

“Android Application for Ambulance Service”

Project Proposal

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1. Introduction:

An emergency can happen at any time. In reality, observing such emergencies and to resolve them is a tough challenge. Emergency services are government agencies whose job it is to respond quickly to emergencies when they arise, including fire-fighters, police, and ambulance services. We need these services which ensure urgent stabilization of the situation and transport to definitive care. In this project, we have introduced an android application which provides an overview of ambulance services and which can be accessible by everyone.

In our proposed work, an android application is used to call ambulance at the spot without wasting any time using GPS system. Ambulance driver can control the routes by checking GPS and can alert the desired hospital in advance for the availability of doctors and bed etc. We offer an android application that can be accessed from

anywhere at any time. Our work presents the remote application which can guide and inform the actual authority according to the needs of the users that they mentioned in the application, then this message is passed on to the authority and forced them to take the action immediately necessary for users in difficulty. When we are faced with such problem, we just click on our apps and type in the important field and then save it. Now our application will read the problem and analyze it, then it will pass this message on to the appropriate authority for them to take the necessary action. Mainly help a collection of all emergency services. Single server that can serve and resolve all emergency issues on time.

To get emergency services, the person must select the available emergency type they want to use. We consider the person in emergency selected emergency services, in our proposed application the user needs to fill up the information to get the list of local hospitals from the accident site, current location of the person once entered the needed data, which will be saved to our application and in a short time the emergency will be provided to the person, from the list of hospitals which are available nearby the user will get displayed. This will also be useful for the new person in town and in trouble but does not know the closest and most helpful hospitals, can also get help with information.

2. Objective:

To design an android application which helps the user to find the nearby ambulance and the nearby hospital based on their location. It helps the user to book the ambulance or call it to the place of emergency so that the patient can be taken to the hospital on time and their life can be saved

3. Problem Description :

Our main goal of this project is to solve the problems in ambulance service. Some of the main problems like misuse of ambulance service took so long to reach to the patient & hospital because of unawareness of their location. After that ambulance stuck in traffic. Sometimes when patient took to the hospital doctors refused to admit the patient and after that patient is sent to another hospital which takes so much time and in result people lose their loved ones. Our application can solve these problems when a person calls an ambulance through our app, the nearest ambulance receives the user's location so with the help of Google maps the ambulance reaches the spot without any difficulty. After that our application stores all the data related to the condition of the patient, so it will be easy to choose which hospital is suitable for the patient. When ambulance driver chooses a hospital, it will show all the possible routes which are short and clear with

traffic so time can be saved here. A notification will be sent to the desired hospital so hospital staff can arrange the bed and all stuff in advance for the patient. With all these features, patient can reach the hospital on time and their chances to survive will increase.

4. Methodology:

1. Determination of traveling time matrix:

We have to compute the time needed to go from each municipality to every other one. It is a very important input in order to define good municipalities or technical areas clusters respecting the main quality objective. It can be argued the necessity to calculate the complete matrix especially for the province, anyway we can compute it using Microsoft MapPoint and some computing time.

2. Simulation:

The optimization model works on aggregate average data. And assume that the ambulance is always present. Since the system is highly variable a simulation model able to examine in detail the management of each event is needed. The events to simulate can be taken from history or can be generated. A simple management rule that state (for each event take the nearest free ambulance that is not far more than a given time threshold has also been implemented. A detailed service process is part of the detailed Simulation. The simulator has been implemented with a general-purpose programming language.

3. Integrating solutions:

The described methodology has been applied to specific time intervals winter morning during working days. However, when the methodology is applied to different scenarios the obtained solution will be different. It might happen that the ambulance site of two solutions related to different scenarios are completely different. As continuity of the service is very important, to avoid set up time, a compromise should be found. In the current proposed methodology such an issue is tackled imposing additional constraints in the optimization model. For instance, if the morning solution, the most important in terms of number of missions and ambulances, is defined, it is possible to set preferences on the chosen sites in the afternoon and night scenarios.

