AMBULANCE SERVICE

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ABSTRACT

India is lagging behind other countries due to emergency medical response. This is because of lack of implementation in technology. To resolve this problem we are introducing ambulance service.. This Android based mobile application project will totally change the native way of calling an ambulance and it will be more efficient and reliable. The app reacts with just one tab on the button and it will send the notification of user's details and location via GPRS to nearby ambulance control center. By the use of Internet of Things and by using smartphone technologies it will help every smartphone user. The application collects location information from Global Positing System (GPS) hardware and uses Google Map Application Programming Interface (API) to plot details of the ambulances on the Google Map Client of the Smartphone App. Same functionalities can be used for other services which helps the user to find out ambulance easily.

Keyword : - *Hospital, Ambulance, Emergency, Public Safety, Smart City, Smartphones*

1. INTRODUCTION

In today's era, there are many countries which are working on transforming themselves into Smart Countries**.** If the city is going to be called as Smart City, then it should have all possible achievements in the sector of smart technology which is needed. This is most challenging and difficult job is to improve efficiency in healthcare sector. It includes various aspects such as getting ambulance in minimum amount of time, providing proper treatment to the patient so that the chance of surviving increases in critical condition. Due to traffic many problems are raised in urban areas which have caused much difficulty for the ambulance. Now a days, road accidents in the city have been increased and to bar the loss of life due to the accidents is even more crucial. We can overcome these limitations by upcoming technology like Internet of Things and also ambulance service[1]. Various hardware devices can be connected with each other via wired and wireless networking tools and software implementations by which service will be provided faster to the users. By keeping this things in mind we've developed this application. It is also an attempt to participate actively in the process of transforming into smart city and make required services more accessible will help users[2].

2. LITERATURE SURVEY

2.1 OLA cab service
Ola Cab was founded on 3 December 2010 by Bhavish Aggarwal, currently CEO, and Ankit Bhati. As of 2017, the company has expanded more than 600,000 vehicles across 110 cities. In November 2014, Ola diversified to incorporate autos on trial basis in Bangalore. Post the

trial phase, Ola Auto expanded to other cities like Delhi, Pune, Chennai and Hyderabad and Kolkata starting December 2014. In December 2015, Ola expanded auto services in Mysore, Chandigarh, Indore, Jaipur and Guwahati, Visakhapatnam. Ola was valued at $US5 billion as on September 2015.

2.2 E-Ambulance

Real-Time Integration for Heterogeneous Medical Telemetry System:- (IEEE Paper by: - Basem Almadania, Manaf Bin-Yahyaa, Elhadi M. Shakshukib Year 2015). The aim is to advance the healthcare services with the improvement of sensor networks, Medical devices, wireless communication, and end software applications. Indoor and outdoor health monitoring systems attracts many researchers, because they provide early detection of diseases, emergency help, and reducing the medical costs. In health monitoring systems, periodic physiological statuses of people must be collected using sensors and delivered to medical professionals through a communication system. Alongside this periodic data, these systems must provide emergency reports under critical situations of it. Gathering of different vital signs depends on the purpose of the healthcare system and its concern are most important. Many patients with critical conditions lose their lives while they are inside an ambulance due to lack of aid to survive. Medical professionals who may be able to save their lives are in medical centers. Therefore, only first aid can be provided in an ambulance and essential treatments will take place in that medical centers. Towards this end, this literature proposes an E-Ambulance system to provide remote health monitoring with automatic responses while patients are still in the ambulance. In normal situations, the ambulance is ordered to carry Patients to medical center (such as a hospital). Many issues may occur in regards to patients' conditions and the need to deliver them to a medical center urgent.

3. ABOUT AMBULANCE SERVICE

3.1 Overview of project

The ambulance service depends upon module that search ambulance by location through GPS. This module can be use to implement and finding the location of ambulance of particular place within users location. This application also can be use to search near by ambulance from searched location on map of users current location. Here user's location is traced using GPS. The location is retrieved in the form latitude and longitude. E.g. 19.54526, 73.87099. This is the format of the latitude and longitude. Depending on the user's location,

server processes the data and matches with records stored into the database. Here users location is traced through GPS. After processing data the result of user's query is sent back to the user. Smartphone application reads the response of the server and retrieves the data which is required and places it on to Google map client of smartphone device or displays in a listed format depending on the user's preference. It makes easier to understand the user. This can be done using Google Map API's functionality. There is a set of predefined markers that are made available in Google Map API. But for user's convenience custom pins are used. This API guideline is provided in Google Maps documentation.

