is located, and with the database in order to get the user information. The communication between the database and the mobile application consists of operation concerning both reading and modifying the data.

## 5 Database Requirements

- In the database, integer and varchar type of information will be stored.
- The application will always be able to access the database for implementing various functions.

  Integrity Constraints:
  Primary Key: Email address
  Unique Key: Phone number