



Daffodil
International
University

Social Problem Detection and Solution

By

Kawsar Amin
(151-35-845)

A project submitted in partial fulfillment of the requirement for the
degree of Bachelor of Science in Software Engineering

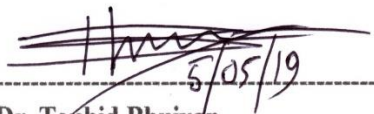
Department of Software Engineering
DAFFODIL INTERNATIONAL UNIVERSITY

Spring – 2019

APPROVAL

This Project titled “Social Problem Detection and Solution”, submitted by **Kawsar Amin**, ID: **151-35-845** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc in Software Engineering and approved as to its style and contents.

BOARD OF EXAMINERS



Dr. Touhid Bhuiyan

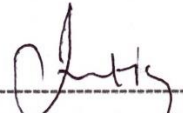
Professor and Head

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University

Chairman



K. M. Imtiaz-Ud-Din

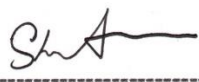
Assistant Professor

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University

Internal Examiner 1



Md. Shohel Arman

Lecturer

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University

Internal Examiner 2



Mr. Shafiul Hasan

Managing Director

Vivacom Solution, Dhaka

External Examiner

DECLARATION

I hereby declare that, this project has been done by us under the supervision of **Md. Shohel Arman**, Lecturer Department of Software Engineering, Faculty of Science and Information Technology, 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.

Submitted By:

Kawsar Amin

Kawsar Amin

ID: 151-35-845

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University.

Certified By:



Md. Shohel Arman

Lecturer

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University.

DECLARATION

I hereby declare that, this project has been done by us under the supervision of **Md. Shohel Arman, Lecturer Department of Software Engineering, Faculty of Science and Information Technology, 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.

Submitted By:

Kawsar Amin

ID: 151-35-845

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University.

Certified By:

Md. Shohel Arman

Lecturer

Department of Software Engineering

Faculty of Science and Information Technology

Daffodil International University.

ACKNOWLEDGEMENT

I have taken endeavors in this task. Notwithstanding, it would not have been conceivable without the thoughtful help and help of numerous people and associations. I might want to stretch out my genuine gratitude to every one of them.

I am exceedingly obliged to **Md. Shohel Arman** Lecturer Department of Software Engineering for his direction and consistent supervision just as for giving vital data in regards to the venture and additionally for his help in finishing the task. I might want to offer my thanks towards my folks and individual from Daffodil International University for their thoughtful co-activity and consolation which help me in the finish of this task.

I might want to offer my exceptional thanks and gratitude to industry people for giving me such consideration and time. My thanks and thanks additionally go to my associate in building up the task and individuals who have readily bailed me out with their capacities.

Executive Summary

Heal City is an android based application. In our general public, there are such a large number of issue and who is dependable to take care of the issue they really don't know which issue should issue first and which issue unravel right away. Thus, this application will locate the real issue of the general people groups to unravel them at the correct time and right way.

In our general public, we generally observe when an issue made then it not explain around then since who is in charge of taking care of the issue they don't think about the issue when it's a minor they get the data about the issue when it has a noteworthy issue. It happens in view of the lacking of correspondence between the general individuals and the expert who is in charge of tackling the diverse social issue. At the point when an issue does not tackle at the ideal time then it turned out to be so much entangled and the expense of the issue increments without a doubt.

Some of the time taking care of the issue by the specialist makes more issue for the general public individuals, along these lines they don't know about it due to the correspondence hole between the general populations who endured an expert. So the fundamental objective is to manufacture a reasonable and successful correspondence between the expert and the general individuals. In some cases we saw that issues are not unraveling appropriately a direct result of defilement and the more recognizable specialist don't mindful of this, this application can enable the injured individual to individuals to grumble to the more recognizable expert about the debasement too.

So the fundamental reason for the application is to help general individuals to contribute for their general public from their place and furthermore help the authority to locate the real issue of a general public from the genuine spot and fathom them at the ideal time and the correct way that can assist them with reducing cost and time to take care of the distinctive issues.

TABLE OF CONTENTS

Social Problem Detection and Solution.....	1
CHAPTER 1: Introduction	1
1.1 Project Overview.....	1
1.2 Purposes of the project	1
1.2.1 The User Business or Background of the Project Effort.....	1
Benefits & Beneficiaries	1
Beneficiaries.....	2
Benefits	2
1.3 Goals of the Project:.....	2
1.4 Stakeholders.....	2
1.5 Proposed System Model	2
1.6 Project Schedule.....	4
1.7 Release Plan.....	4
CHAPTER 2: SOFTWARE REQUIREMENT SPECIFICATION	5
2.1 Functional Requirements.....	5
2.2 Non-Functional Requirements	5
2.3 Data Requirement.....	6
2.4 Performance Requirement	6
2.4.1 Speed and Latency Requirement	6
2.4.2 Precision or Accuracy Requirement	6
2.4.3 Capacity Requirement.....	7
2.5 Dependability Requirement	7
2.5.1 Reliability Requirement	7
2.5.2 Availability Requirement	7
2.5.3 Robustness or Fault-Tolerance Requirement	8
2.6 Maintainability and Supportability Requirement.....	8
2.6.1 Maintenance Requirement.....	8
2.6.2 Supportability Requirement	8
2.6.3 Adaptability Requirement	9
2.6.4 Scalability or Extensibility Requirement	9
2.7 Security Requirement	9
2.7.1 Access Requirement	9
2.7.2 Integrity Requirement	9

2.7.3 Privacy Requirement.....	9
2.7.4 Usability and Human-Interaction Requirement.....	10
2.8 Look and Feel Requirement.....	10
2.8.1 Appearance Requirement	10
2.9 Operational and Environmental Requirement	10
2.10 Legal Requirement	10
CHAPTER 3: SYSTEM ANALYSIS.....	11
3.1 Use Case Diagram.....	11
3.2 Use case Description:	12
3.2.1 Signup	12
3.2.2 Signup with social media	12
3.2.3 Login.....	13
3.2.4 Create a Post.....	13
3.2.5 Upload Photos	14
3.2.6 Approve Donation	14
3.2.7 Password Recovery.....	15
3.2.8 Comments.....	15
3.2.9 Update Post.....	16
3.2.10 Delete post.....	16
3.3 Activity Diagram.....	18
3.3.1 Activity Diagram (Donation).....	19
3.3.2 Activity Diagram (admin).....	20
3.4 Sequence Diagram	21
CHAPTER 4: SYSTEM DESIGN SPECIFICATION.....	22
4.1 Class Responsibilities Collaboration (CRC) Cards.....	22
4.1.1 CRC for user.....	22
4.1.2 CRC For admin log.....	22
4.1.3 CRC for Problem Post	22
4.1.4 CRC for Update User Info	23
4.1.5 CRC for Donation.....	23
4.2 Data Flow Diagram	24
4.2.1 DFD Level-0.....	24
4.2.2 DFD Level -1.....	25
4.3 Entity–Relationship Diagram	26
4.4 Development Tools & Technology	26

CHAPTER 5: SYSTEM TESTING	27
5.1 Testing Features	27
5.1.1 Features to be tested.....	27
5.1.2 Features not to be tested.....	27
5.2 TESTING STRATEGIES.....	28
5.2.1 Test Approach	28
5.2.2 Pass/Fail Criteria.....	28
5.2.3 Suspension and resumption Suspension:	28
5.2.4 Resumption:.....	28
5.2.5 Testing Schedule.....	28
5.2.6 Requirement Traceability Matrix Requirements:	29
5.2.7 Test cases:	29
5.3 Testing Environment (Hardware/Software Requirements)	29
5.4 Test Cases	30
5.4.1 Sign up (Authentication)	30
5.4.2 Sign up (User Information)	30
5.4.3 Login Module	31
5.4.4 Create post module	31
CHAPTER 6: USER MANUAL SCREENSHOT	33
6.1 User manual for user	33
6.1.1 Login Page.....	33
6.1.2 User Registration	34
6.1.3 User Basic Information	35
6.1.4 Recover Password.....	36
6.1.5 Login with Google	37
6.1.6 Create a new post.....	38
6.1.7 User Timeline	39
6.1.8 Edit or Delete Post	40
6.1.9 User Profile Settings	41
6.1.10 Comment on Post.....	42
6.1.11 Admin Login	43
6.1.12 Admin Activity	44
CHAPTER 7: PROJECT SUMMERY	45
7.1 Limitations	45
7.2 Obstacles & Achievements.....	45

7.3 Conclusion	45
7.4 Future Scope	46
References	47
APPENDIX	48

LIST OF FIGURES

Figure 1. 1: Agile model	3
Figure 1. 2: Gantt chart	4
Figure 3. 1: Activity Diagram	18
Figure 3. 2: Activity Diagram (Donation)	19
Figure 3. 3: Activity Diagram (Admin)	20
Figure 3. 4: Activity Diagram (user & admin).....	21
Figure 4. 1: DFD Level-0.....	24
Figure 4. 2: DFD Level-1.....	25
Figure 4. 3: ER Diagram.....	26
Figure 6. 1: Login Page.....	33
Figure 6. 2: User Registration	34
Figure 6. 3: User Basic Information	35
Figure 6. 4: Recover Password.....	36
Figure 6. 5: Login with Google	37
Figure 6. 6: Create a new post.....	38
Figure 6. 7: User Timeline	39
Figure 6. 8: Edit or Delete Post.....	40
Figure 6. 9: User Profile Settings	41
Figure 6. 10: Comment in Post	42
Figure 6. 11: Admin login.....	43
Figure 6. 12: Admin Activity	44

LIST OF TABLES

Table 2. 1: Functional Requirements.....	5
Table 2. 2: Non-Functional Requirements.....	5
Table 2. 3: Data Requirements.....	6
Table 2. 4: Speed and Latency Requirements.....	6
Table 2. 5: Precision Requirements.....	6
Table 2. 6: Capacity Requirements	7
Table 2. 7: Reliability Requirements.....	7
Table 2. 8: Availability Requirements.....	7
Table 2. 9: Robustness Requirements.....	8
Table 2. 10: Safety-Critical Requirements.....	8
Table 2. 11: Maintenance Requirements	8
Table 2. 12: Supportability Requirements	8
Table 2. 13: Access Requirements	9
Table 2. 14: Integrity Requirements.....	9
Table 2. 15: Privacy Requirements	9
Table 2. 16: Appearance Requirements.....	10
Table 2. 17: Legal Requirements	10
Table 3. 1: Signup.....	12
Table 3. 2: Signup with social media	12
Table 3. 3: Login	13
Table 3. 4: Create a Post	13
Table 3. 5: Upload photos.....	14
Table 3. 6: Approve Donation.....	14
Table 3. 7: Password Recovery.....	15
Table 3. 8: Comment	15
Table 3. 9: Update Post.....	16
Table 3. 10: Delete post	16
Table 3. 11: Logout	17
Table 4. 1: CRC for user.....	22
Table 4. 2: CRC for Admin login.....	22
Table 4. 3: CRC for Problem Post.....	22
Table 4. 4: CRC for Update User	23
Table 4. 5: CRC for Donation	23
Table 5. 1: Features	27
Table 5. 2: Features	27
Table 5. 3: Features	28
Table 5. 4: Sign up (Authentication)	30
Table 5. 5: Sign up (User Information)	30
Table 5. 6: Login	31
Table 5. 7: Create post.....	31

Table 7. 1: Create post	45
-------------------------------	----

CHAPTER 1: Introduction

1.1 Project Overview

Heal City is basically an android app with using real-time database. User can use it for inform authority about their problem which ones are happened to their society. Users must register this app with their valid information and then they can post their problem to their timeline with problem description and must mention the location and phone number. The users will see their own post alongside with others post with post description and photos but only the authority/admin can see the user phone number and other description so that authority can contact with them to know the details information about the problem if they needed. The general user will not be able to see the contact number for the security purposes. So, my application is a communication bridge between the general people who suffer different problem in the society and the authority who are responsible to solve the problem in the society. This application have donation option for solving the specific problem like if anyone or any organization post a problem like helping the flood affected people or winter cloth distribution then the admin/authorities will approve that specific post for donation and then there will be a donation option visible in that specific post. The users of the application can donate money for the flood affected people or can contribute for the winter cloth distribution and many others.

