

**EMERGENCY HOSPITAL FINDER**

**BY**

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering.

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**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH**

**DECEMBER 2020**

## **APPROVAL**

This Project titled “EMERGENCY HOSPITAL FINDER” submitted by SHIMUL MONDOL TAMO and MD. SOHEL RANA and LUBNA JAHAN DOLY and ABDULLAH AL MOHSIN to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 18-01-2021.

## **BOARD OF EXAMINERS**

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**(Name)**

**Chairman**

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Department of CSE  
Faculty of Science & Information Technology  
Daffodil International University

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**(Name)**

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**Designation**

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Daffodil International University

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**(Name)**

**External Examiner**

**Designation**

Department of -----  
Jahangirnagar University

## DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Mohammad Jahangir Alam, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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We would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, we must acknowledge with due respect the constant support and patients of our parents.

## **ABSTRACT**

In this project, we tried to make the Emergency Hospital Finding system. Also, we added a real-time database to get available seats of any hospital and find hospital details. We studied more than five (5) papers regarding emergency hospital findings using smartphones. After this, we developed an android based application named “Emergency Hospital Finder” and we included emergency blood bank feature along with a direct calling system. We also included an emergency ambulance finding feature. User can easily find nearby hospitals and pharmacies, also search any hospital’s location through Google map. We also developed an application for the hospital’s admin. From our database, users can find all hospital's details and contact with the hospital. Also, the user finds the hospital location and direction by Google map. We hope that this application will be beneficial for every citizen of our country.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

In our real life, we can see every people suffering from many things. Sickness is one of them. Somehow people are not totally fit for any reason. At present time fully fit person is rare to find out in a family at least one person can be found who is not fully fit physically. For that reason, people going to hospital for check-up. Normally, they are mostly suffering one thing they can't decide which is nearest hospital from their house and which hospital is best for treatment. An emergency moment they didn't have enough time to think about it. That time is really difficult for them to find nearest hospital. Sometimes patient is too much serious situation before to reach hospital and the patient dead already. By means of our App people can easily solve that problem. They can easily search the nearest hospital from their home. Also contact reception by their phone number and email. They can also book seat for patient. Our app also provide ambulance details for that people can contact ambulance service and also booked ambulance. All the facilities people can get by using our App.

### 1.2 Motivation

By means of our project we tried to make finding nearest hospital and booked seat for patient. Also finding nearest ambulance service easily and digital for all the people in our country. In this era most of the people are using smartphone and online shopping is becoming popular day by day.so we hope that our application "EMERGENCY HOSPITAL FINDER" will help everyone to finding nearest hospitals in area. Also, we added nearest pharmacy finding system so that people can easily buy their medicines. For using this feature no need to download another app. We believe that people will be benefited and that will be our success.

### **1.3 Objective**

1. Many people do not find where the hospital is when they need it. People can easily find the nearest hospital.
2. People should easily know which hospital's bed is empty. This will reduce the number of unexpected deaths.
3. Sometimes people do not find an ambulance during an emergency. People can easily find nearest ambulance service.

### **1.4 Expected Outcome**

1. If any emergency occurs or depending on the condition of the patient, it will be possible to take patient to a nearby hospital in a hurry.
2. Users will be able to easily inform the hospital by emergency contact number which is available.
3. An ambulance can be easily reached, if needed.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Background Study

Authors [1] mentioned about that quite often, spatial search applications of smart phones do not effectively operate in the State of Sudan because they mainly rely on Google maps has lack of information of many health care units and therefore cannot deliver any results at all. This is missing location data and some information of some health care units in Google maps. After testing this application and showing all the results, the performance was exactly fine and planned for properly.

Authors [2] mentioned about that in our daily life we travel for work, for study, sometime just to travel. This is an android app that is use for Google Map to show navigation towards the hospital. Health is more valuable thing in our life. To have a healthy life we need a help of doctors.

This app is a smart solution for reaching doctors, hospitals problem in an unknown places. Many apps in the market but no other app have all this requirements that we r serving with Doctor Finder app. Now no one need to ask other about any doctor, what is his specialty, his degree or designation, how we can take appointment, address of chamber. One solution of all problems that is Doctor Finder app.

Authors [3] mentioned about that an emergency patient is not able to find the nearest hospital for his emergency in an unknown areas. Emergency Medical Services to make decision and to create a suitable model to direct the emergency patients to appropriate hospital. The main theme of this study is to assist with emergency hospital resources management, to identify variable with significant role in decision taking. An Emergency Medical Services has been designed to facilitate and computerize all the processes involved in an emergency situation.

Emergency Patient. In current situation, Emergency Medical Services decide optimal hospital based on 'distance'. It also consider other variables like seriousness degree of

patient, emergency room resources, category of hospital etc. The Emergency Medical Services must guide an emergency patient to nearest appropriate hospital and also inform the hospital about the patient's emergency condition and his previous medical records at all. Authors [4] mentioned about that **developing countries have recognized the importance of Electronic Health Record in all Healthcare** Management System. Emergency Medical System is a revolutionary approach to emergency medical treatment in some medical emergency section. It observed that people in unknown place are in danger if they don't able to find hospital quickly. In emergency case a single minute counts so lengthy it is very important that automatic applications must be used for make decision, maintaining up to date status of the hospitals.

Authors [5] mentioned about that we try to build a mobile app that have the solution of this problem. Development of Android Application Medical Information Guide is an Android application where we cover an overall solve of medical problem. When we research about our project then we find some medical related mobile and web based applications but they developed small parts of medical sectors. Now they can't give a proper solution for medical problems. We wants to development of Android Application on Medicals Information Guide. Here we provide a proper solution of medical related problems. Our medical app was implemented successfully. Overall features work fine after connecting to the application via the firebase server.

We believe that our application will be helpful for all. Patients can solve their medical problem by using the application. We try to our best to make the front-end design nicely that user can easily use the application with comfort. This project is intended to describe all the features and procedures followed during the application development system.

## CHAPTER 3

### REQUIREMENTS ANALYSIS AND METHODOLOGY

#### 3.1 Requirements

##### 3.1.1 Emergency Hospital Finder Application

▶ Hardware Requirements:

- Device: Mobile
- Minimum 15MB free Hard Drive space
- Global Positioning System (GPS)
- 256 MB RAM (recommended)

▶ Software Requirements:

- Platform Version: Android 11 to low
- API Level: 30 to low
- Version Code: R to low
- Operating System: Android

##### 3.1.2 Emergency Hospital Finder Admin Application

▶ Hardware Requirements:

- Device: Mobile
- Minimum 15MB free Hard Drive space
- 256 MB RAM (recommended)

► Software Requirements

- Platform Version: Android 11 to low
- API Level: 30 to low
- Version Code: R to low
- Operating System: Android

### 3.2 Algorithms

#### 3.2.1 Algorithm for Emergency Hospital Finder (home screen) application.

Step 01: START

Step 02: Select specific one from four otherwise go to step 03

Step 03: END

#### 3.2.2 Algorithm for Emergency Hospital Finder “All Hospitals” module.

Step 01: START

Step 02: Select all hospitals

Step 03: See hospitals list with their details. Go to step 04 for specific one. Or go to step 05

Step 04: Select specific one for it’s details. Can call or visit website or see location here.

Step 05: END

#### 3.2.3 Algorithm for Emergency Hospital Finder “Nearest Hospital” module.

Step 01: START

Step 02: Can search hospital manually

Step 03: Want to see nearest hospital go to step 04.

Step 04: Click hospital icon and system will take Google map to show nearest hospital. Want to see nearest pharmacy? Go to step 05.

Step 05: Click on pharmacy tab, system will show nearest pharmacy on Google map

Step 06: END

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### 3.2.4 Algorithm for Emergency Hospital Finder “Blood Bank” module.

Step 01: START

Step 02: Click blood bank for blood banks name, address, phone number.

Step 03: Select specific one blood bank for details.

Step 04: Want to call blood bank? Go to step 05 or go to step 07

Step 05: Click on call icon

Step 06: System sent a call to that blood bank

Step 07: END

### 3.2.5 Algorithm for Emergency Hospital Finder “Find Ambulance” module.

Step 01: START

Step 02: Click on find ambulance

Step 03: Show list of ambulance services

Step 04: Select specific one for details

Step 05: Want to call ambulance? Go to step 06, or go to step

Step 06: Click on call icon

Step 07: System will sent call to that ambulance service

Step 08: END



### 3.2.6 Algorithm for “Admin” application

Step 01: START

Step 02: If registered go to step 03. Non registered? Go to step 07

Step 03: If forgot password go to step 06 .Otherwise go to step 04

Step 04: Provide email and password for log in

Step 05: Input available seat number press save button then it will show on user app

Step 06: Enter registered email and press reset password then system sent email on that email account.