5. Project Scope

In an android-based ambulance service project, we are assuming a common problem with using phone calls to get help is providing the accurate location of the caller. When an emergency occurs, the types of the emergency and its location are critical to any dispatcher. Unfortunately, getting the incorrect location information can become a hazard when the caller does not know their exact location or the dispatcher can't identify the exact location and information from the caller.

6. Feasibility Study

i. Risks Involved:

1. This project will cost high as compared to current phone call ambulance service.
2. Internet is basic need to use our application.

ii. Resource Requirement:

1. We are using basic programming languages.
2. A device with internet is required in the ambulance.
3. Google maps will be used to track the location of user and hospitals.

7. Solution Application Areas

Our application is an advancement to such existing projects with a user friendly and ambulance service facility. Our project summing up is, we will develop our project to handle emergency health situations and to evacuate the patient to a nearby and communicated hospital. In our project, an approach is extended toward rescuing sufferers' life in a more accelerated approach as feasible. It is extremely essential for sufferers in the matter of crises since it conserves time.

The main target of our project is the medical industry and their ambulance services, which nowadays lack in saving lives through their communications, the time an ambulance takes to come, and the route they take to bring the patient to the hospital which mostly ends up with not saving a person's life,

It will be beneficial through our domain, like it will be easier for the user to look for the ambulances in his or her preferred areas through our application. They can approach the nearest ambulances for time saving, and through our project we will provide a GPS system to the ambulance rider to look for the fastest route which avoids the traffic, to save and reduce the risk of a person's death.

8. Tools/Technology:

1. React Native
2. MongoDB

9. Expertise of the Team Members

Both of our team members have the knowledge to complete the project as we have studied basic languages of application development, Database etc. Our team has equal interest in this project.