1.2 Purposes of the project

1.2.1 The User Business or Background of the Project Effort

Heal City is an android application which one help general people to make their society good. It will also help the authority who are responsible to solve different problem in our society to know the actual problem which one need to solve and to ensure the better society. This is an android application that's why people can lay bare their problem very easily and also easy for the authority to connect with the victims. User also can contribute for the society b donate money in different situation like flood affected people or winter cloth distribution etc.

Benefits & Beneficiaries

The system is so simple that a very average people can use it so easily. There are a lots of benefits of the system and a good number people will be beneficiaries of the system. The main advantage of the application is to make an easy communicating system between the general society people and authority who are responsible for working for the society. And general people also can be effective for the society to doing some good work or attend into some good events by donate money.

Beneficiaries

- The society peoples.
- The authority who are responsible for work for the society.
- The people who are affected by natural disasters or something like that.

Benefits

- General people can inform their problem to higher authority of the society.
- It will make a bridge between the people and the authority.
- Authority can easily know, people are facing which problem in the society.
- People will get help who are effected by natural disasters.
- General people can contribute for their society.

1.3 Goals of the Project:

The principal objective of the undertaking is to diminish the separation between the general public individuals and social expert. Another critical objective is to help individuals to add to their general public in an alternate circumstance. Another critical thing is to help expert who is in charge of the social issue to know the genuine issue which one truly disturbs the general public individuals. They can likewise get the proposal from the general public individuals how to take care of any issue with viable way. It's another objective is to make an open door for the general individuals to help the general population who are influenced by some characteristic digester.

1.4 Stakeholders**The Users:**

The people who are using this system and create post or comment on the others post and also can donate.

The Authority:

The people who are maintain the system and responsible for solving different problem in the society.

Bank:

Transferring money using the different bank accounts.

1.5 Proposed System Model

A software development process is a procedure of separating programming advancement work into unmistakable stages to improve the plan, item the executives, and task the board. It is otherwise called a product improvement life cycle. The

technique may incorporate the pre-meaning of explicit expectations and ancient rarities that are made and finished by an undertaking group to create or keep up an application. Most modern development processes can be vaguely described as agile. Other methodologies include waterfall, prototyping, iterative and incremental development, spiral development, rapid application development, and extreme programming.

My proposed framework is planned to utilize the agile model. Agile model work with cycles. Light-footed is the capacity to make and react to change. It is a method for managing, and eventually prevailing in, an unsure and violent condition. Deft programming improvement is more than practices, for example, pair programming, test-driven advancement, stand-ups, sessions, and dashes.

Agile software development is an umbrella term for a set of frameworks and practices based on the values and principles expressed in the Manifesto for Agile Software Development and the 12 Principles behind it. When we approach programming improvement in a specific way, it's commonly great to live by these qualities and standards and use them to help make sense of the correct activities given our specific setting, So that I am utilizing agile in my system.

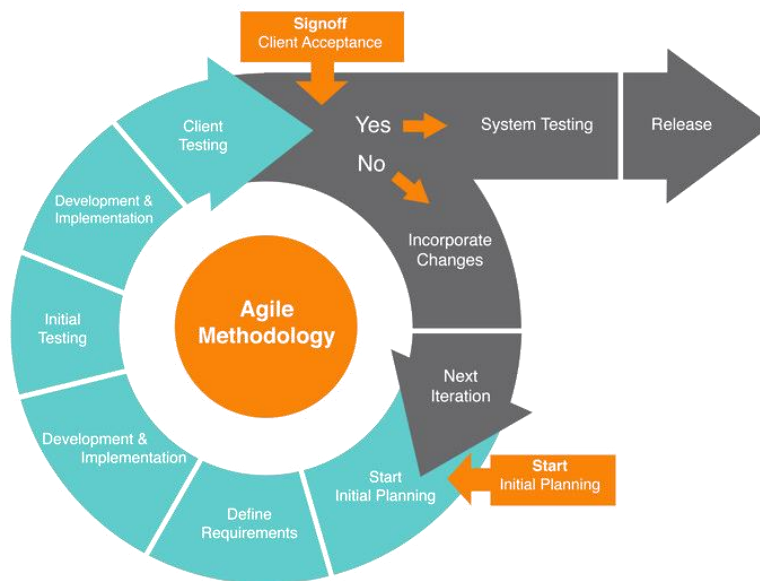


Figure 1. 1: Agile model

1.6 Project Schedule

Project Schedule are shown into the Figure 1.2

Weeks	1	2	3	4	5	6	7	8	9	10	11	12
Works												
Project Planning												
Analysis												
Feasibility Study												
Project Proposal Ready & Submission												
Project UI												
Midterm Defense												
Development												
Testing												
Preparing Project Document												
Final Defense												

Figure 1. 2: Gantt chart

1.7 Release Plan

Release 1: beta version 1.0.0 on 01/05/2019

Release 2: beta version 1.0.1 on 15/05/2019

Release 3: beta version 1.0.3 on 30/05/2019

CHAPTER 2: SOFTWARE REQUIREMENT SPECIFICATION

2.1 Functional Requirements

Functional Requirements are given in table 2.1

Table 2. 1: Functional Requirements

ID	Requirement	Description	Priority
01	Create Post	Registered user can create a post	H
02	Upload Photo	User can upload a photos related to their problem.	H
03	Edit Post	User can edit their post after creating a post.	M
04	Delete Post	User can delete post whenever he wants.	M
05	Comment	User can comment on the others and own posts.	H
06	Signup	People can get services from application by signing up once a time.	H
07	Login	User can login after signing up	H
08	Logout	A login user can logout whenever they wants.	H

2.2 Non-Functional Requirements

Non-Functional Requirements are given in table 2.2

Table 2. 2: Non-Functional Requirements

ID	Requirement	Description	Priority
01	Accessibility	Android platform. Interface is very user friendly.	H
02	Capacity	A good number of people can able to use the system at a time.	L
03	Login with fb, google etc.	User can create their new account using their fb, twitter and google account.	M
04	Quality	Quality must be good.	M
05	Reliability	Application reliable.	H
06	Security	User sensitive information must be secure.	H

2.3 Data Requirement

Data Requirements are given in Table 2.3

Table 2. 3: Data Requirements

ID	Description	Priority
01	User must have to sign up before login. Login data will be matched with signup data if it does not match user not allow to login.	H
02	User have search for valid keywords.	M
03	User have to enter valid information on the forms otherwise system will show an error message.	H
04	All field on form must have to be fill up otherwise user will get error message.	L

2.4 Performance Requirement

2.4.1 Speed and Latency Requirement

Speed and Latency Requirements are given in Table 2.4

Table 2. 4: Speed and Latency Requirements

ID	Description	Priority
01	The system should load the data from server within 2 seconds.	M
02	The system must have a high speed of manipulation data and reply to the user request.	L

2.4.2 Precision or Accuracy Requirement

Precision or Accuracy Requirements are given in Table 2.5

Table 2. 5: Precision Requirements

ID	Description	Priority
01	The input data should be validated when User or admin provide data to the system	M

02	All data should be in place accurately where it is associated	M
----	---	----------

2.4.3 Capacity Requirement

Capacity Requirements are given in Table 2.6

Table 2. 6: Capacity Requirements

ID	Description	Priority
01	The application size must have to be less than 100 Mb	M
02	The remote server database size must be able to load the system data.	L

2.5 Dependability Requirement

2.5.1 Reliability Requirement

Reliability Requirements are given in Table 2.7

Table 2. 7: Reliability Requirements

ID	Description	Priority
01	Sign up, create post, comment must depend on insertion of new data in the server.	H
02	System must send the user data to the server	H

2.5.2 Availability Requirement

Availability Requirements are given in Table 2.8

Table 2. 8: Availability Requirements

ID	Description	Priority
01	The system should work 24 hours a day	H
02	The system should provide the desired data to the user on time	H

2.5.3 Robustness or Fault-Tolerance Requirement

Robustness or Fault-Tolerance Requirements are given in Table 2.9

Table 2. 9: Robustness Requirements

ID	Description	Priority
01	If the system has been crashed, it should not be more than a minute.	M
02	Supports all screen size.	M

2.5.4 Safety-Critical Requirement

Safety-Critical Requirements are given in Table 2.10

Table 2. 10: Safety-Critical Requirements

ID	Description	Priority
01	User data should be secure	H

2.6 Maintainability and Supportability Requirement

2.6.1 Maintenance Requirement

Maintenance Requirements are given in Table 2.11

Table 2. 11: Maintenance Requirements

ID	Description	Priority
01	The system maintenance should be quick	L

2.6.2 Supportability Requirement

Supportability Requirements are given in Table 2.12

Table 2. 12: Supportability Requirements

ID	Description	Priority
01	The system should support in all type of android version.	M
02	Supports all screen size.	M

2.6.3 Adaptability Requirement

No visible adaptability requirements

2.6.4 Scalability or Extensibility Requirement

No Scalability or Extensibility requirements

2.7 Security Requirement

2.7.1 Access Requirement

Access Requirements are given in Table 2.13

Table 2. 13: Access Requirements

ID	Description	Priority
01	The Application user access boundary should be within the application	M

2.7.2 Integrity Requirement

Integrity Requirements are given in Table 2.14

Table 2. 14: Integrity Requirements

ID	Description	Priority
01	The data of the system must not be altered without any permission	L
02	The data integrity should be maintained	L

2.7.3 Privacy Requirement

Privacy Requirements are given in Table 2.15

Table 2. 15: Privacy Requirements

ID	Description	Priority
01	The user data like phone number, must not be visible for public	H
02	The user data should not contain any private issues.	M

2.7.4 Usability and Human-Interaction Requirement

No Usability and Human-Interaction Requirement

2.8 Look and Feel Requirement

2.8.1 Appearance Requirement

Appearance Requirements are given in Table 2.16

Table 2. 16: Appearance Requirements

ID	Description	Priority
01	The user interface must be attractive	M
02	The user interface must be user friendly	H
03	The user interface must be user interactive.	M