Step 07: Provide required information for registration and click on sign up

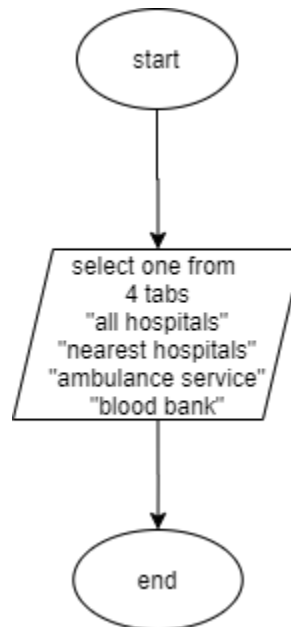
Step 08: System show a confirmation toast message

Step 09: STOP

### 3.3 Flowchart

#### 3.3.1: Flowchart for Home Screen

Fig 01: Flowchart for Home Screen



#### 3.3.2 Flowchart for All Hospitals module

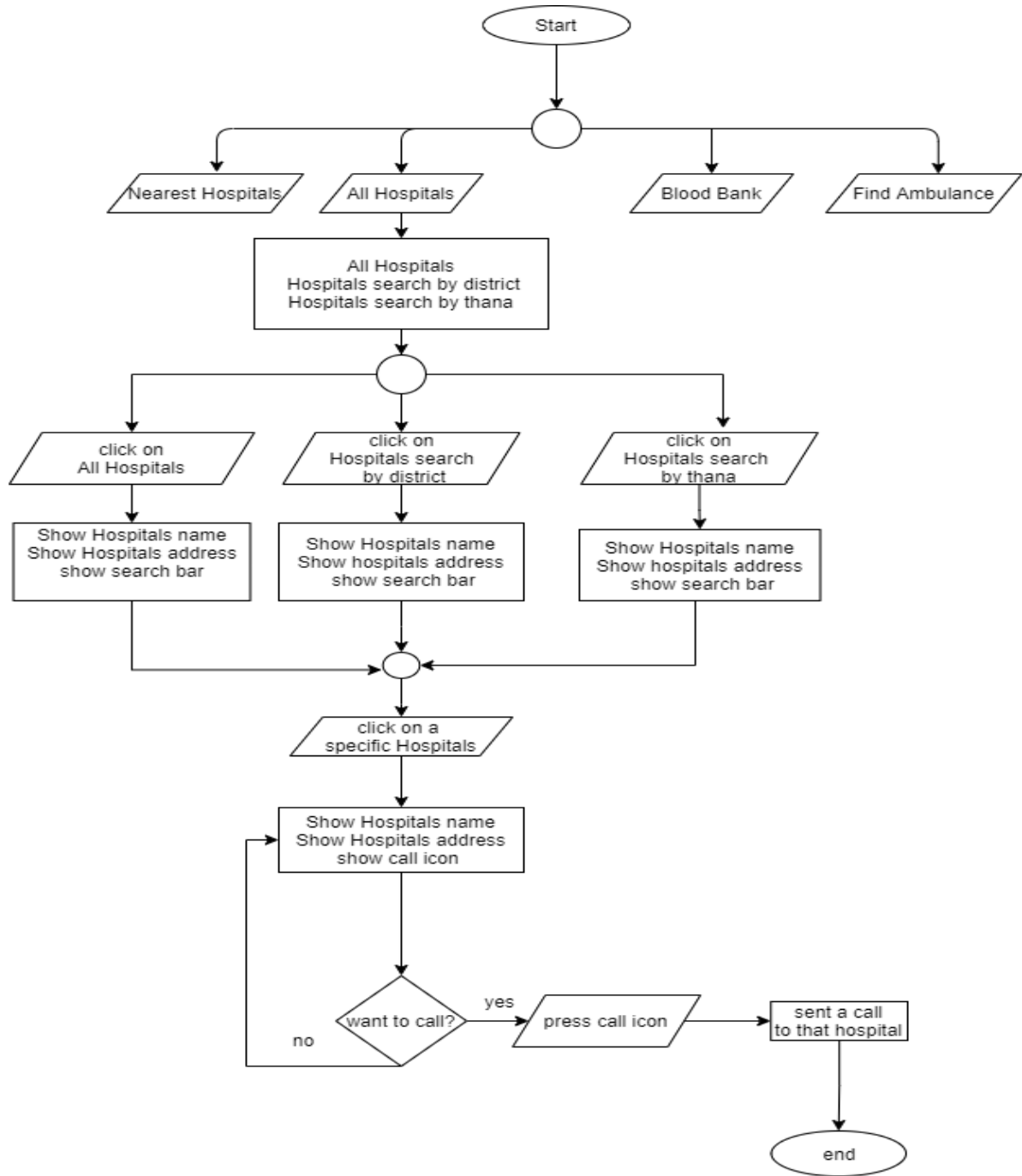


Fig 02: Flowchart for All Hospital module

### 3.3.3 Flowchart for Nearest Hospital module

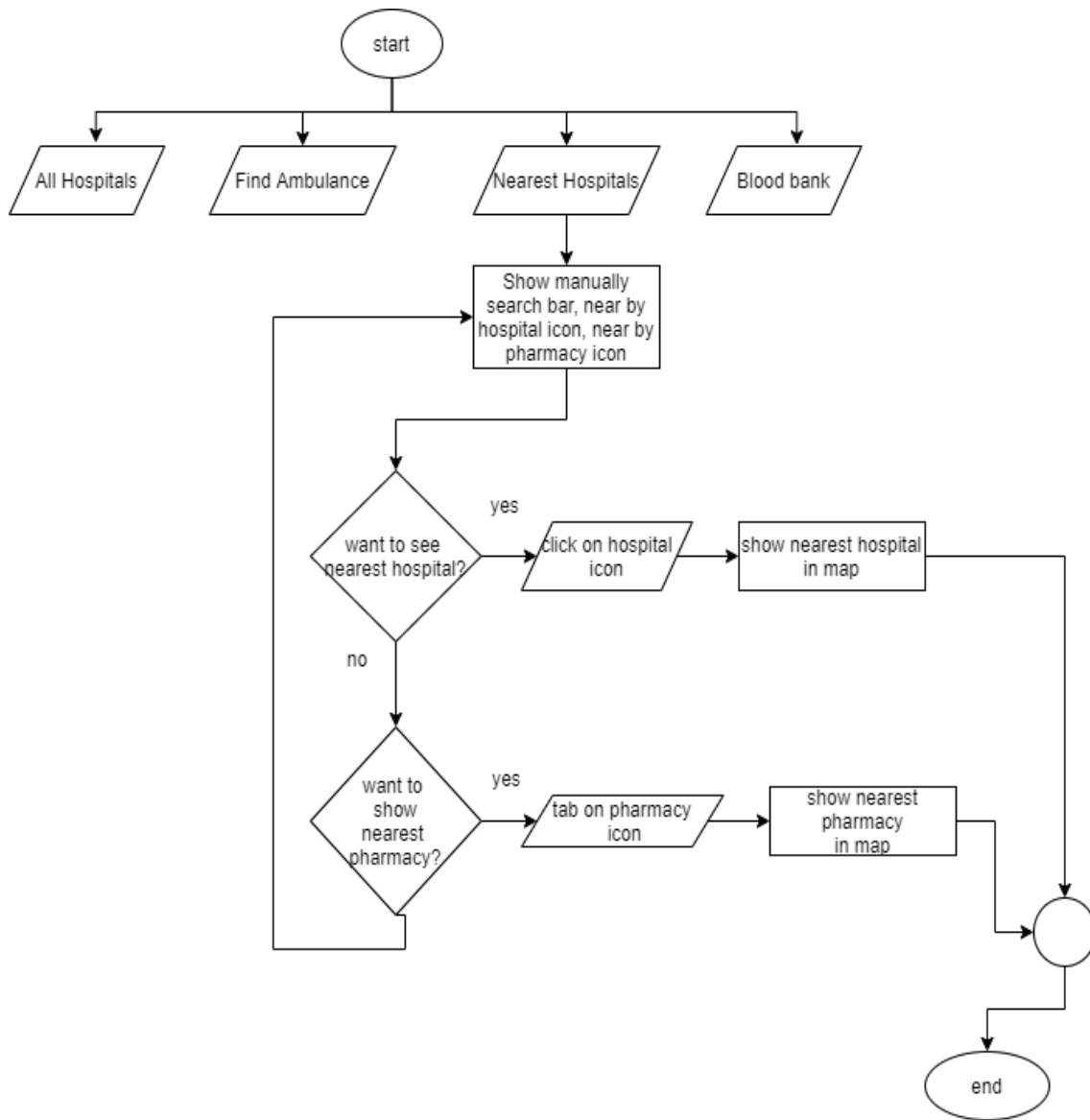


Fig 03: Flowchart for Nearest Hospital module

### 3.3.4: Flowchart for Blood Bank module

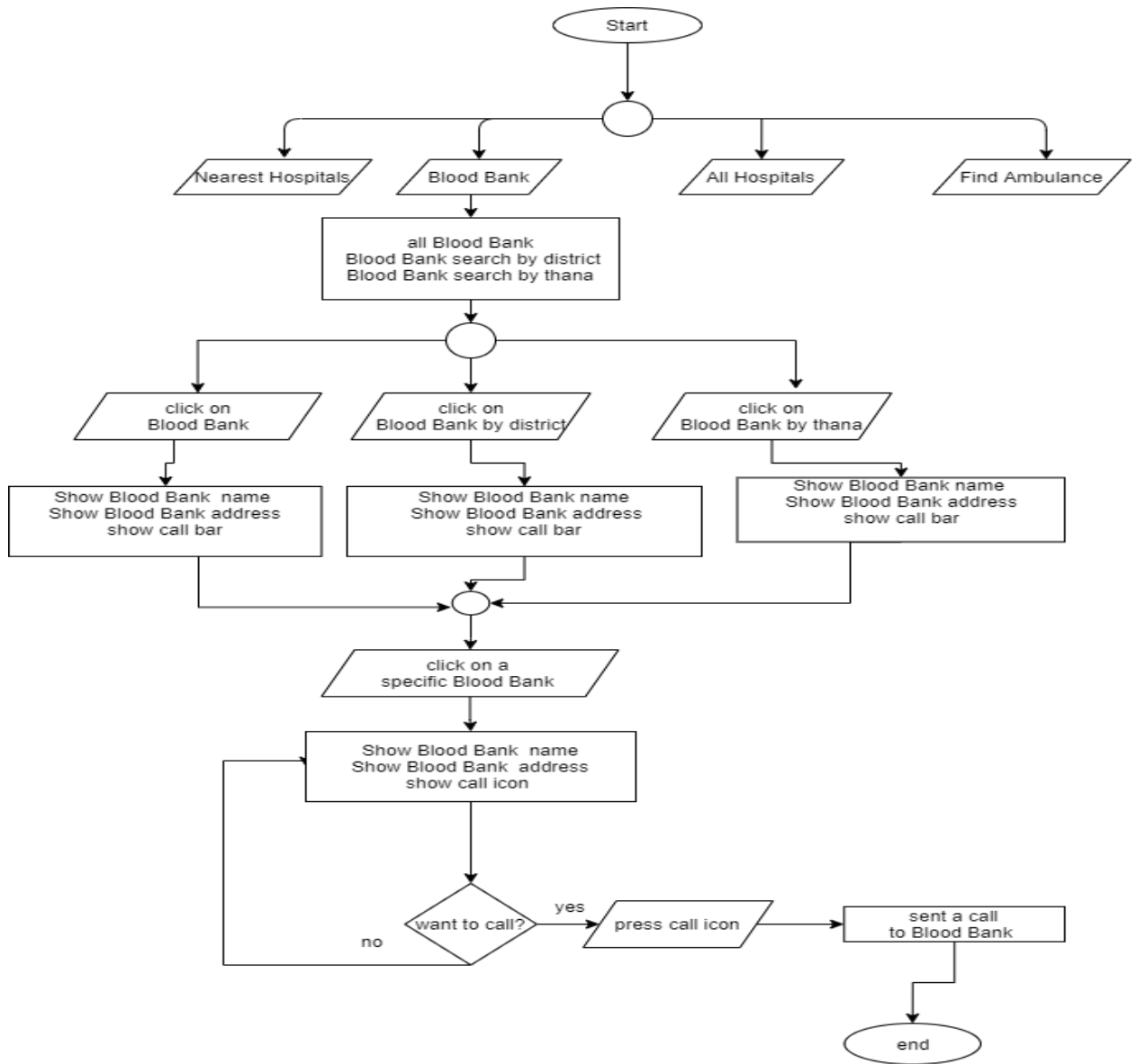


Fig 04: Flowchart for Blood Bank module

### 3.3.5 Flowchart for Find Ambulance module

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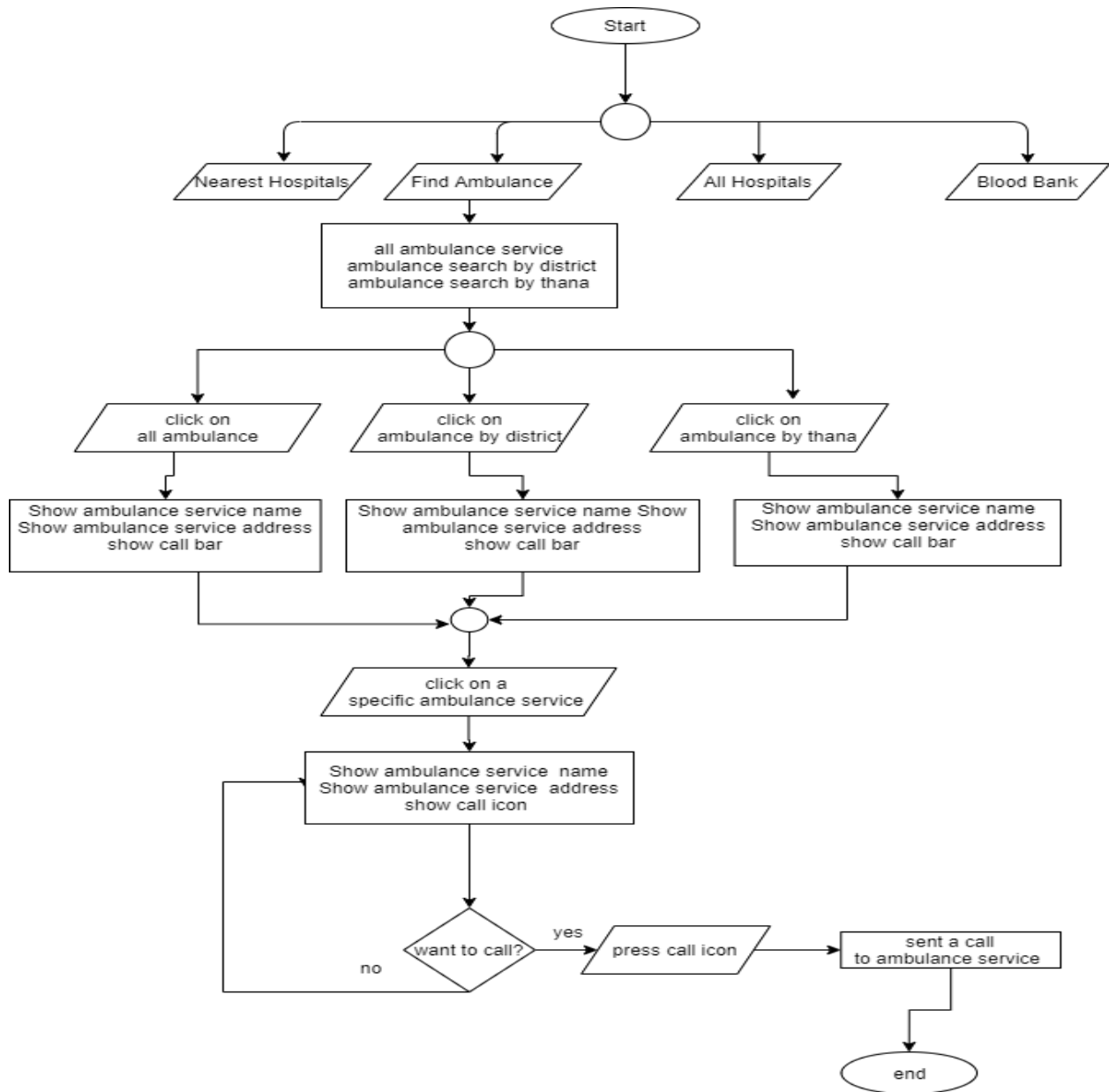