10. Milestones

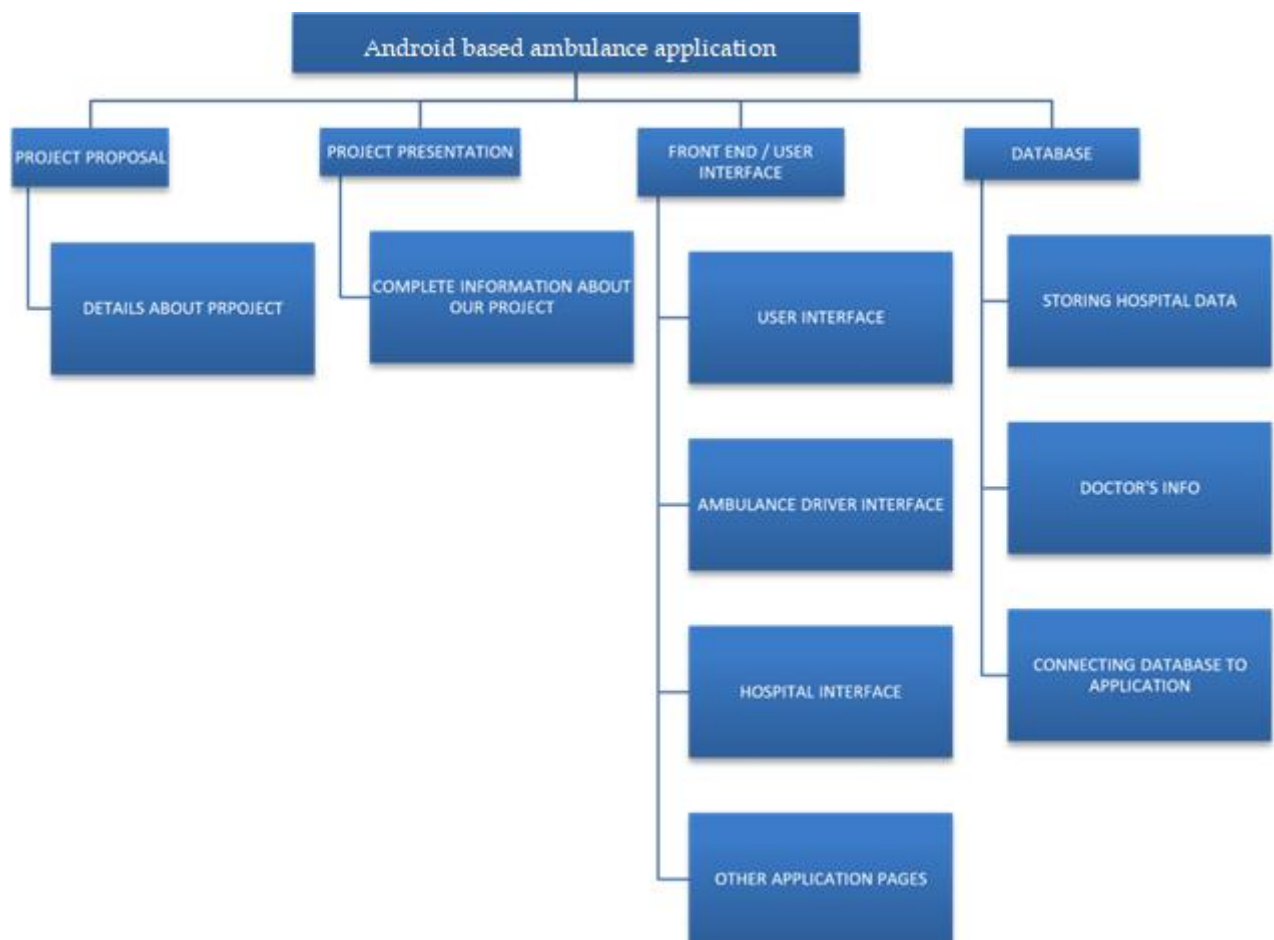
- First Documentations will be done for our project.
 - Project proposal will be completed
 - After that proposal defense will be made
 - A complete presentation of our project which is based on Android based Ambulance service will be made.
 - We'll start working on the front end of our application.
 - A complete user-friendly interface will be created.
 - Second interface for the ambulance driver will be created.
 - After that we'll work over the other tabs/ interface designs of our application.
- Once the front end is completed, we'll work on database. • Database will be connected to the application.
- Data of hospitals, doctors etc. will be stored in the database.
- After all the above work, we'll start working on the back end of our application.
- After that we'll start working on the location and GPS system.
- And in the end, we need to connect different devices to one server for the communication.

