

Smart Mobile Hybrid App for Emergency Health Care

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ABSTRACT:

The android mobile app is proposed which has target users of those sections of the people who suddenly fall into an emergency situation then this application gives intimation to near by hospitals. This android application consists of three sections/features such as accident (road/fire) A, pregnancy P, heart attack H. The first application 'A' is enabled whenever an accident occurs and mobile falls down through accelerometer sensor then the information is given to cloud data base and it will send the information near by hospital and police station/fire station within 2 minutes through emergency SMS. The second application 'P' is enabled whenever a pregnant woman gets into an emergency then the five fingers of hand touched the mobile screen then the touch sensor information will pass to the gives the intimation to the hospitals which are nearer to that location. The third application H is enabled, when the heart beat raises than normal heart beat then it gives the emergency alert to the hospitals which are nearer. The fourth application G is enabled in case of fever, cold etc. Smart watch is employed to sense the heart rate of cardiac patient and also pulse rate of the pregnant women and information is sent to the hospitals, relatives, and emergency contacts. It is implemented by using Java programming language and GPS and expected range is 4 to 5 kilometers.

Keywords: Google Maps, GPS, Contacts, Text Messages, Java, Android

1.INTRODUCTION

Every hospital maintains a sizable amount of patient records and other private information. Hospital mobile apps can assist reduce time for the doctor and patient waste for entering in data, searching for analyses, and paying expenses. All of that information can be kept in this app and is always accessible to both parties. Hospital mobile apps can help doctors and patients spend less time entering data, looking up analysis, and paying bills. This programmer may be used to store all of the data, making it available to both parties at all times. Companies that create hospital mobile apps face a difficult task because they have to offer software solutions for ongoing health monitoring, early disease warnings, and assistance with diagnosis and monitoring.

Since that the mobile internet's parameters

are currently improving in terms of speed and dependability approaching the parameters of the established connection. Many people also have cell phones with always-on, location-independent internet access at the same time.in such cases, there is a possibility that health information will be sent continually to a server for processing or to alert the attending physician.in an emergency, the programmer can promptly call an ambulance.

2.LITERATURE SURVEY

Priyanka Dubey, Dhanesh Sharma, and Navin Singh Professor Sulachana Devi's direction

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In the past, the majority of research on Android has been on the difficulties in developing Android applications that are primarily focused on emergency scenarios in order to successfully execute the concept of emergency-based Android applications. One study focuses on the best method for creating a foundational Android application. in order to clarify the idea to implement and to develop the application interface. Another piece of work uses the Google Maps API to set a location-based remainder. The application-relevant use of the Google Maps API has been the subject of more recent research. In order to obtain the user's precise location via the Global Positioning System, it is necessary for the user to have a functioning internet connection in addition to an android device that supports GPS (GPS). The third paper focuses exclusively on the most crucial component, the "EMERGENCY BUTTON". The final study is based on an Android programme designed with women's safety in mind.

3.EXISTING MODEL

It is a licensed product or model for developing a new working model with efficient working

1.Login Module

Login module includes the sign-in and login pages, as well as the data base connectivity of both the page. The sign-up page is the page used to create the user's name and password along with specifying the emergency contacts which will be used later for the further processes. The login page will check the entire credentials with the database to check for valid username and password.

2.Emergency Module

The emergency button, which makes up the majority of the Emergency Module Application. The Emergency Button when pressed will navigate to the nearest working Hospital and a ping notification through SMS, which will include the current location of the victim and the location of the nearest hospital where the victim is being directed

3.Google API Module

After the login process, we will use the Google Maps Locations API on the start screen. The Google API will be utilised to display the local doctors and their reasonable costs. Also, it will be used to locate the closest hospital in an emergency

4.PHP\Firebase (Database) Module

The database will be used to hold user data, such as the user's contact information and emergency contacts, as well as doctor data, such as the doctor's minimal costs.

Do not use "et al."; instead, list the names of all writers in the reference section. No space should be used between an author's initials. Unpublished should be used as the citation style for unpublished papers [4]. papers that have been offered or approved.