Fig 05: Flowchart for Find Ambulance module

### 3.3.6 Flowchart for Super Admin module

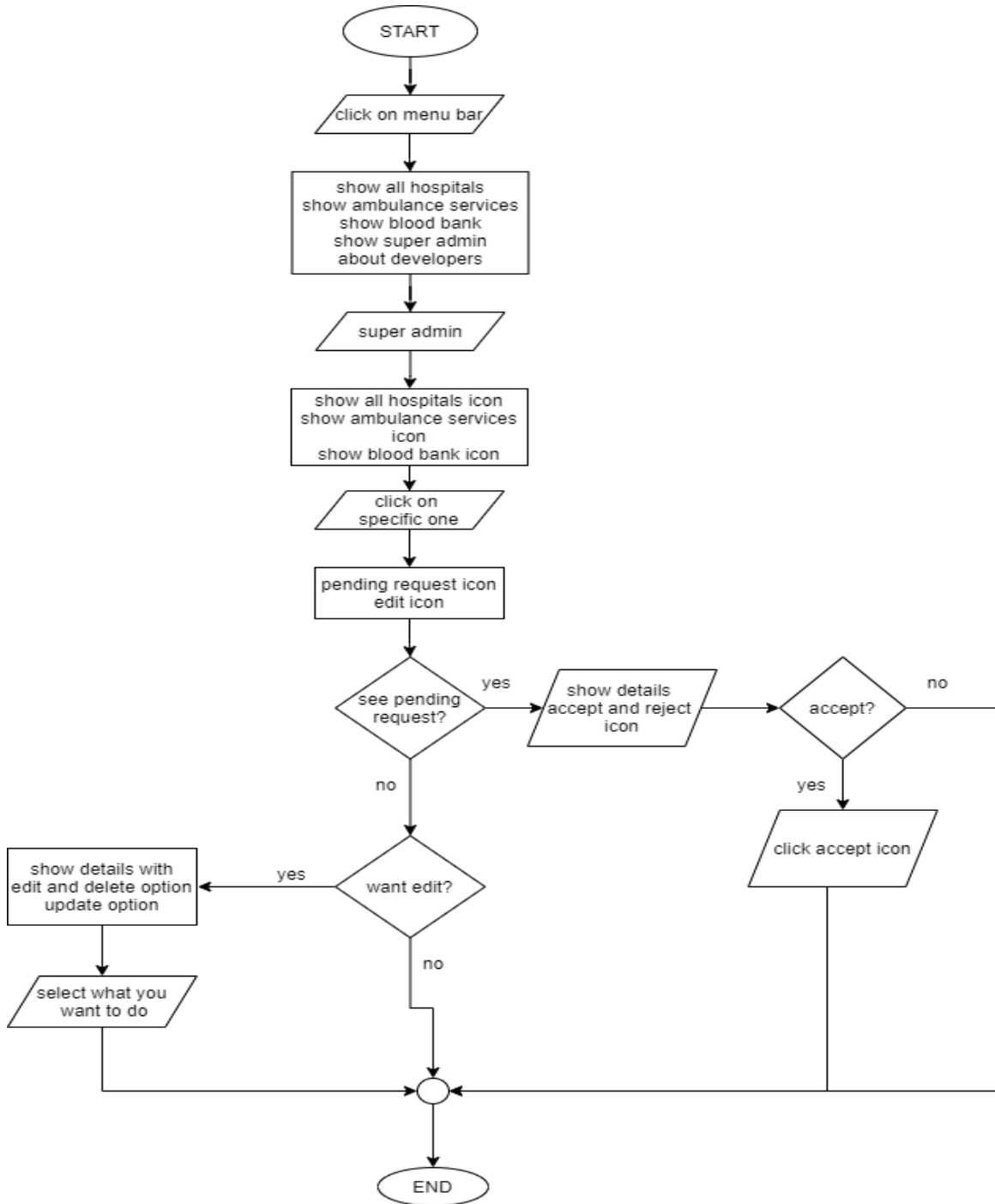


Fig 06: Flowchart for super admin application

### 3.3.7<sup>14</sup> Flowchart for Hospital Admin module

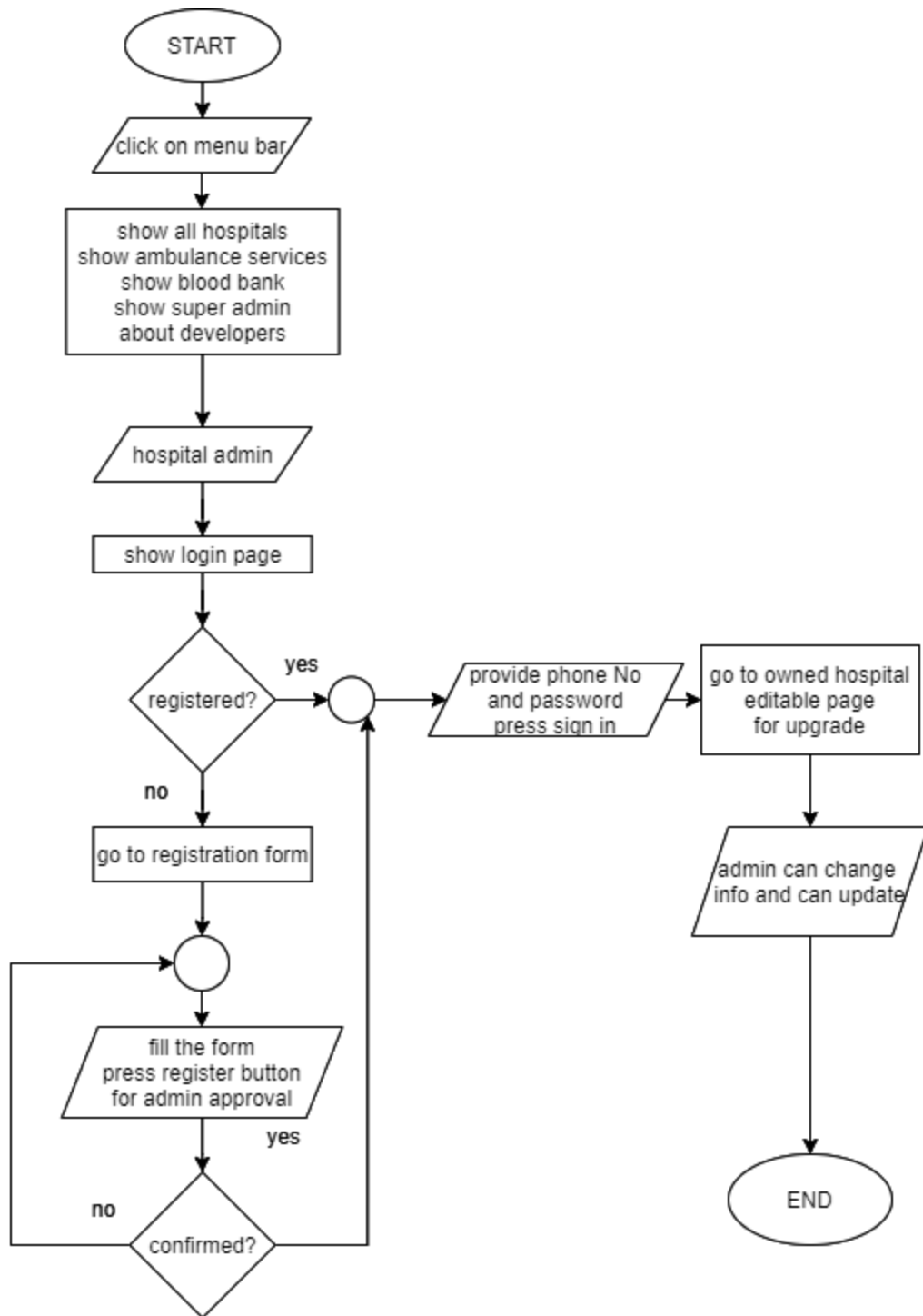


Fig 07: Flowchart for hospital admin application

3.3.8 Flowchart for Ambulance Admin module



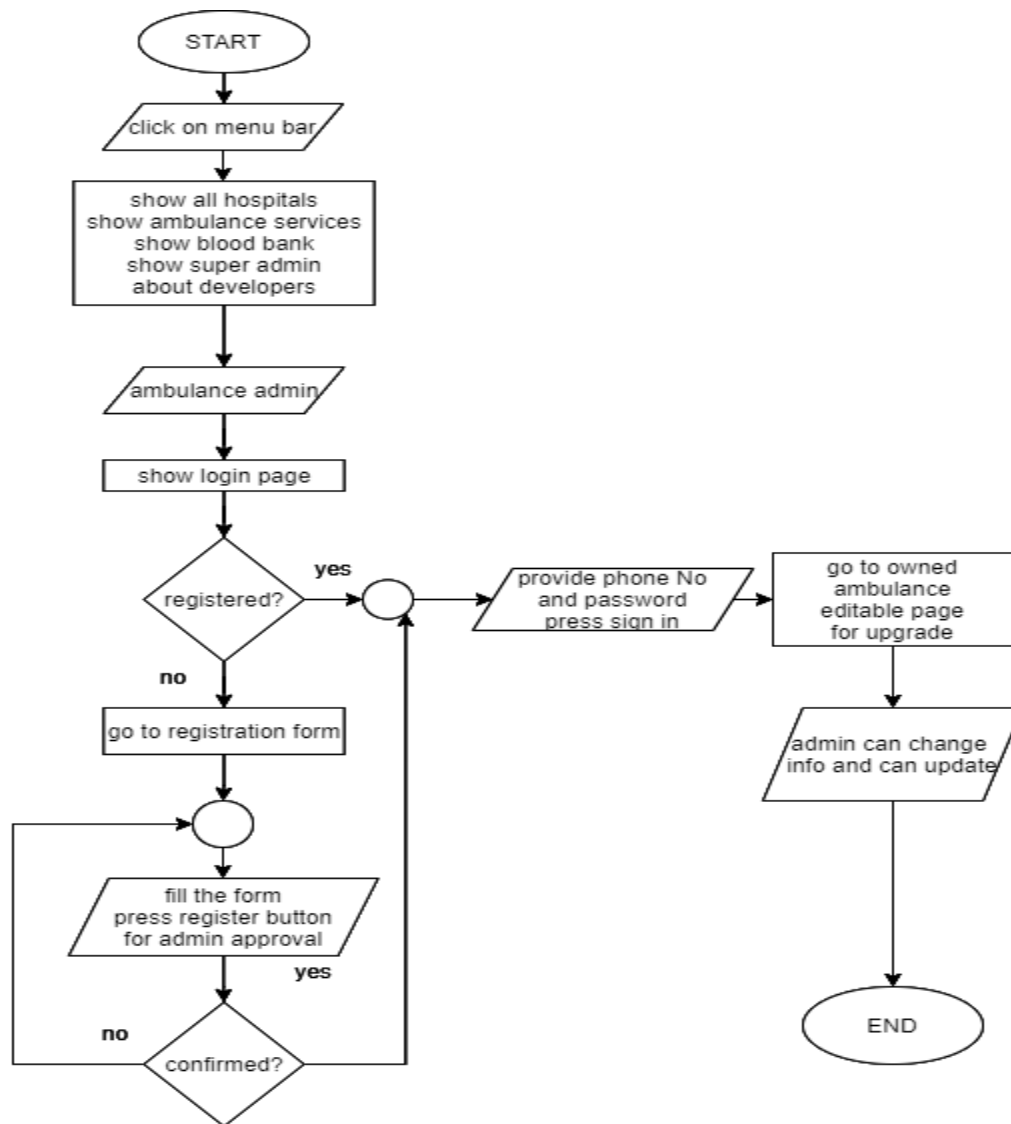


Fig 08: Flowchart for ambulance admin application

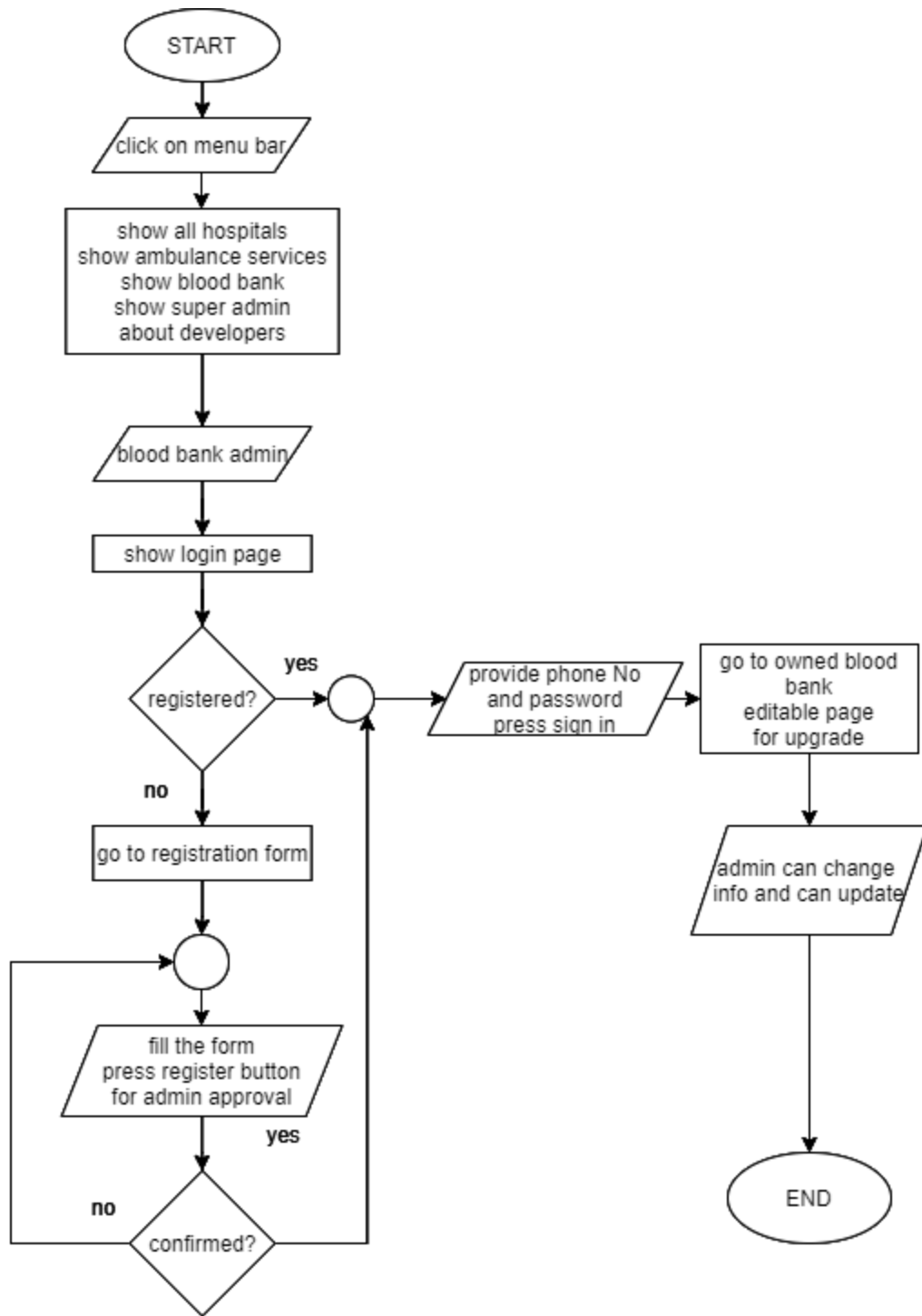


Fig 09: Flowchart for blood bank admin application

### 3.4: Software Development Model

For implement our idea we follow “Waterfall Model”

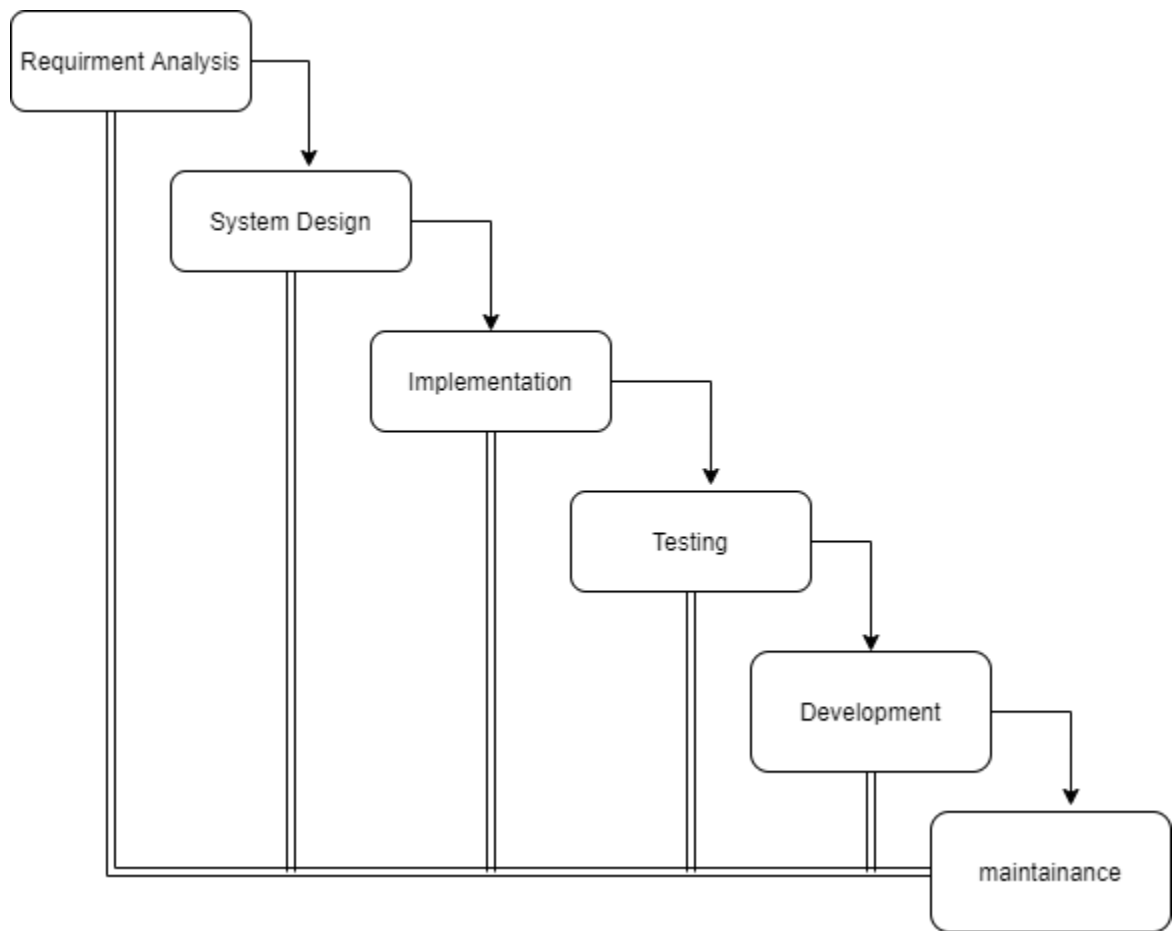


Fig 10: Waterfall Model

### 3.5 Design requirements

► Use diagrams.net web app

► Use Microsoft word

## CHAPTER 4

### RESULTS AND OUTPUTS

#### 4.1 Emergency Hospital Finder Test Case

##### 4.1.1 All Actions

Table 4.1.1: All Actions (Emergency Hospital Finder)

Actions	Result	Expected Result
All Hospitals	Showing All Hospitals List & Details Successfully	Showing All Hospitals List & Details Successfully
Nearest Hospitals	Find Nearby Hospitals & Pharmacies by Google Map	Find Nearby Hospitals & Pharmacies by Google Map
Blood Bank	Get Blood Bank Details & Direct Call Option	Get Blood Bank Details & Direct Call Option
Find Ambulance	Get Ambulance Services Details & Direct Call Option	Get Ambulance Services Details & Direct Call Option
Hospital Admin	Register New Hospital & Update Hospital Details	Register New Hospital & Update Hospital Details
Ambulance Admin	Register New Ambulance Services & Update Ambulance Services Details	Register New Ambulance Services & Ambulance Services Details
Blood Bank Admin	Register New Blood Bank & Update Blood Bank Details	Register New Blood Bank & Update Blood Bank Details

Table 4.1.2: Hospital Admin Login (Emergency Hospital Finder)

Conditions	Registered Phone Number	F	T	F	T
	Password	F	F	T	T