2.9 Operational and Environmental Requirement

No Operational and Environmental Requirements

2.10 Legal Requirement

Legal Requirements are given in Table 2.17

Table 2. 17: Legal Requirements

ID	Description	Priority
01	No copyright content allow in the application.	M

CHAPTER 3: SYSTEM ANALYSIS

3.1 Use Case Diagram

Use case are shown in Figure 3.3

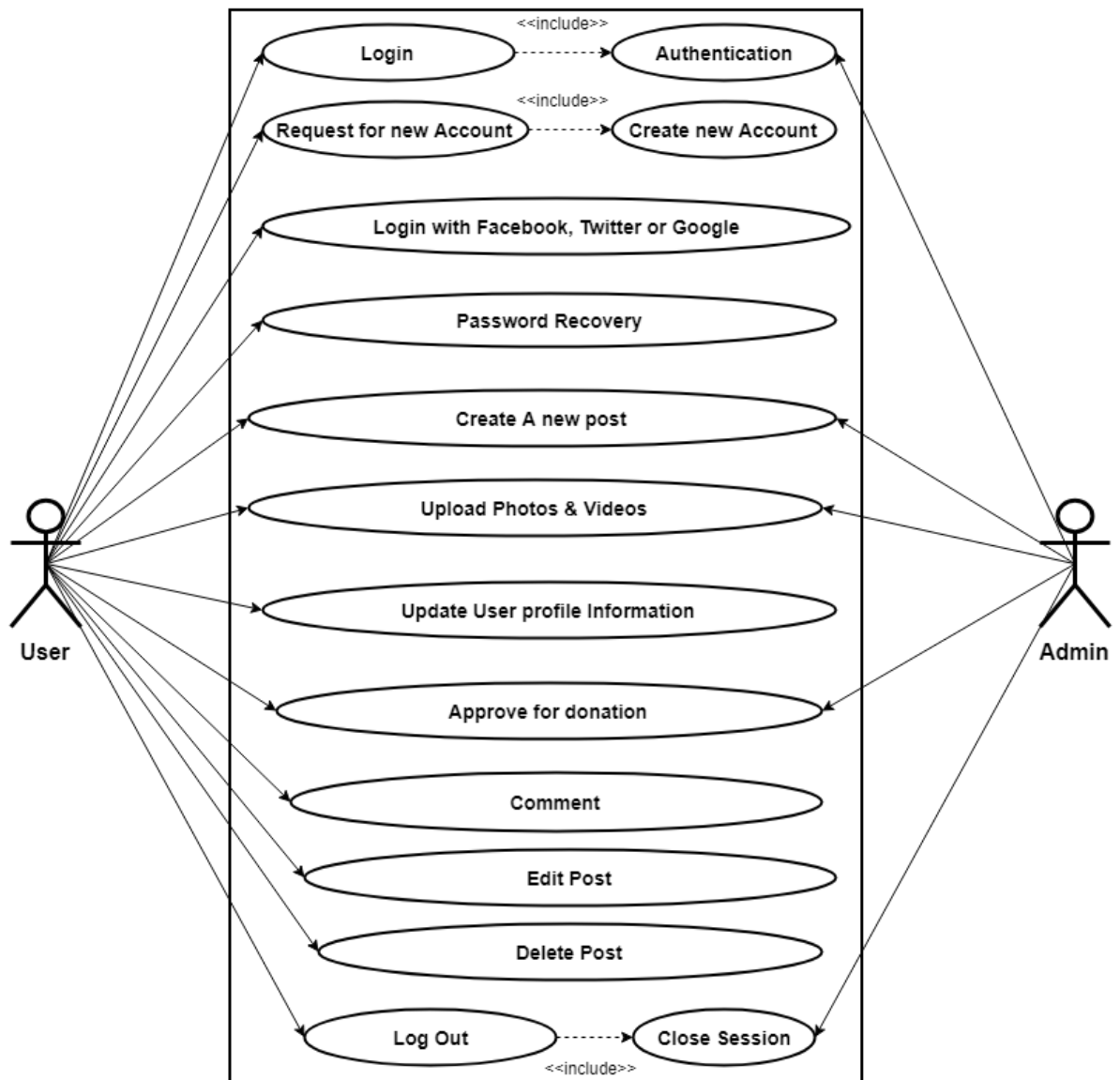


Figure 3. 3: Use case Diagram

3.2 Use case Description:

3.2.1 Signup

User have to complete sign up by providing basic information's before login. In create new account, all field must have to fill up and information's must have to be accurate. Sign up details given in table 3.1

Table 3. 1: Signup

Use Case Name:	Create new account
Scenario:	User have to create an account to login.
Brief Description:	Without creating an account not possible to login.
Actor:	User
Precondition:	Must go to create new account page.
Post condition:	Must provide all necessary information.
Main-Success Scenario	1. Server must have to be working. 2. Properly fil all the required field.
Scenario Extensions	1. Fill all the field with proper information.

3.2.2 Signup with social media

Users are able to Sign up with social media if they want. Signup with social media details given in table 3.2

Table 3. 2: Signup with social media

Use Case Name:	Signup with Facebook, Twitter, Google
Scenario:	If user want to login with their different social media account then thy can do it.
Brief Description:	If user have social media account like fb, twitter of google then they can use it to create a new account.
Actor:	User
Precondition:	User must have an active social media account.
Post condition:	User login to their account according to account.
Main-Success Scenario	User will get successfully creating account conformation.
Scenario Extensions	1. Without account signup not completed. 2. Without login to their account it not complete.

3.2.3 Login

For login user have to provide user email and password.

Login details given in table 3.3

Table 3. 3: Login

Use Case Name:	Login
Scenario:	If any user want to make a post, comment, update or delete post and want to see the others posts then user must have to login.
Brief Description:	Once a user login he/she can create post, view his post, update and delete his/her post. All this feature is accessible for the login users.
Actor:	User
Precondition:	Must have to sign up.
Post condition:	User have provided right user name and password.
Main-Success Scenario	1. Server must have to be working. 2. User name and password must be matched. 3. After login user get confirmation message.
Scenario Extensions	1. Have provide proper information otherwise signup can't be complete.

3.2.4 Create a Post

User can create a post after complete his login successfully.

Create a Post details given in table 3.4

Table 3. 4: Create a Post

Use Case Name:	Create a new post
Scenario:	User can create a new post with his/her problem description.
Brief Description:	After login user can create a new post by simply go to post creation section or new post icon then select new post option.
Actor:	User, Admin
Precondition:	Must have to logged in.
Post condition:	Must fill all the required fields in the form.
Main-Success Scenario	1. Get post creation successful message.
Scenario Extensions	1. If all the required field is properly not filled up post creation cannot be done.

3.2.5 Upload Photos

User can be able to upload an image related to their post.

Upload photos details given in table 3.5

Table 3. 5: Upload photos

Use Case Name:	Upload photos and videos
Scenario:	When user will create a post then they will find an option to upload image.
Brief Description:	If user go to new post option then they will be able to upload image to attach on the post.
Actor:	User, Admin
Precondition:	User have to select a valid type of file to upload. The image should be related to the post.
Post condition:	User will get a successful upload message.
Main-Success Scenario	1. Get success message.
Scenario Extensions	1. Without valid type of file upload will not be complete.

3.2.6 Approve Donation

If User post is uploaded successfully then donation option will appear.

Approve Donation details given in table 3.6

Table 3. 6: Approve Donation

Use Case Name:	Post approve for donation
Scenario:	After creating a post if it's related to donation then admin will approve the post.
Brief Description:	User have to create post with brief description then it will help authorities to understand the post should be approve for donation or not.
Actor:	User, Admin
Precondition:	User must create a post.
Post condition:	The post must have to valid reason to approve.
Main-Success Scenario	The invisible donation button will be visible if it's approved.
Scenario Extensions	Without approve donation button will not appear.

3.2.7 Password Recovery

If user are forgotten their password then they can recover it with providing their email.

Password Recovery details given in table 3.7

Table 3. 7: Password Recovery

Use Case Name:	Password Recovery
Scenario:	User can recover their forgotten password.
Brief Description:	If user want make a new password or forgotten the login password then they can recover it.
Actor:	User
Precondition:	Must provide their email address which one used to create account.
Post condition:	Go to email and click on to the given URL to change password.
Main-Success Scenario	Receive password changed successfully message.
Scenario Extensions	If user not provide valid email address then new password create not be successful.

3.2.8 Comments

Any users are able to make a comment on any other users post.

Comment details given in table 3.8

Table 3. 8: Comment

Use Case Name:	Comments
Scenario:	If user want to comment on a post he can.
Brief Description:	If user found a post related to their area or related to their problem they can comment on that post.
Actor:	User
Precondition:	Have to logged in.
Post condition:	Post have to be available.
Main-Success Scenario	Instant comment update on a post.
Scenario Extensions	1. If user not type anything on comment field then comment will not update. 2. If user not logged in comments cannot be done.

3.2.9 Update Post

User can update a post after creating that post.

Update Post details given in table 3.9

Table 3. 9: Update Post

Use Case Name:	User can update previous post.
Scenario:	If user thing he need to change information of a post he created before he can update the post.
Brief Description:	If user find better image to upload that can be more related to the problem then they can update it and same for the location and description.
Actor:	User
Precondition:	Have to login.
Post condition:	Must have to create a post.
Main-Success Scenario	View Updated post into his timeline.
Scenario Extensions	User can update only own post.

3.2.10 Delete post

User can delete previous created posts. Delete post details given in table 3.10

Table 3. 10: Delete post

Use Case Name:	User can delete posts that he created before.
Scenario:	Whenever user don't need any post, he can delete that post.
Brief Description:	After solving the problem user have no longer need to keep that post into their timeline.
Actor:	User
Precondition:	Have to logged in
Post condition:	Must have to create a post.
Main-Success Scenario	Never see the deleted post and get a confirmation.
Scenario Extensions	If user don't create any post by own, he has nothing to delete.

3.2.11 Logout

User can logout after successfully login. Logout is only available for user who already logged in into the system. Logout details given in table 3.11

Table 3. 11: Logout

Use Case Name:	User can logout after login.
Scenario:	If user want get out of the system, he/she can logout.
Brief Description:	After using the internal features of the system user can logout to make system information safe.
Actor:	User
Precondition:	Must have to logged in.
Post condition:	Logout should be confirmed.
Main-Success Scenario	Logout should be confirmed and never see the post again before login again.
Scenario Extensions	User have to sign up and login if login not confirmed log out cannot be done.