3.2 Android

Android is the world's most popular and dominant mobile operating system which is used very widely. It is based on Linux kernel, java, SQLLite and is open source operating system. It runs on wide variety of hardware including smartphone, smartwatches, cars, televisions, digital cameras, games console and more. It was founded by Andy Rubin and three other members in October 2003 and got acquired by Google in August 2005. Android applications are easy to develop and understandable by everyone.

Main Function of android is-

- Activity.

- Services

4. TECHNICAL REQUIREMENT

4.1 Hardware Requirements

- Smart mobile Phone
- CPU – Quad-core Max 1.40GHz
- Internal memory-537.4MB

4.2 Software Requirements

- Android Studio
- Android SDK Java JDK 8.0 or higher
- Android Virtual Device(AVD) -Mobile Noghut 7.1.2 N2G47H
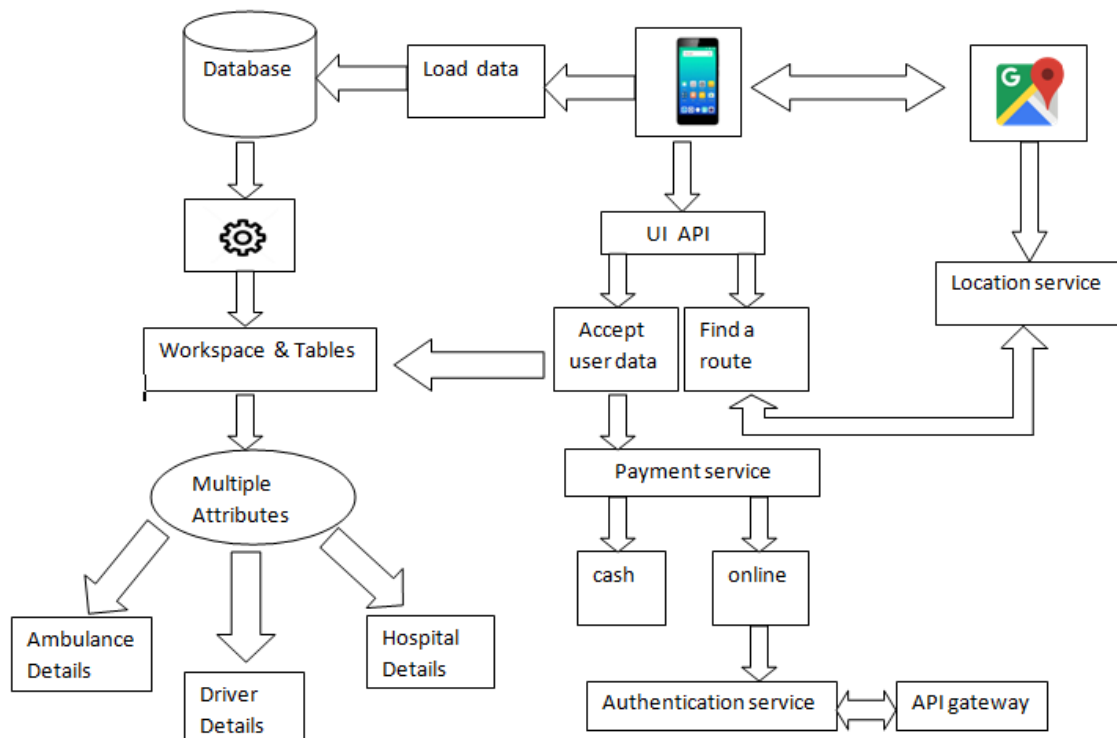
5. ARCHITECTURE DIAGRAM