Actions	Expected Result	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Logged in
	Result	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Logged in

4.1.2.1 Other Actions

Table 4.1.2.1: Other Actions (Hospital Admin)

Actions	Result	Expected Result
Update Hospital Details	Hospital Details Updated Successfully	Hospital Details Updated Successfully

### 4.1.3 Ambulance Admin Login:

Table 4.1.3: Ambulance Admin Login (Emergency Hospital Finder)

Conditions	Registered Phone Number	F	T	F	T
	Password	F	F	T	T
Actions	Expected Result	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Logged in
	Result	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Logged in

#### 4.1.3.1 Other Actions

Table 4.1.3.1: Other Actions (Ambulance Admin)

Actions	Result	Expected Result
Update Ambulance Services Details	Ambulance Services Details Updated Successfully	Ambulance Services Details Updated Successfully

#### 4.1.4 Blood Bank Admin Login:

Table 4.1.4: Blood Bank Admin Login (Emergency Hospital Finder)

Conditions	Registered Phone Number	F	T	F	T
	Password	F	F	T	T
Actions	Expected Result	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Logged in
	Result	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Error: Please enter registered Phone and password	Logged in

##### 4.1.4.1 Other Actions

Table 4.1.4.1: Other Actions (Blood Bank Admin)

Actions	Result	Expected Result
Update Blood Bank Details	Blood Bank Details Updated Successfully	Blood Bank Details Updated Successfully

#### 4.1.5 Super Admin Login:

Table 4.1.5: Super Admin Login (Emergency Hospital Finder)

Conditions	Email	F	T	F	T
	Password	F	F	T	T
Actions	Expected Result	Error: Please enter valid email and password	Error: Please enter valid email and password	Error: Please enter valid email and password	Logged in
	Result	Error: Please enter valid email and password	Error: Please enter valid email and password	Error: Please enter valid email and password	Logged in