3.3 Activity Diagram

Activity Diagram given in Figure 3.1

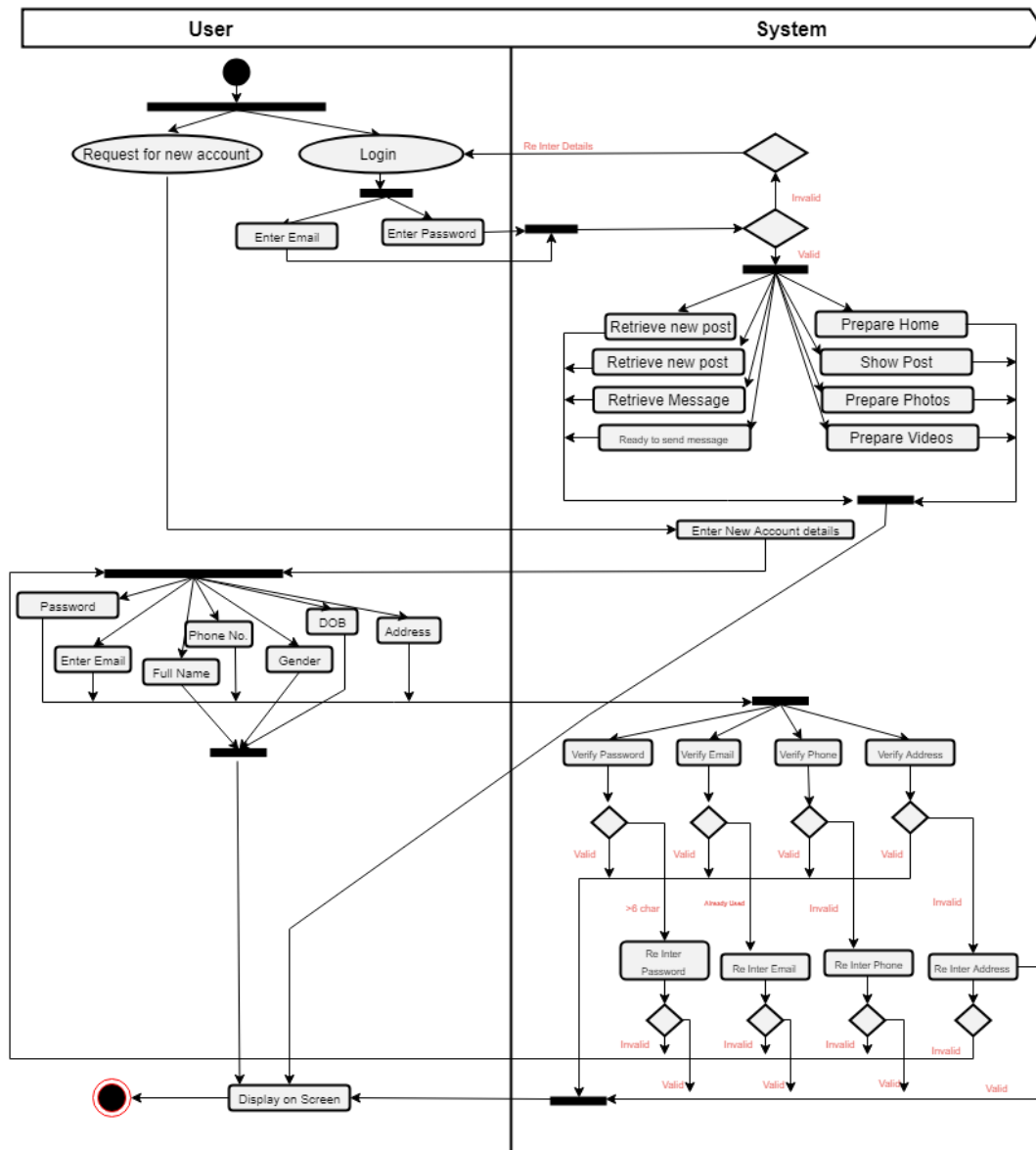


Figure 3. 1: Activity Diagram

3.3.1 Activity Diagram (Donation)

Activity Diagram given in Figure 3.2

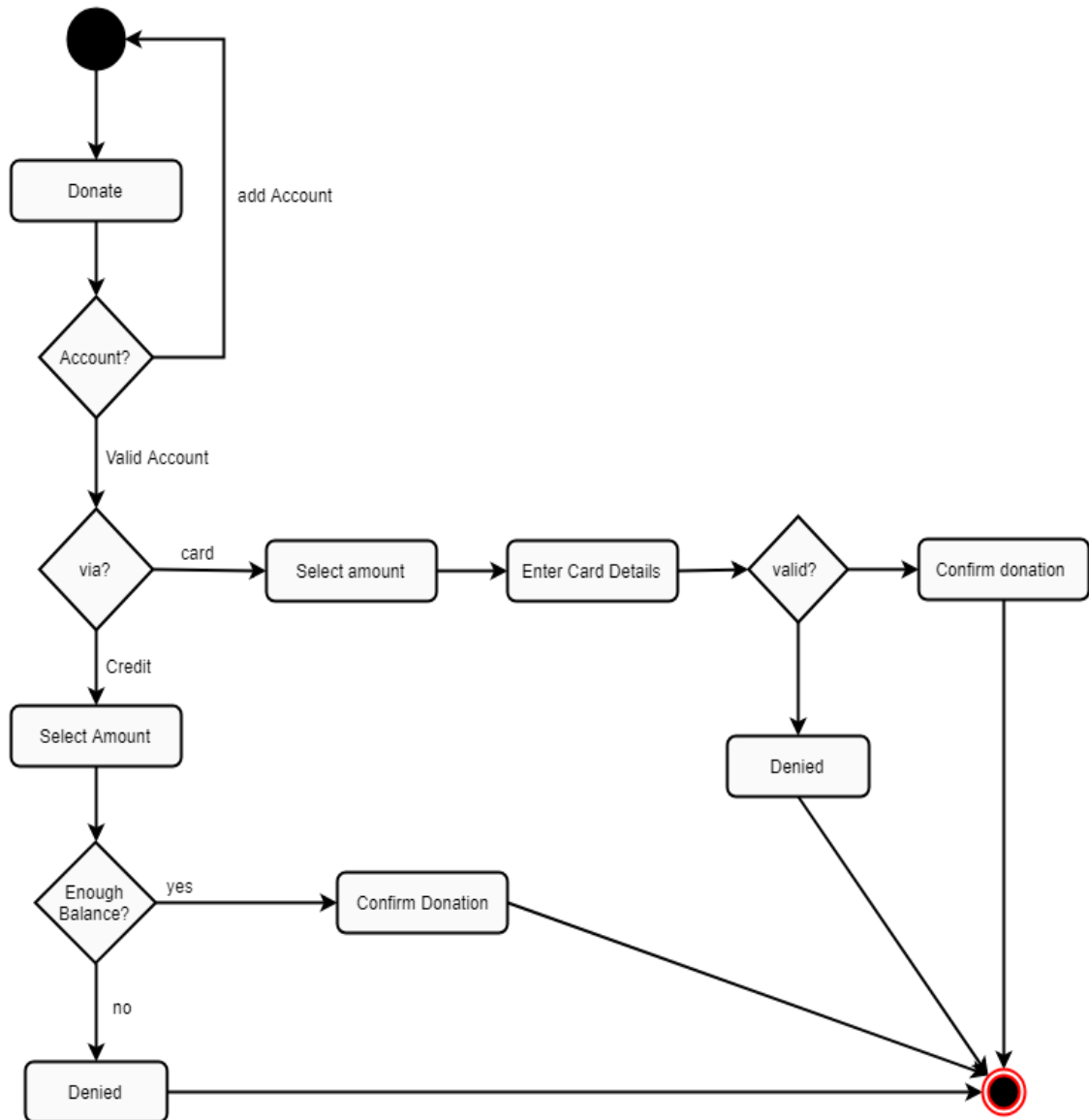


Figure 3. 2: Activity Diagram (Donation)

3.3.2 Activity Diagram (admin)

Activity Diagram given in Figure 3.3

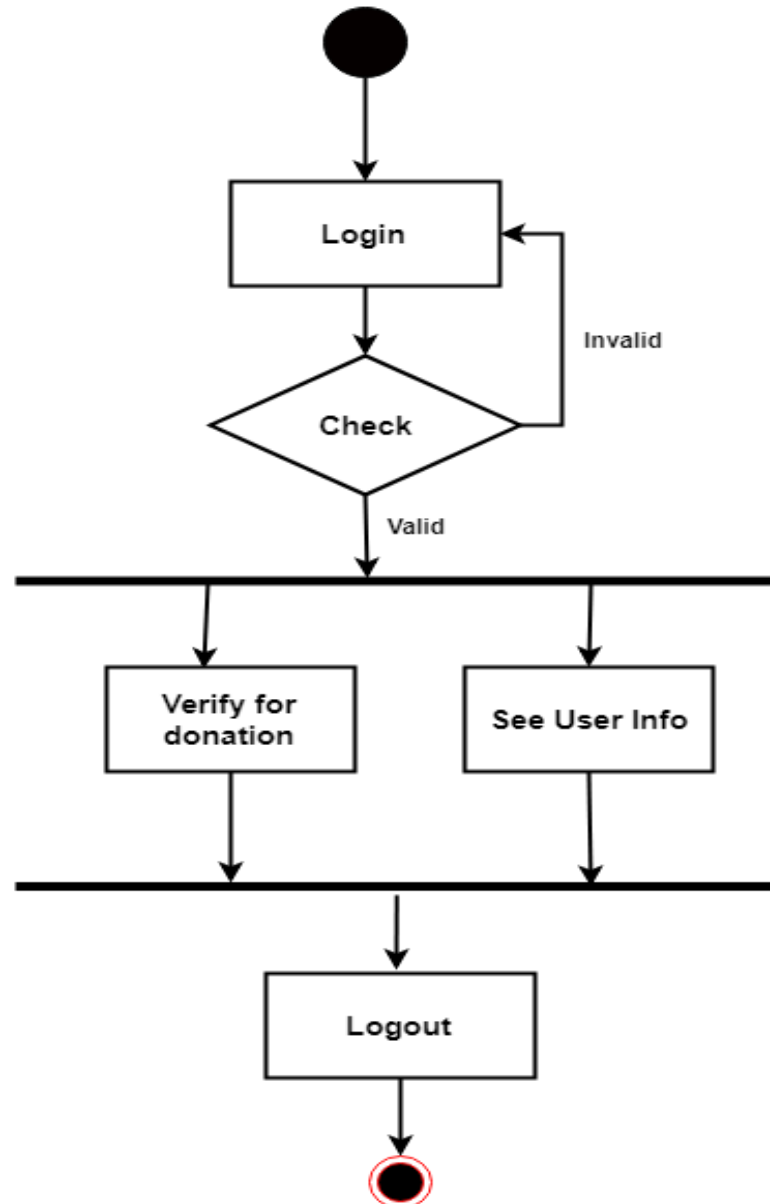


Figure 3. 3: Activity Diagram (Admin)