11. Project Schedule:

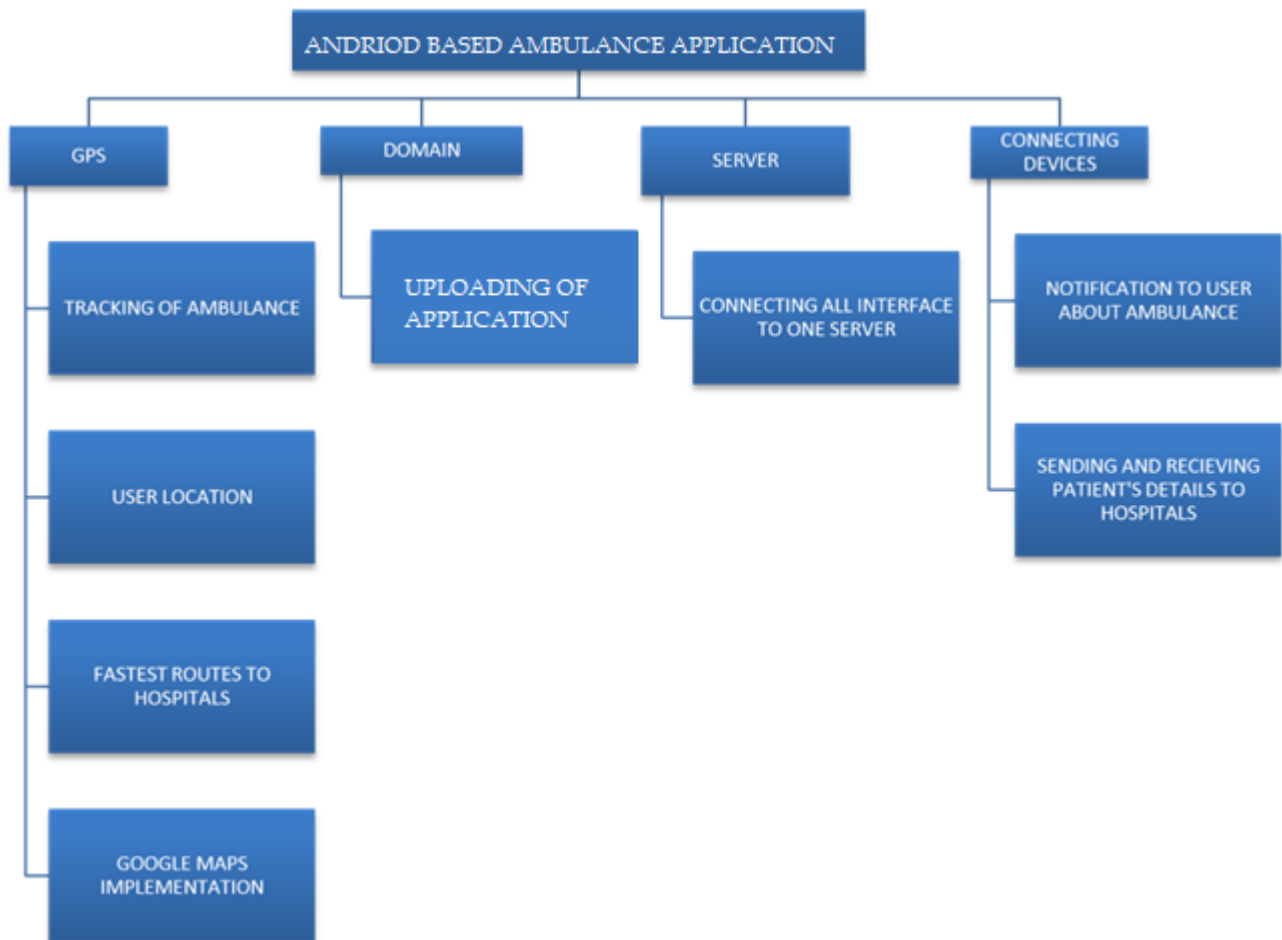
ID	Name	Start Date	End Date	Duration
1	Project proposal	Mar 03, 2023	Mar 03, 2023	1 day
2	Proposal defense	Mar 07, 2023	Mar 11, 2023	3 days
3	Project Presentation	Mar 07, 2023	Mar 12, 2023	5 days
4	Front end	Mar 17, 2023	Mar 27, 2023	10 days
5	Database Connectivity & Storage	Mar 31, 2023	Apr 18, 2023	18 days
6	Design for Map and GPS	May 01, 2023	May 09, 2023	8 days
7	Google maps implementation	May 12, 2023	May 16, 2023	4 days
8	GPS of ambulances will be tracked	May 19, 2023	May 26, 2023	7 days
9	Domain will be connected to application	May 27, 2023	May 30, 2023	3 days
10	Server made for all user connectivity	Jun 02, 2023	Jun 06, 2023	4 days

ID	Name	Feb, 23	Mar, 23	Apr, 23	May, 23
		26 02 09 16 23	30 06 13 20	27 04 11 18 25	01 08
1	Project proposal	■			
2	proposal defense		■		
3	Project Presentation		■		
4	Front end		■		
5	Database Connectivity & Storage		■		
6	Design for Map and GPS			■	
7	Google maps implementation			■	
8	GPS of ambulances will be tracked				■
9	Domain will be connected to application				■
10	Server made for all user connectivity				■

12. Work Breakdown Structure: FYP 1



FYP 2



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