#### 4.1.5.1 Other Actions

Table 4.1.5.1: Other Actions (Super Admin)

Actions	Result	Expected Result
Pending Hospital	Accept or Reject Successfully	Accept or Reject Successfully
Update Hospital Details	Hospital Details Updated Successfully	Hospital Details Updated Successfully
Add Hospital	Add Hospital Successfully	Add Hospital Successfully
Delete Hospital	Delete Hospital Successfully	Delete Hospital Successfully
Pending Ambulance Services	Accept or Reject Successfully	Accept or Reject Successfully
Update Ambulance Services Details	Ambulance Services Details Updated Successfully	Ambulance Services Details Updated Successfully

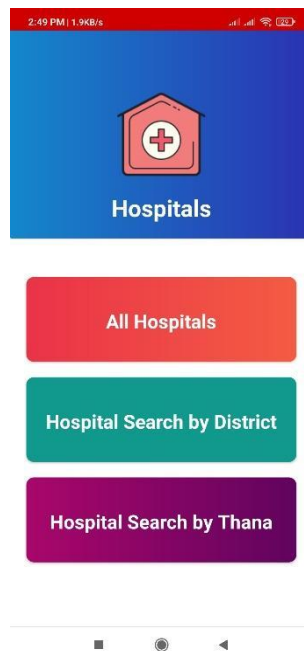


Add Ambulance Services	Add Ambulance Services Successfully	Add Ambulance Services Successfully
Delete Ambulance Services	Delete Ambulance Services Successfully	Delete Ambulance Services Successfully
Pending Blood Bank	Accept or Reject Successfully	Accept or Reject Successfully
Update Blood Bank Details	Blood Bank Details Updated Successfully	Blood Bank Details Updated Successfully
Add Blood Bank	Add Blood Bank Successfully	Add Blood Bank Successfully
Delete Blood Bank	Delete Blood Bank Successfully	Delete Blood Bank Successfully