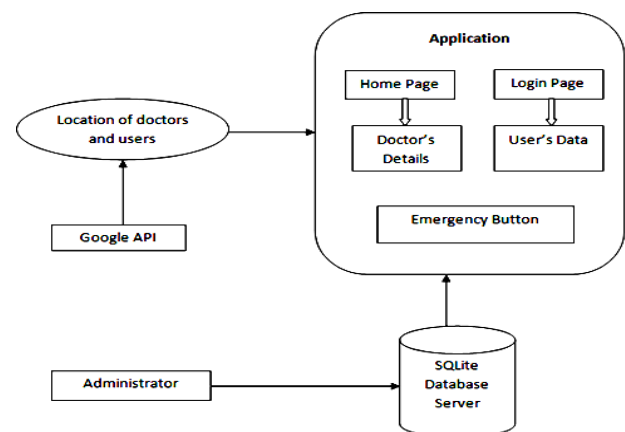


Fig 1 Working of existing model

4.PROPOSED MODEL

In the present era there has been a drastic increase in the no of accidents and heart strokes.

There are few available models available to display the list of near by hospitals like google maps and also for the heart strokes detection.

The proposed system serves to bid the two requirements together through an app. Unlike the existing models the proposed model reduces the time of search to get the list of nearby hospitals.

It is achieved by the pressing of buttons instead of typing in this way our first requirement to get the list of nearby hospitals

is met.

The proposed system fulfills the requirement of heart attack detection by observing the pulse of the person.

Here a person's heartbeat is detected using the smart watch which thus reduces the burden of carrying an extra hardware to detect the pulse as shown in existing models. It is difficult to determine when a person will get affected with heart stroke. In some situations, there may be a or may not anyone nearby to help. Keeping that situation is in mind the proposed model is designed in such a way that it sends emergency message to the near and dear of the affected person once the heart beat crosses the normal level in this way

“Single app serves two requirements”

Registration Module

we have implemented User Registration in our App. We're going to create a straightforward application that displays a user login form in an android app enables users to log into that application.

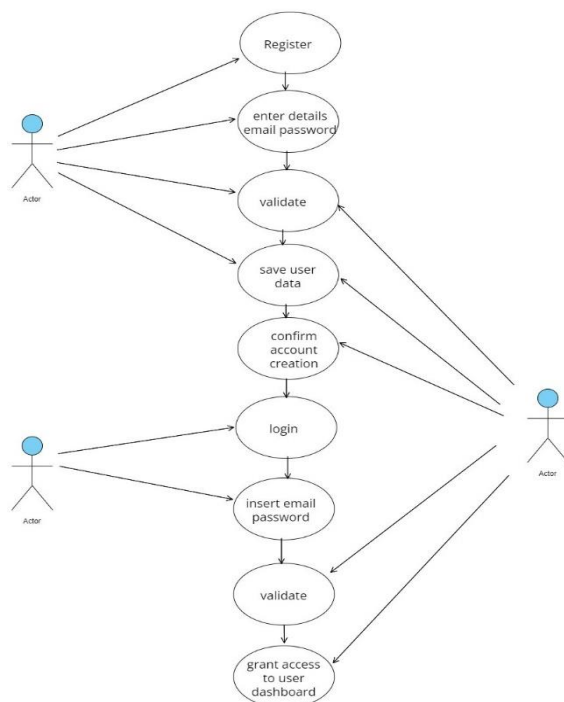


Fig 1. Flowchart for user registration

1.Heart Attack Activity

You are alerted to an emergency when the patient's heart rate reaches your maximal

heart rate or falls dangerously low. Your chosen emergency contacts will receive a text message when the patient's heart rate is abnormally high or low. Your name, location, and other details are included in the urgent text message.

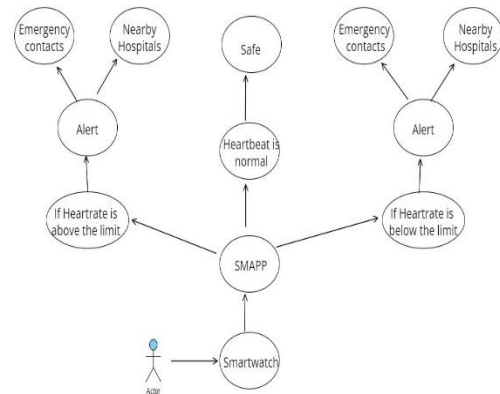


Fig 2. Heart attack activity working

2.Pregnancy Activity

Whenever a pregnant woman gets into an emergency then the five fingers of hand touched the mobile screen then the touch sensor information will pass to the gives the intimation to the hospitals which are nearer to that location