3.4 Sequence Diagram

Activity Diagram given in Figure 3.7

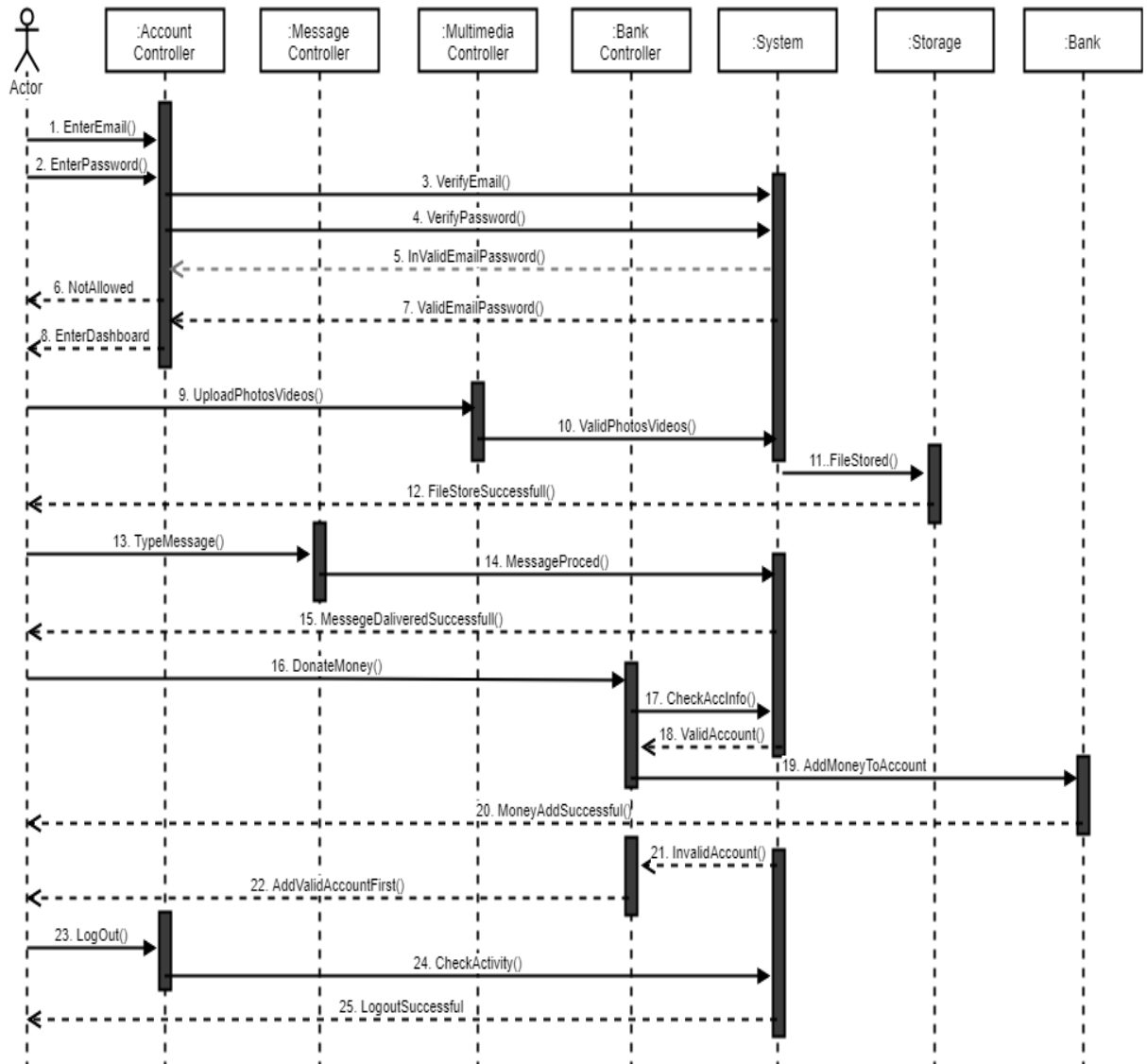


Figure 3. 4: Activity Diagram (user & admin)

CHAPTER 4: SYSTEM DESIGN SPECIFICATION

4.1 Class Responsibilities Collaboration (CRC) Cards

4.1.1 CRC for user

CRC for user is given in table 4.1

Table 4. 1: CRC for user

User	
Responsibility	Collaboration
Fill sign up form	Signup
Login into system with username/email and password	Login

4.1.2 CRC For admin log

CRC for Admin login is given in table 4.2

Table 4. 2: CRC for Admin login

Admin log	
Responsibility	Collaboration
Admin Login into system with phone number and password	Login

4.1.3 CRC for Problem Post

CRC for Problem Post is given in table 4.3

Table 4. 3: CRC for Problem Post

Problem Post	
Responsibility	Collaboration
Create a problem post.	Found post person

4.1.4 CRC for Update User Info

CRC for Update User Info is given in table 4.4

Table 4. 4: CRC for Update User

Update User Info	
Responsibility	Collaboration
Update user personal information	Update Information