## 4.2 Screenshots of the application (Emergency Hospital Finder)



Home Screen



Hospital Activity



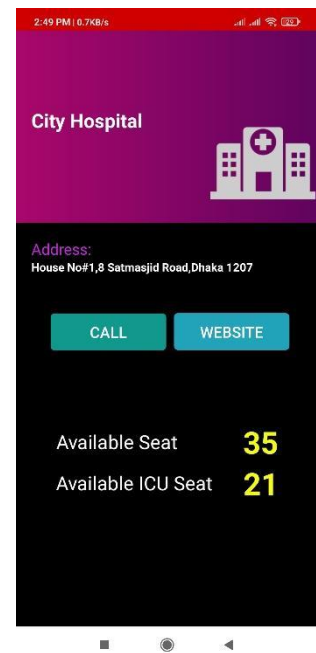
All Hospital



Hospital Search by District



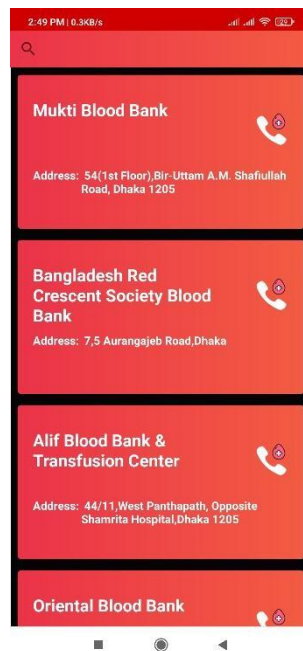
Hospital Search by Thana



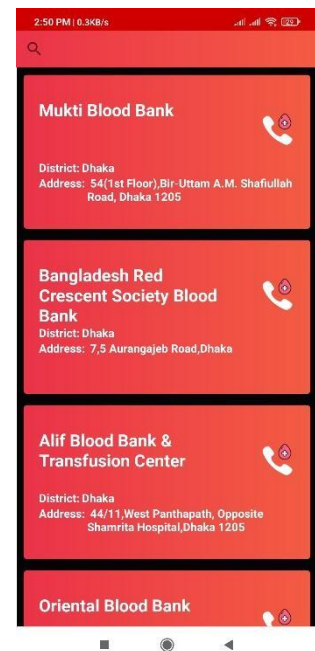
Specific Hospital Details



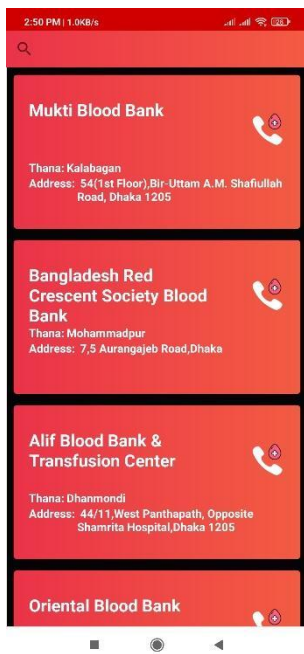
Blood Bank Activity



All Blood Bank



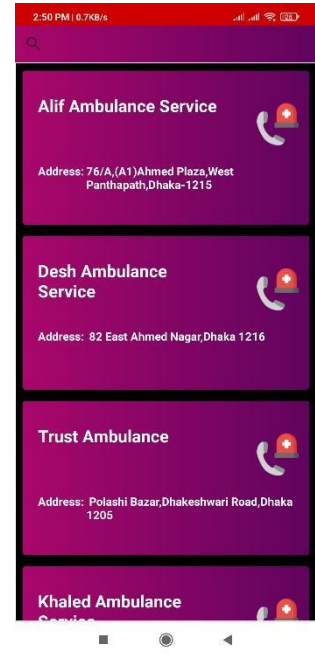
Blood Bank Search by District



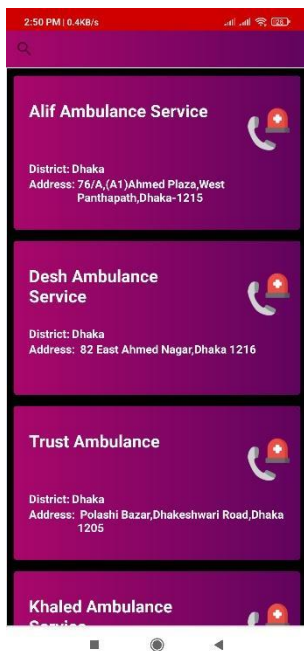
Blood Bank Search by Thana



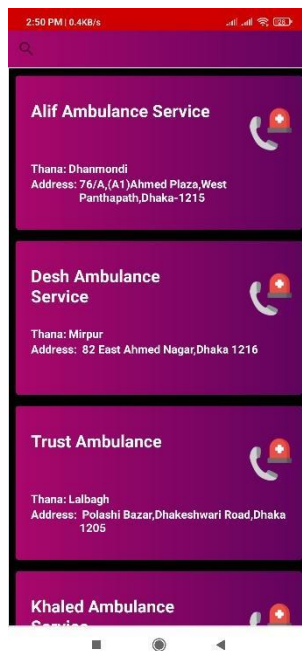
Ambulance Services Activity



All Ambulance Services



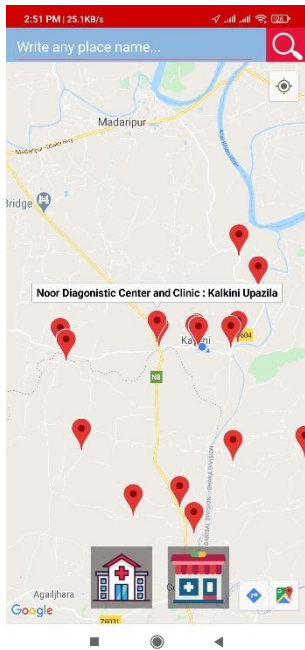
Ambulance Services Search by District



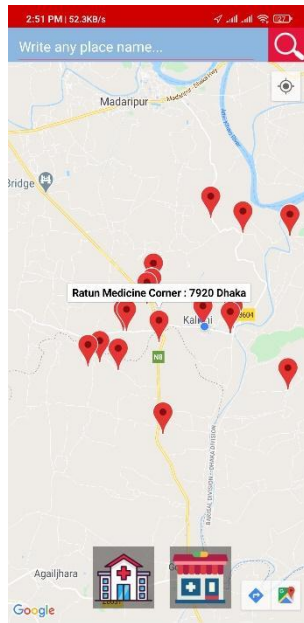
Ambulance Services Search by District



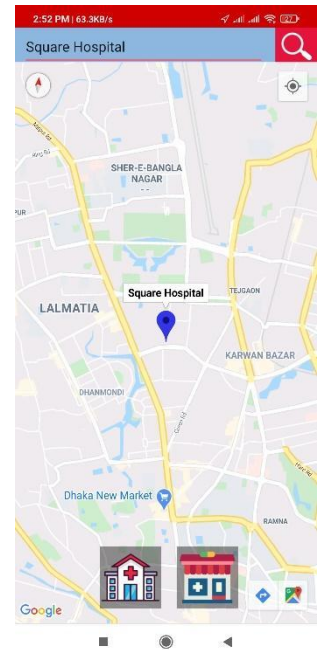
Nearby Hospitals & Pharmacies



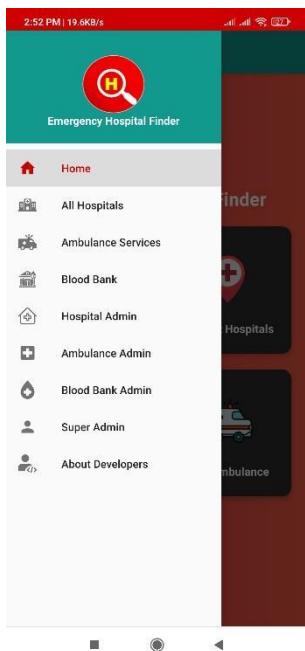
Nearby Hospitals