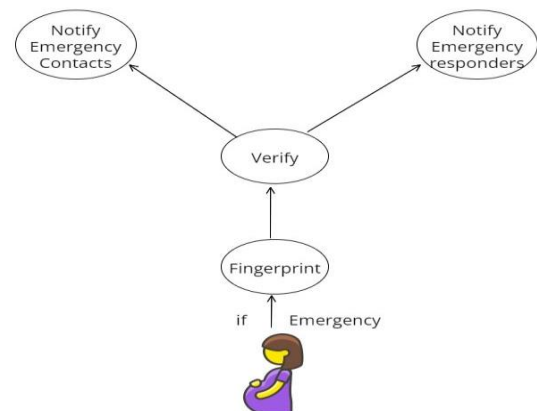


Fig 3. Pregnancy Activity working

3. Road Accidents Activity:

The first application 'A' is enabled whenever an accident occurs and mobile falls down then the information is given to nearby hospital and police station/fire station within 2 minutes through emergency SMS

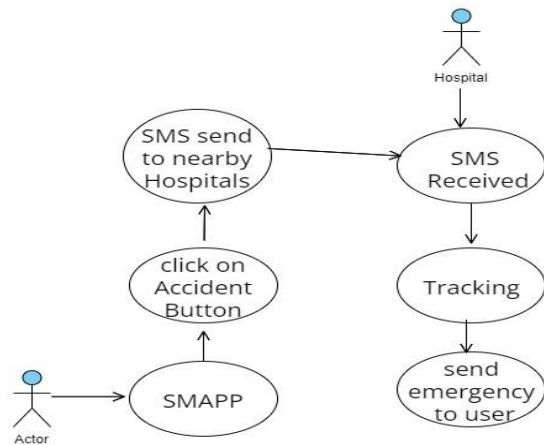


Fig 4. Working of Road Accidents Activity

Output Screens:

Patient Geo Co-Ordinates

The geographic coordinate system (GCS) is a spherical or ellipsoidal coordinate system for measuring and communicating positions directly on the Earth as latitude and longitude.



Fig 5. Screenshot of Patient Realtime Geocoordinates



Fig 6. Screenshot of Patient Realtime Geocoordinates

Maps:

Patient Location Near Controller

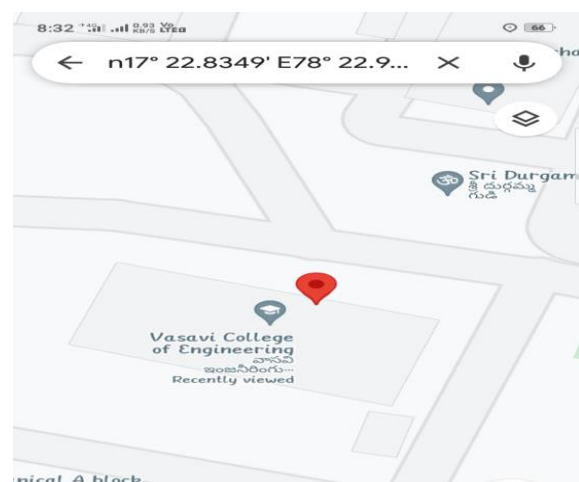


Fig 7. Screenshot of patient location

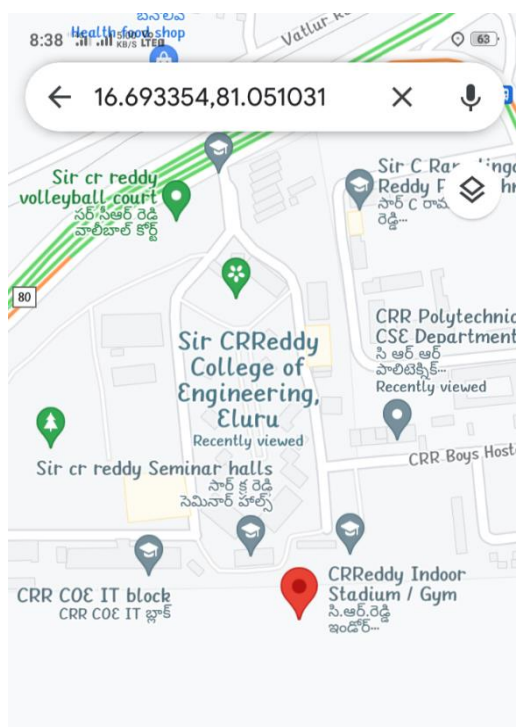


Fig 8. Screenshot of patient location

Conclusion:

We have proposed an efficient and reliable smart mobile hybrid application for emergency health care. The service provided by the proposed system is needed and valuable to the health sector where a quick treatment is needed. The user will get himself registered through this proposed system. In case of emergency the user can get a list of nearby Hospitals. This app will enable the transfer of user's data to the emergency contacts. By using this app, you can call an ambulance faster and significantly lower mortality rate in society

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