4.1.5 CRC for Donation

CRC for Donation is given in table 4.5

Table 4. 5: CRC for Donation

Donation	
Responsibility	Collaboration
Donate in different post	Donate money

4.2 Data Flow Diagram

4.2.1 DFD Level-0

DFD Level-0 given in Figure 4.1

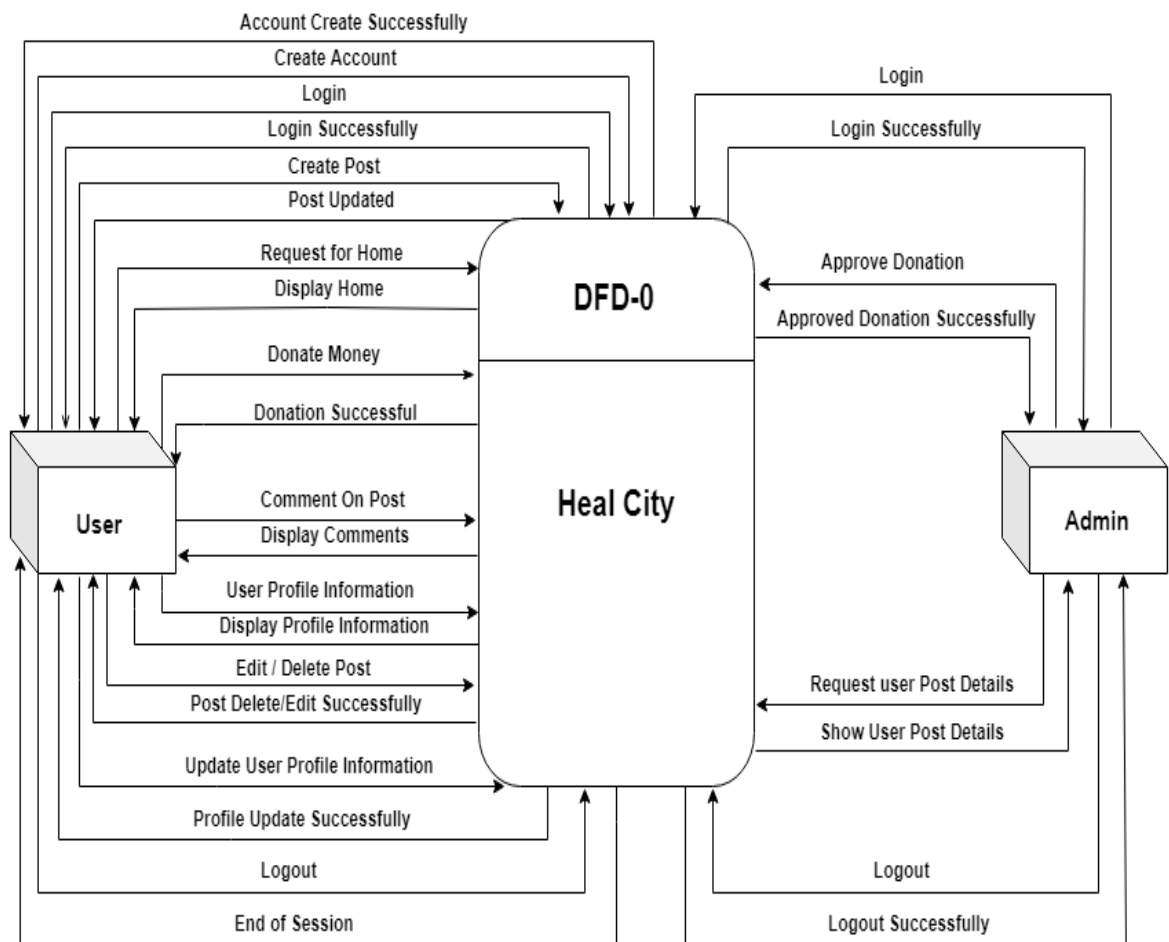


Figure 4. 1: DFD Level-0

4.2.2 DFD Level -1

DFD Level-1 given in Figure 4.2

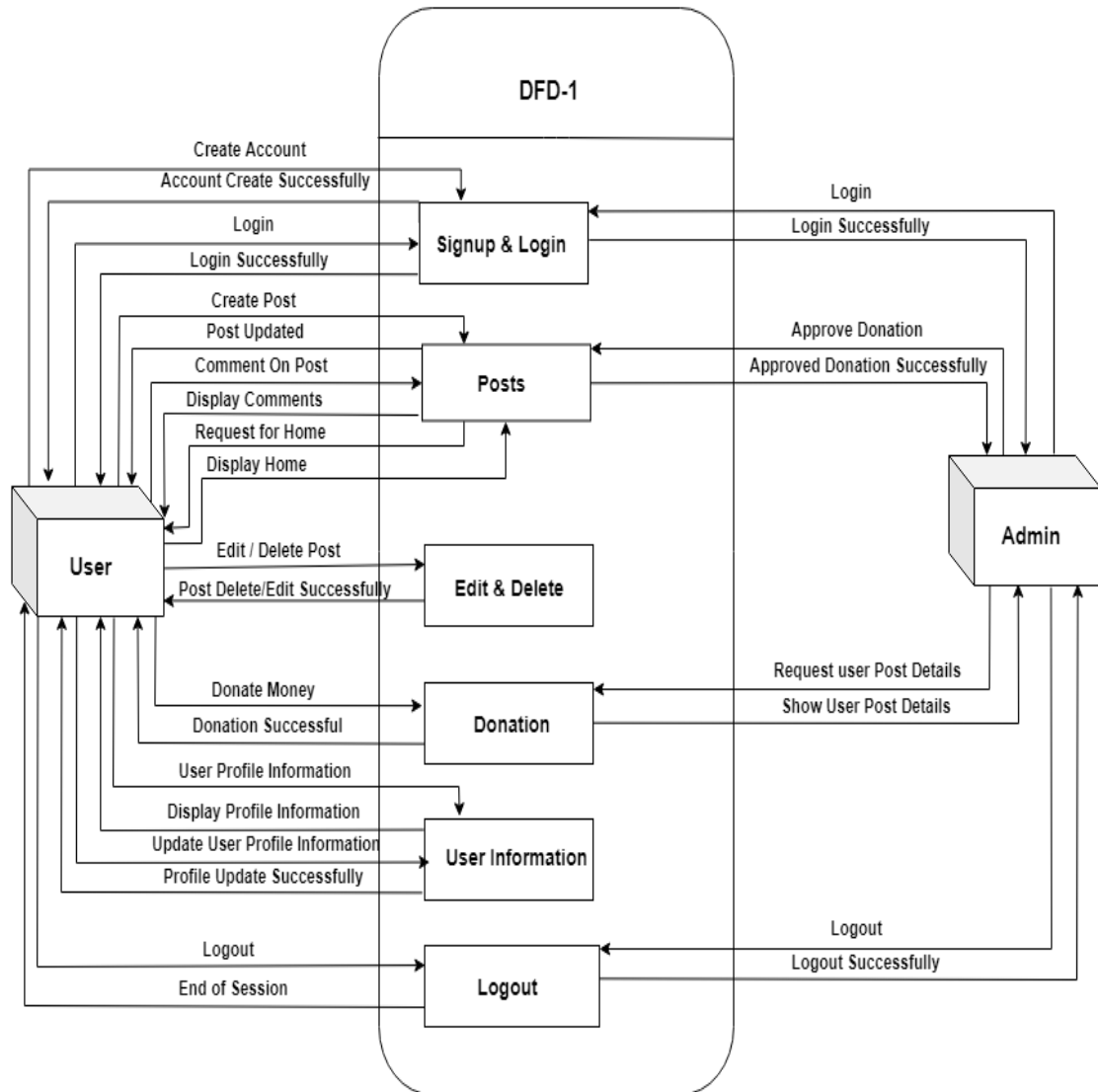


Figure 4. 2: DFD Level-1

4.3 Entity–Relationship Diagram

Entity–Relationship Diagram given in Figure 4.3

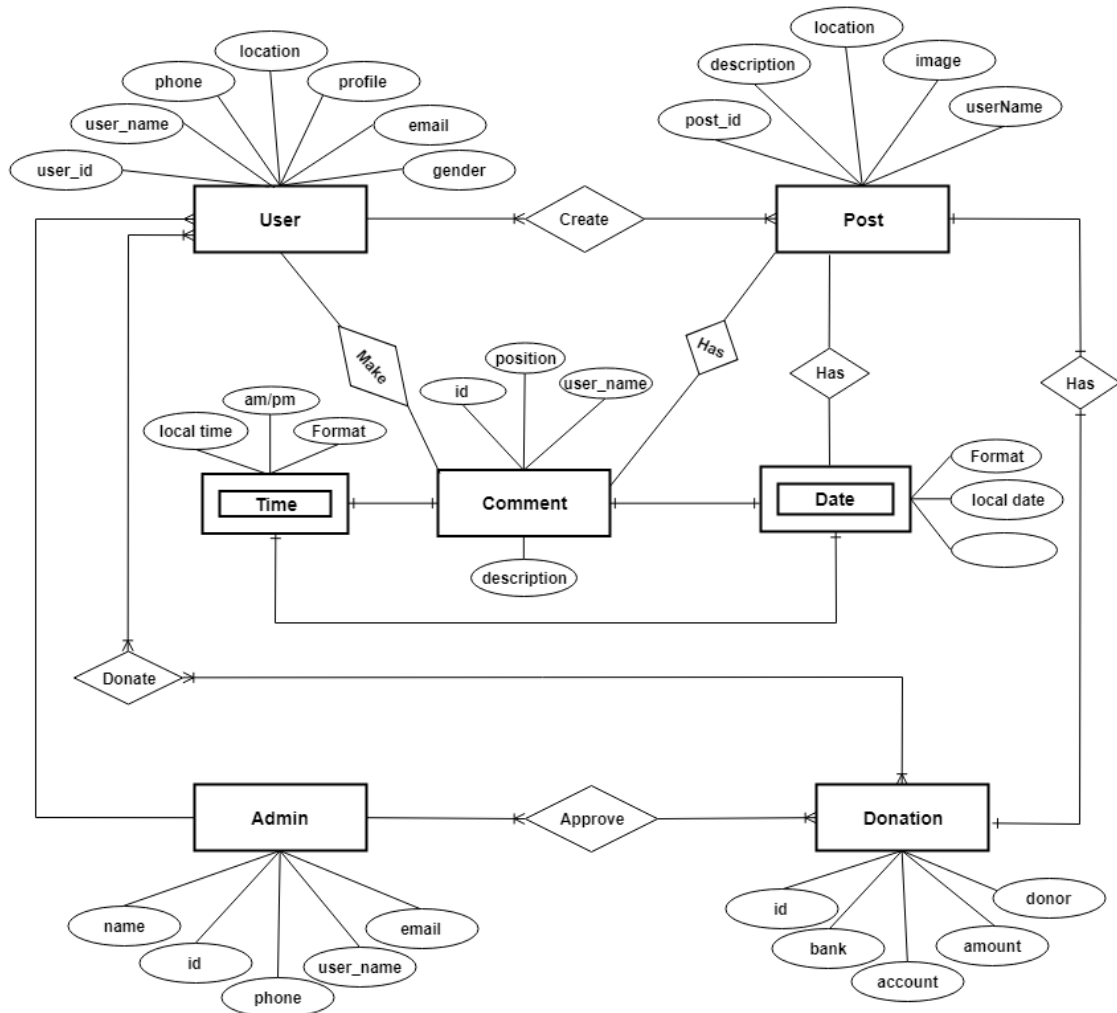


Figure 4. 3: ER Diagram

4.4 Development Tools & Technology

- Android Studio
- Java
- XML
- Firebase
- Adobe XD

CHAPTER 5: SYSTEM TESTING

5.1 Testing Features

5.1.1 Features to be tested

Features to be tested details are given in table 5.1

Table 5. 1: Features

Featured ID	Featured Name	Description	Involved User
01	Login (Admin)	Check admin login working or not	Admin
02	Login (User)	Check user login working or not	User
03	Create post	Check user can successfully create a post.	User
04	View post	Check User can see all post in his timeline given by the other users.	User
05	Post details	Check user can see a post details by clicking on the post.	User
06	Edit/delete post	Check user can edit / delete a post or not.	User
07	Comment	Check user successfully make a comment under the specific post.	User
08	Logout	Check user can log out or not	User
09	Logout (Admin)	Check admin can logout or not.	Admin

5.1.2 Features not to be tested

Features not to be tested details are shown in table 5.2

Table 5. 2: Features

Featured ID	Featured Name	Description	Involved User
01	Accuracy	How accurate the system loads data	System
02	Speed	How fast the system retrieve data from server	System
03	Security	How secure is the system data	System
04	Backup	How much system can store date	System

5.2 TESTING STRATEGIES

5.2.1 Test Approach

Test strategy is the process and procedures of how the system should be tested the test date is identified by expected output for actual input. Test plan is a standard document produced in most software engineering projects. Low quality projects don't have test plans. Test plan is written after requirement analysis. System is tested with sample data to see how it handle input and output functions with extreme data

5.2.2 Pass/Fail Criteria

- High reliability will pass the system.
- If the system is 80% error free it will pass either will fail.
- If the system retrieve data in less than 4 seconds it will pass.
- If the validation work properly system will pass.
- If the system retrieve 80% accurate data system will pass.

5.2.3 Suspension and resumption Suspension:

- Unavailability loading data from server.
- System Crush.
- Invalid data.

5.2.4 Resumption:

- System taking too much time to load data.
- Failure in data validation.

5.2.5 Testing Schedule

Testing Schedule is given in table 5.3

Table 5. 3: Features

Id	Task name	Duration	Start	Finish
01	Testing planning	1 Days	15 th April 2019	15 th April 2019
02	Test plan and QA schedule preparation	2 Days	16 th April 2019	17 th April 2019
03	Test point preparation	2 Days	18 th April 2019	19 th April 2019
04	Testing and Bug reporting	2 Days	20 th April 2019	21 st April 2019

5.2.6 Requirement Traceability Matrix Requirements:

- Signup
- Login
- Update User Info
- Create Post
- Comment on post
- Edit post
- Delete post
- Logout

5.2.7 Test cases:

- Signup module
- Login module
- Create post module
- Edit post module
- Delete post module
- Comment post module
- Logout module
- Update information module

5.3 Testing Environment (Hardware/Software Requirements)

Software: Robotium Android Testing Tool

Hardware: Computer

5.4 Test Cases

5.4.1 Sign up (Authentication)

Sign up module for authentication are given in table 5.4

Table 5. 4: Sign up (Authentication)

Id	Action	Input	Expected Result	Actual Result	Result	Code module
01	Sign up	Email: Password: @k123456 Confirm Password: @k123456	Provide Email Address	Provide Email Address	Pass	
02	Sign up	Email: kawsar@gmail.com Password: @123456 Confirm Password: @k123456	Your Password and Confirm password must match...	Your Password and Confirm password must match...	Pass	
03	Sign up	Email: kawsar@gmail.com Password: @k123456 Confirm Password: @k123456	Your Authentication Successful...	Your Authentication Successful...	Pass	

5.4.2 Sign up (User Information)

Sign up module for user information input are given in table 5.5

Table 5. 5: Sign up (User Information)

Id	Action	Input	Expected Result	Actual Result	Result	Code module
01	Sign up	Profile Image: Full Name: Kawsar Amin Country: Bangladesh	Profile Image Not uploaded. Account Created Successfully...	Profile Image Not uploaded. You can upload it later...	Pass	

5.4.3 Login Module

Login module are given in table 5.6

Table 5. 6: Login

Id	Action	Input	Expected Result	Actual Result	Result	Code module
01	Login	Email: Password: @k123456	Provide your email address...	Provide your email address...	Pass	
02	Login	Email: afif@gmail.com Password: @k123456	There is no account with this Email...	There is no account with this Email...	Pass	
03	Login	Email: kawsar@gmail.com Password: k123456	Password or email not matched...	Password or email not matched...	Pass	
04	Login	Email: kawsar@gmail.com Password: @k123456	Login Successful	Login Successful		

5.4.4 Create post module

Create post module are given in table 5.7

Table 5. 7: Create post

Id	Action	Input	Expected Result	Actual Result	Result	Code module
01	Create Post	Image: Phone: 01828592882 Problem: Lamp Post Broken Problem Location: 215 Tollabug Dhaka 1211	First select problem Image...	First select problem Image...	Pass	
02	Create Post	Image: image Uploaded Phone: Problem: Lamp Post Broken Problem Location: 215 Tollabug Dhaka 1211	Provide your phone number...	Provide your phone number...	Pass	
03	Create Post	Image: image Uploaded	Provide the abject Location...	Provide the abject Location...	Pass	

		Phone: 01828592882 Problem: Lamp Post Broken Problem Location:				
04	Create Post	Image: image Uploaded Phone: 01828592882 Problem: Lamp Post Broken Problem Location: 215 Tollabug Dhaka 1211	Post Update Successfully...	Post Update Successfully...	Pass	

CHAPTER 6: USER MANUAL SCREENSHOT

6.1 User manual for user

6.1.1 Login Page

For the new user or open the application first time it will show the login page. In this login page User will find login option with email and password if he/she already registered. For the Unregistered user there have an option that “I have no account, create new”. If user click on that option then it will open another page (Figure 6.12) which are for the new user registration. User also can create their account by their Facebook, twitter or google account. There are also have an option for admin login. For the admin login admin have to click on “I am an Admin” option and then it will open an admin login page (Figure :).

Login page given in Figure 6.1

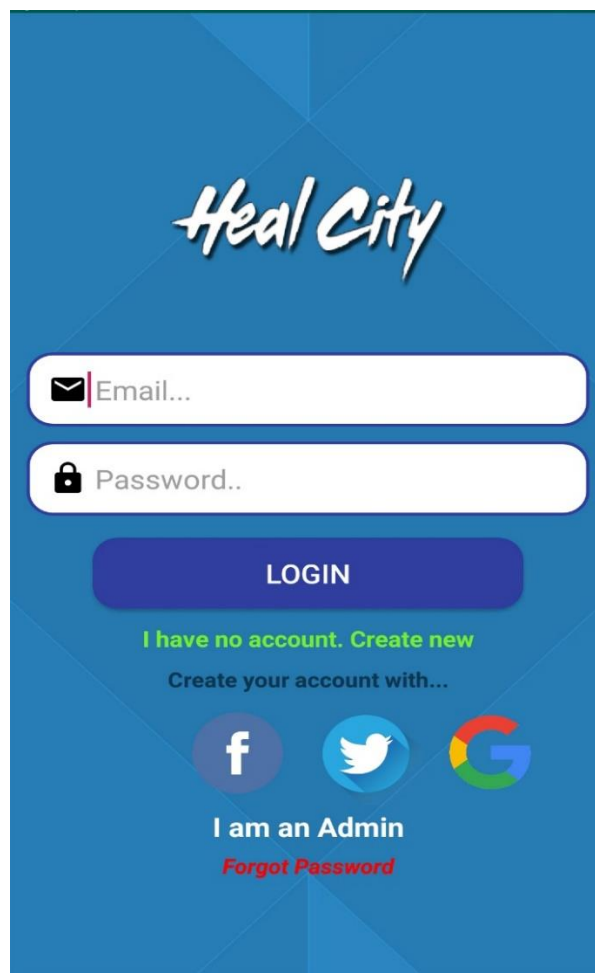


Figure 6. 1: Login Page

6.1.2 User Registration

In this page user can register for the login into the application. There are three field available here. User will input Email, password and confirm password and click on create account button for complete the registration.