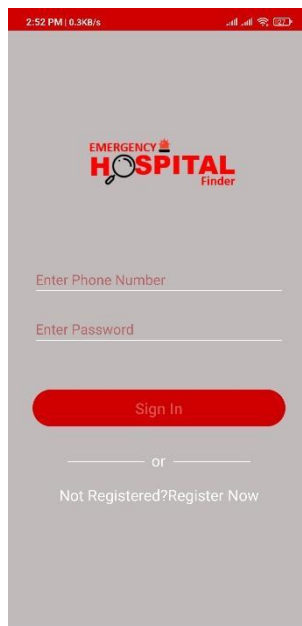
Nearby Pharmacies



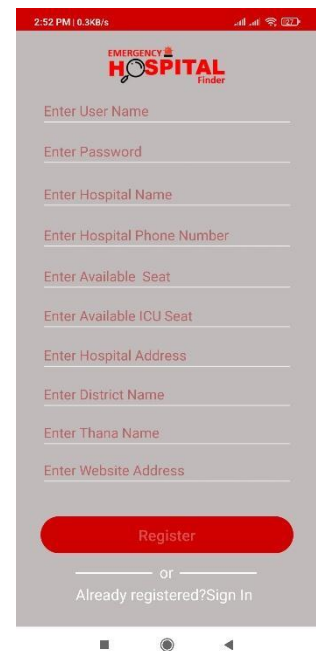
Search Any Hospitals



Menu Bar

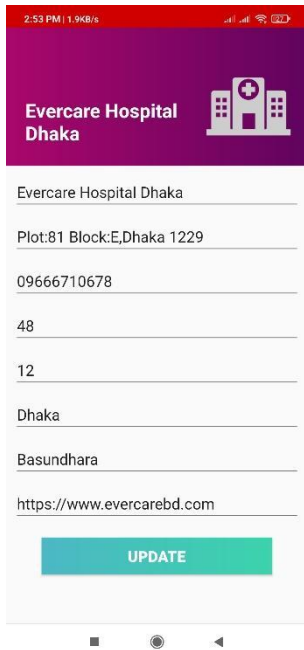


Hospital Admin Sign in Activity

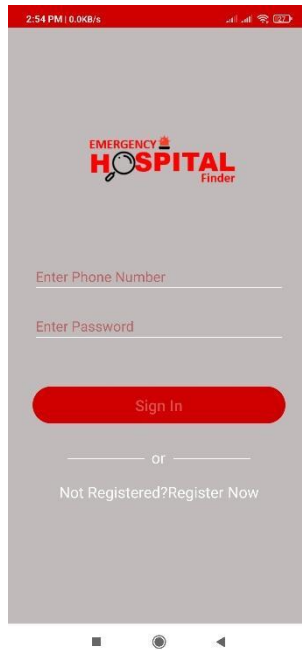


Hospital Admin Register Activity

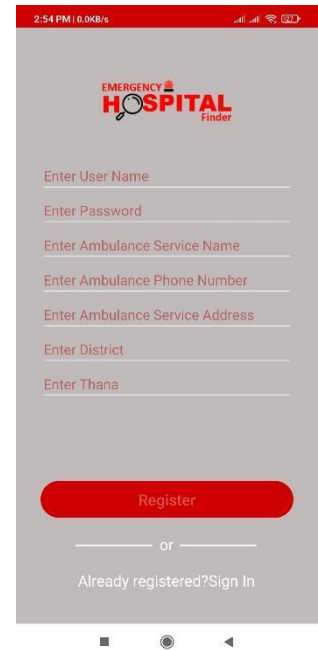




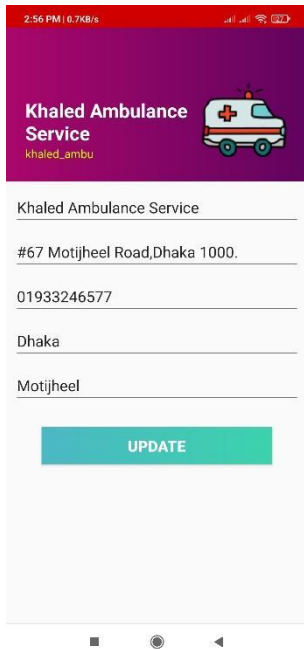
Hospital Admin Home Activity



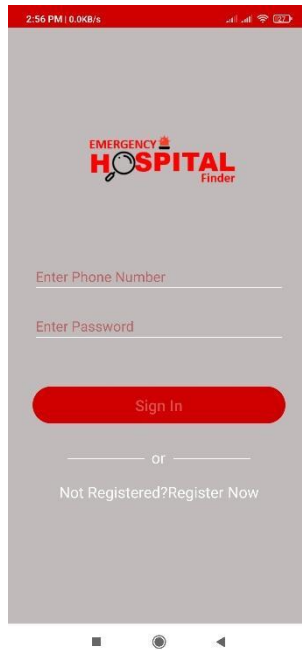
Ambulance Admin Sign in Activity



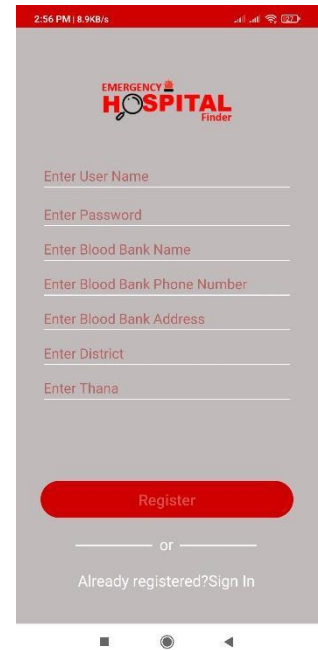
Ambulance Admin Register Activity



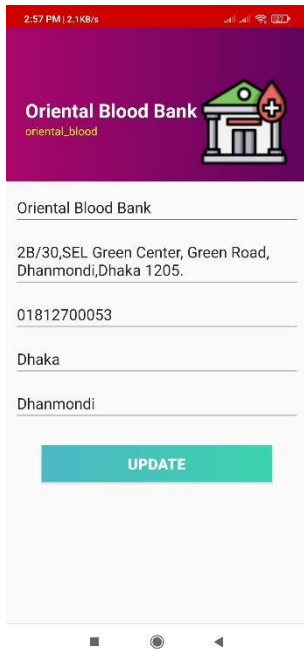
Ambulance Admin Home Activity



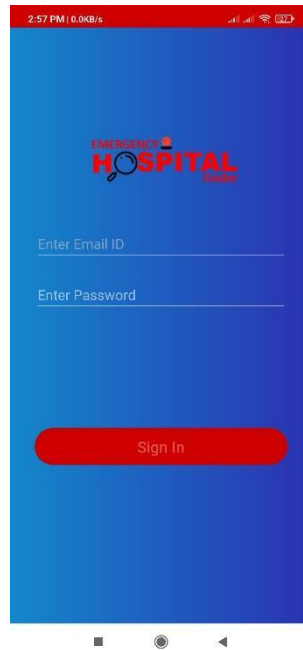
Blood Bank Admin Sign in Activity



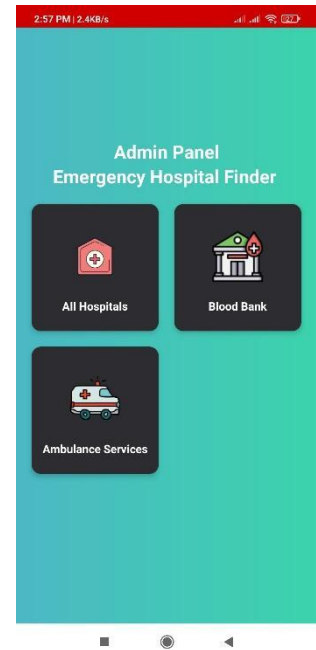
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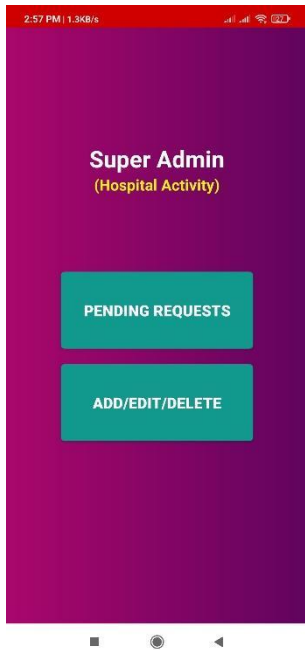
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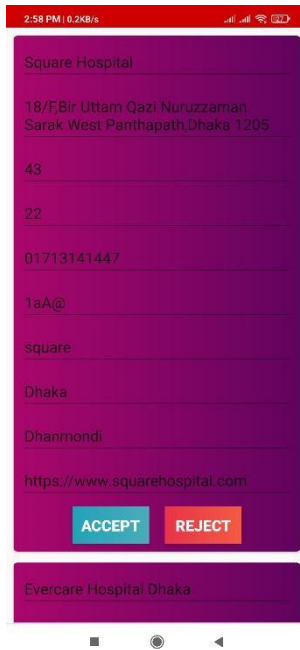
Super Admin Sign in Activity