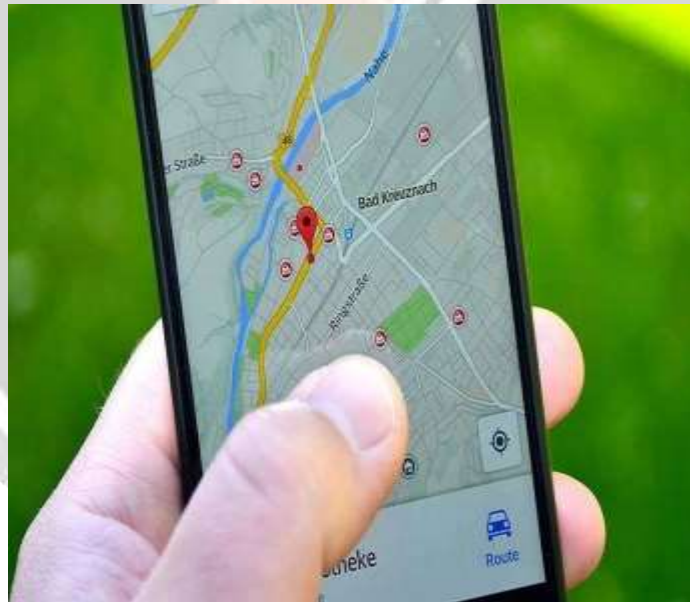**Fig -1**: Block Diagram

Fig -2: Location View

Fig-3: Location Tracking through GPS

6. WORKING OF OUR PROJECT

In our application we are giving facility of booking ambulance similarly like how we book cabs. It will be very important application for us from which we can reduce time and deliver patient on time. In our application there will be two modules in which one will be for user/patient and other will be for ambulance driver. In our project data will be kept safely and in systematic way which will easy to keep records of users and drivers. In our project we can easily locate ambulance as well as user accurately through which it will reduce the time of calling to each other.

6.1 Algorithm

1) Start
2) User
3) Checking ambulance location and sending location to user.
4) IF GPS is not enabled /Enable it.
5) Else
6) Ambulance is available and sending location of ambulance to user
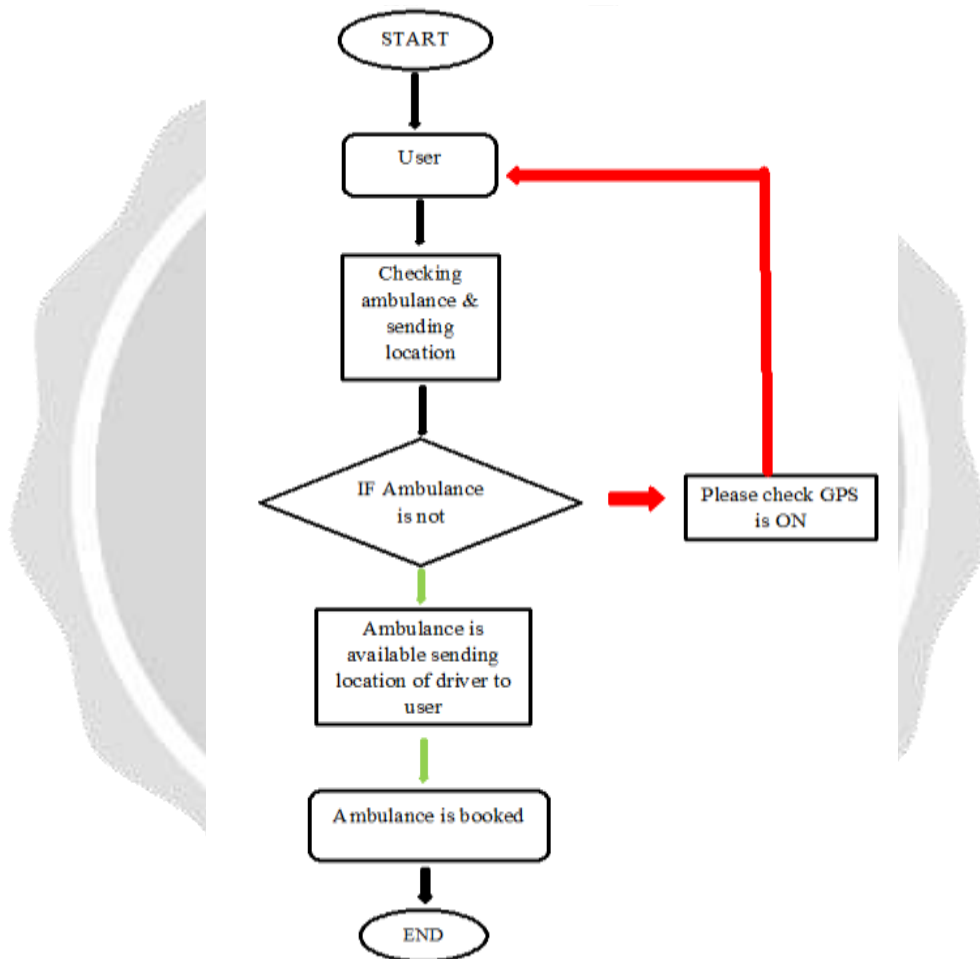7) End

6.2 Flowchart

Fig-4: Flowchart

7. CONCLUSIONS

Our conclusion is we have developed our project and if it work as we have expected then it will be very successful application which will be useful in our day to day life. And according with smart city project we will be able to go one step forward in health sector also. In this paper, an idea is developed for saving a patient's life in a faster way as possible. It is very important for users in case of emergencies as it saves time. With this Application, the ambulance can reach to the user or patient as location is tracked or given through the application and also can provide necessary equipment's which is required for the patient's health.

6. REFERENCES

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