User Registration page given in Figure 6.2

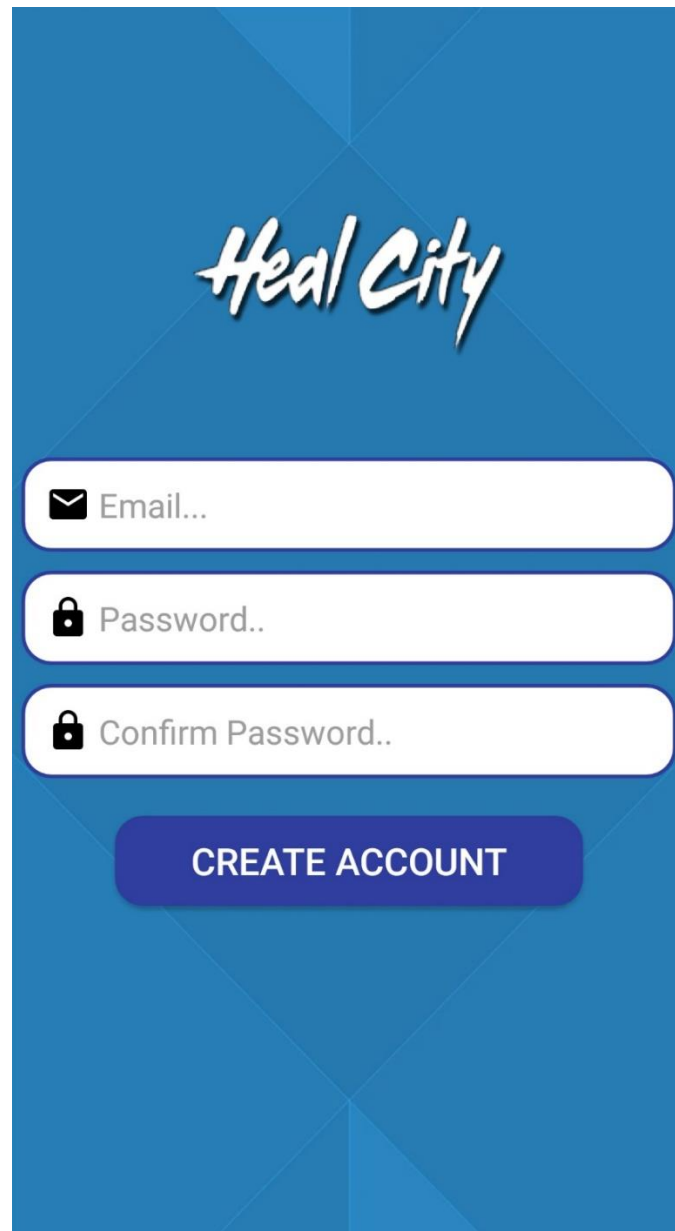
The image shows a user registration form for an application named "Heal City". The form is set against a blue background with a subtle geometric pattern. At the top, the "Heal City" logo is displayed in a white, stylized script font. Below the logo, there are three input fields, each with a white border and a light blue background. The first field is labeled "Email..." with an envelope icon. The second field is labeled "Password.." with a lock icon. The third field is labeled "Confirm Password.." with a lock icon. Below these fields is a prominent blue button with the text "CREATE ACCOUNT" in white, uppercase letters.

Figure 6. 2: User Registration

6.1.3 User Basic Information

This page will appear after complete registration. In this page user will upload their profile picture write their username, Full name and the country name and then hit the save button. After then user will see the confirmation message that their information update successfully.

User Basic Information page given in Figure 6.3

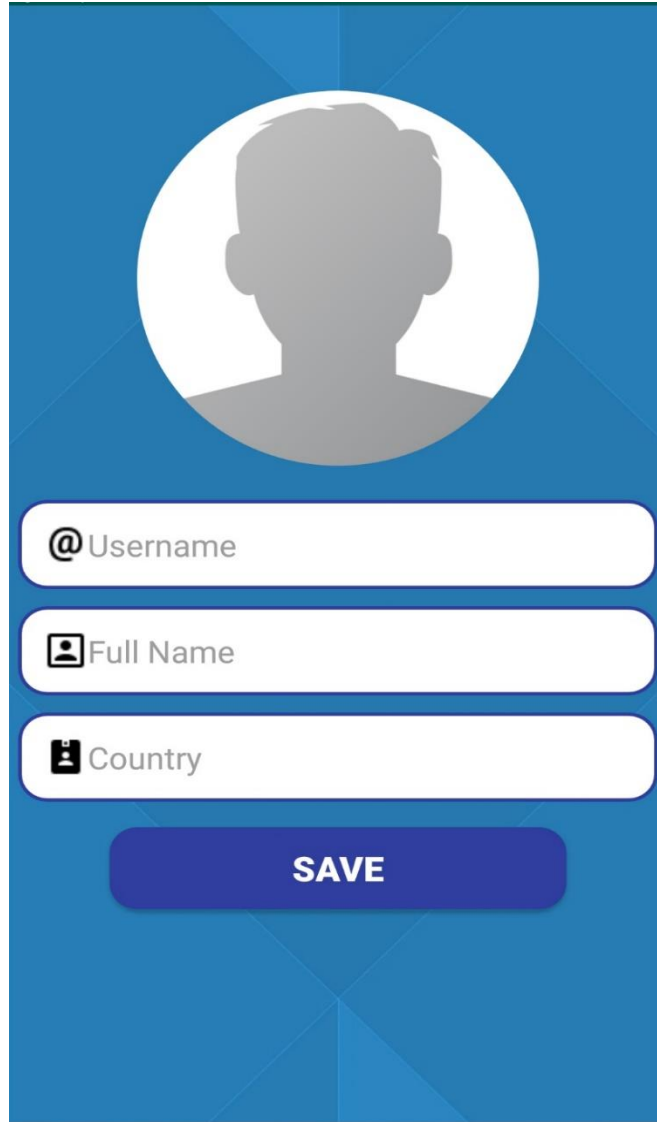
The image shows a user profile update form on a blue background. At the top is a circular placeholder for a profile picture, containing a grey silhouette of a person's head and shoulders. Below this are three white input fields with rounded corners and blue borders. The first field is labeled '@Username' with an '@' icon. The second field is labeled 'Full Name' with a person icon. The third field is labeled 'Country' with a location pin icon. Below these fields is a dark blue button with the word 'SAVE' in white capital letters.

Figure 6. 3: User Basic Information

6.1.4 Recover Password

If any user forgot their password then they can create a new password by clicking on forgot password option in login page. Then this page will appear. User will provide their email and hit the “Send Email” button. Now user can create a new password by going to their email address and following the simple steps.

Recover Password page given in Figure 6.4

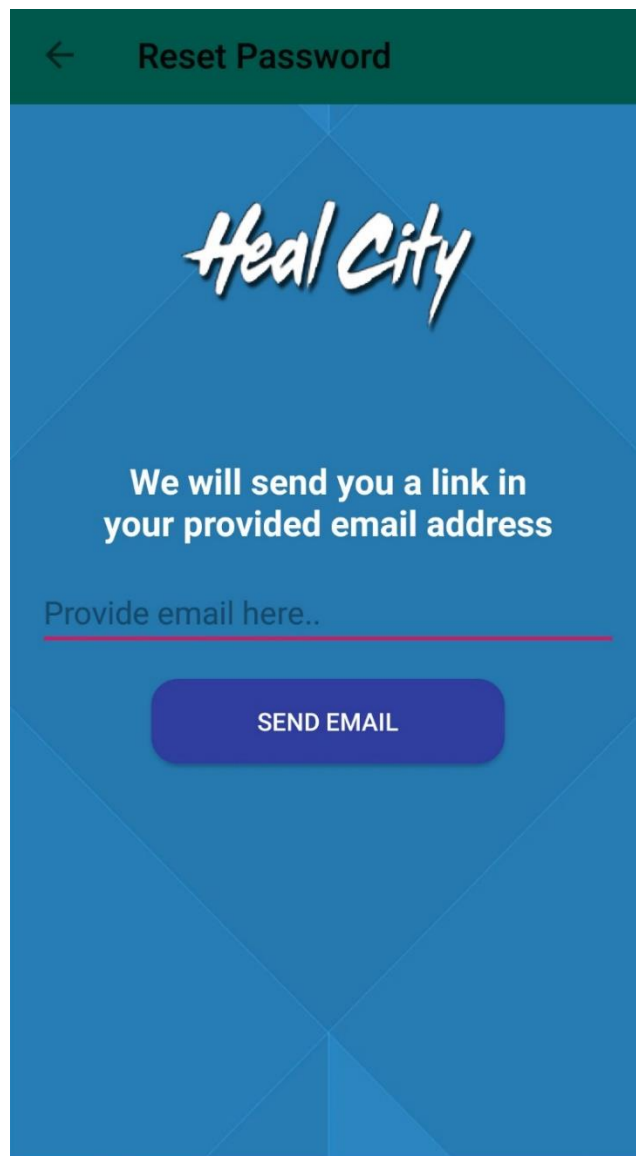
The image shows a mobile application screen for a 'Reset Password' process. At the top, there is a dark green header bar with a white back arrow icon on the left and the text 'Reset Password' in white. Below the header, the background is a solid blue color with a faint, large, light blue geometric pattern. In the center, the 'Heal City' logo is displayed in a white, stylized, handwritten font. Below the logo, the text 'We will send you a link in your provided email address' is written in white. Underneath this text is a white text input field with the placeholder text 'Provide email here..'. A red underline is visible below the input field. Below the input field is a dark blue, rounded rectangular button with the text 'SEND EMAIL' in white capital letters.