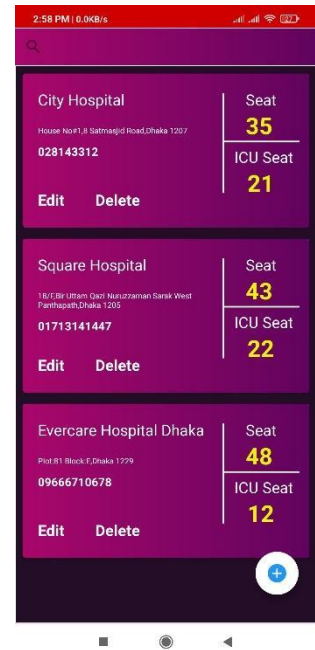
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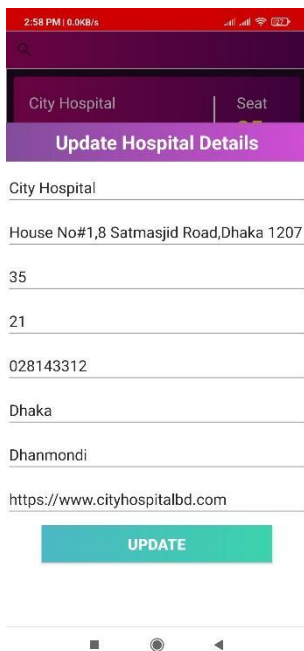
Super Admin Hospital Activity



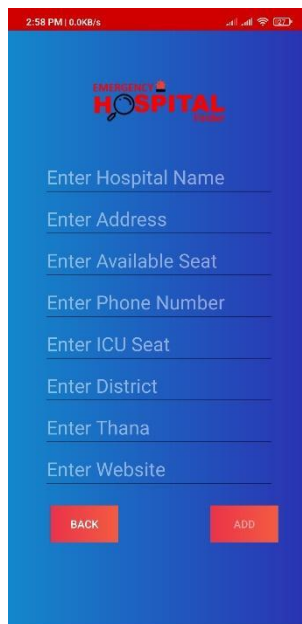
Super Admin Hospital Approval Activity



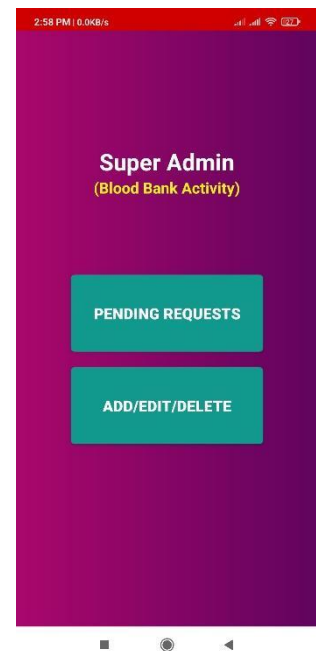
Super Admin Hospital ADD/Edit/Delete Activity



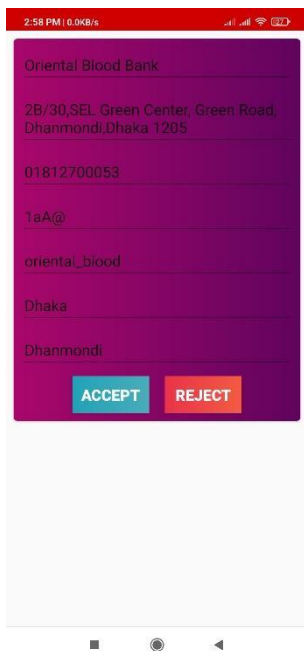
Super Admin Hospital  
Details Update  
Activity



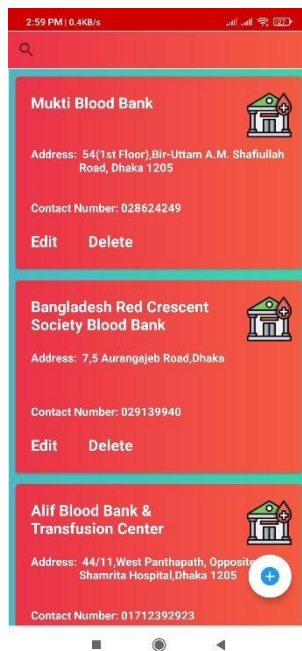
Super Admin Add Hospital  
Activity



Super Admin Blood Bank  
Activity



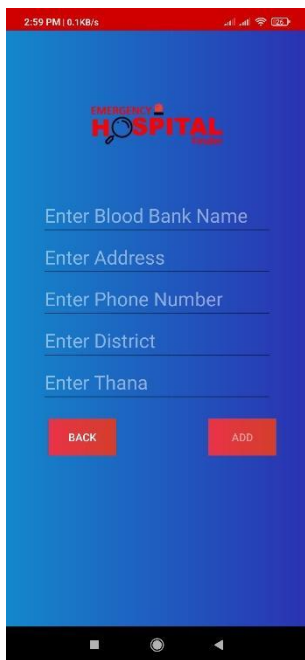
Super Admin Blood Bank  
Approval Activity



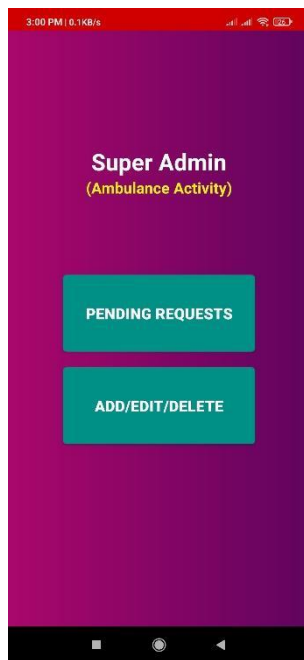
Super Admin Blood Bank  
ADD/Edit/Delete Activity



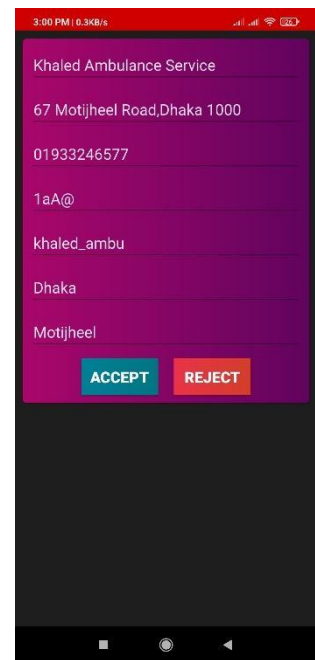
Super Admin Blood Bank  
Details Update Activity



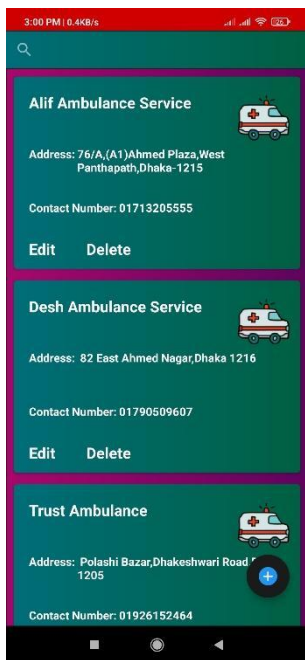
Super Admin Add Blood Bank Activity



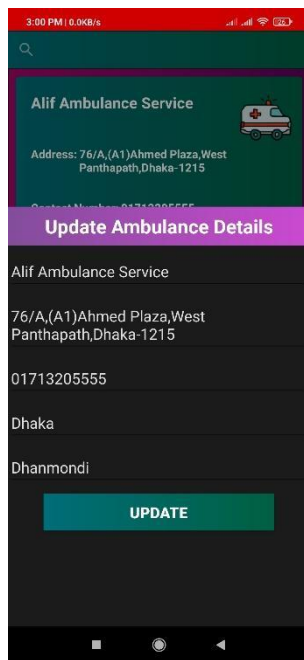
Super Admin Ambulance Activity



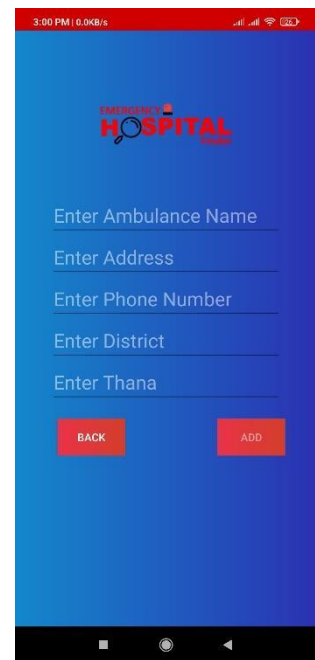
Super Admin Ambulance Approval Activity



Super Admin Ambulance  
ADD/Edit/Delete Activity



Super Admin Ambulance  
Details Update Activity



Super Admin Add Ambulance  
Activity



## CHAPTER 5

### CONCLUSION

#### 5.1 discussion and conclusion

By means of our project we tried to make finding nearest hospital and booked seat for patient. Also finding nearest ambulance service easily and digital for all the people in our country. In this era most of the people are using smartphone and online shopping is becoming popular day by day. so we hope that our application "EMERGENCY HOSPITAL FINDER" will help everyone to finding nearest hospitals in area. Also, we added nearest pharmacy finding system so that people can easily buy their medicines. For using this feature no need to download another app. We believe that people will be benefited and that will be our success.

#### 5.2 Scope for further development

1. Easily finding nearest ambulance using by map.
2. Booked seat for patient in hospital.
3. Find blood doner.
4. Also we added in future virtual hospital.

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