Figure 6. 4: Recover Password

6.1.5 Login with Google

User can create their account by using their Email account.
Login with Google page given in Figure 6.5

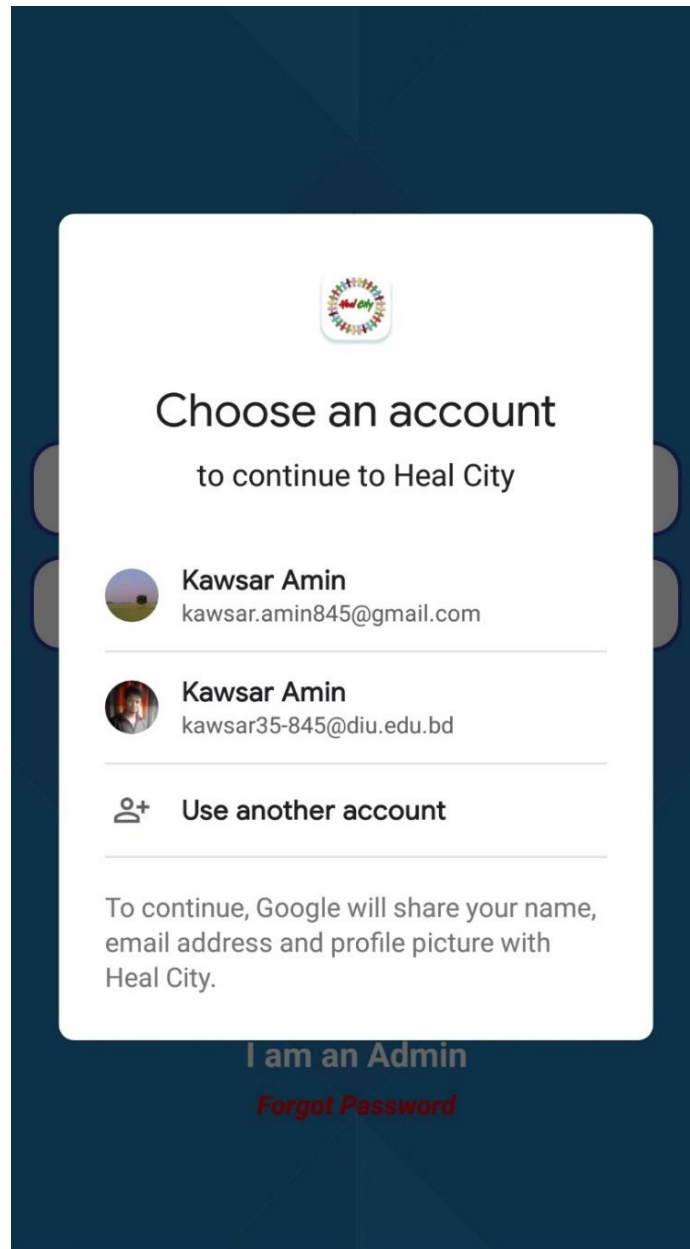


Figure 6. 5: Login with Google

6.1.6 Create a new post

User can create new post by click on new post icon or select option from navigation drawer. User can upload problem image with description, problem location and their phone number. Then click on “Update Post” button.

Create a new post page given in Figure 6.6

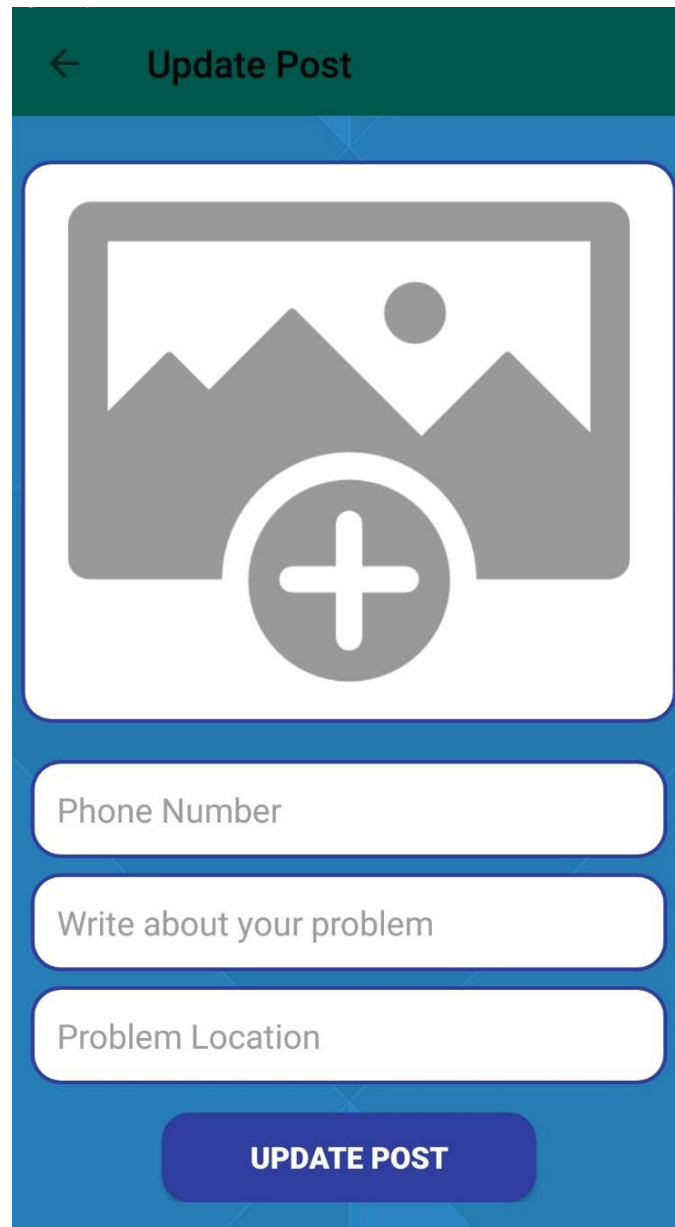
The image shows a mobile application interface for updating a post. At the top, there is a dark green header bar with a white back arrow on the left and the text 'Update Post' in white. Below the header is a large white square area containing a gray icon of a landscape with mountains and a sun, with a white plus sign in a gray circle overlaid on the bottom center. Underneath this image area are three white rounded rectangular input fields stacked vertically. The first field is labeled 'Phone Number', the second 'Write about your problem', and the third 'Problem Location'. At the bottom of the screen is a dark blue rounded rectangular button with the text 'UPDATE POST' in white capital letters.

Figure 6. 6: Create a new post

6.1.7 User Timeline

In home page user can see all the post given by the other users.
User Timeline page given in Figure 6.7

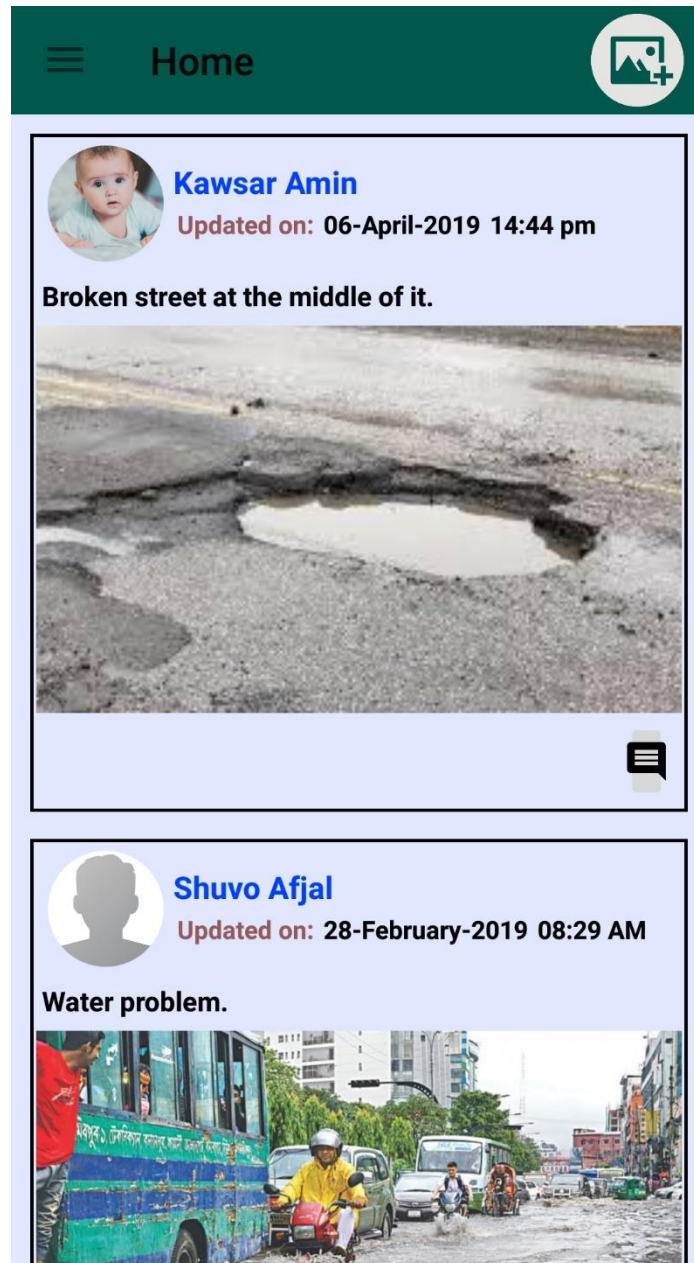


Figure 6. 7: User Timeline

6.1.8 Edit or Delete Post

User can update or delete their own post but not the others. If user click on any post from their timeline they can see the picture and its description. User can update their post by click on “Edit Post” and Delete on “Delete Post” button.

Edit or Delete Post page given in Figure 6.8

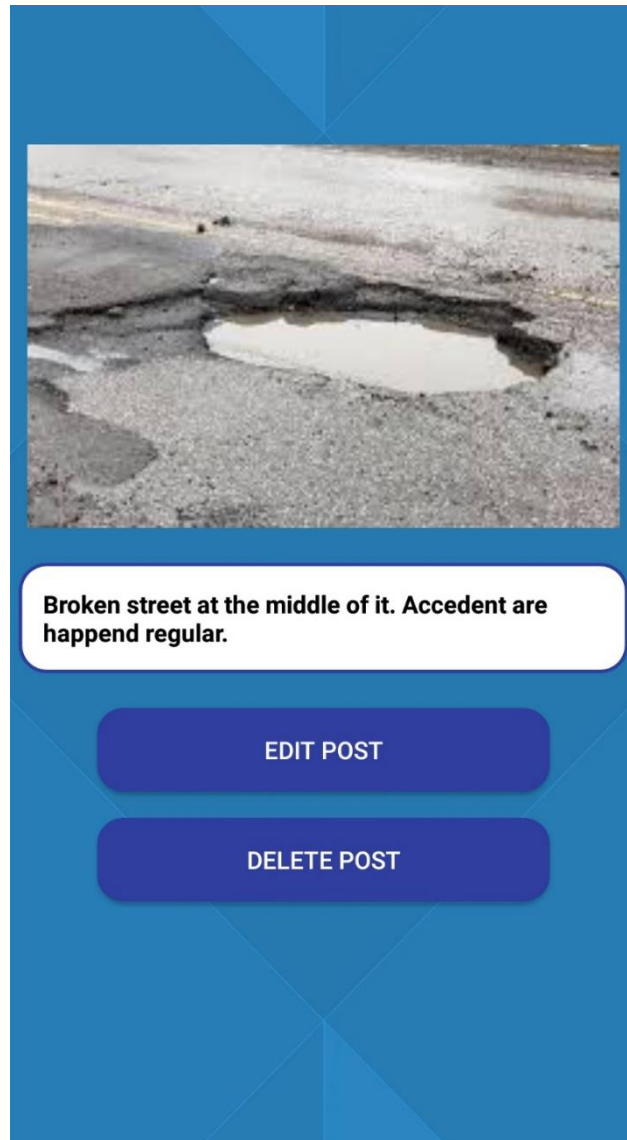


Figure 6. 8: Edit or Delete Post

6.1.9 User Profile Settings

User can update their information by going to the account settings option. Here they can update all the necessary information. After successfully update their information they will get conformation message. User can check their information by going to their profile.

User Profile Settings page given in Figure 6.9

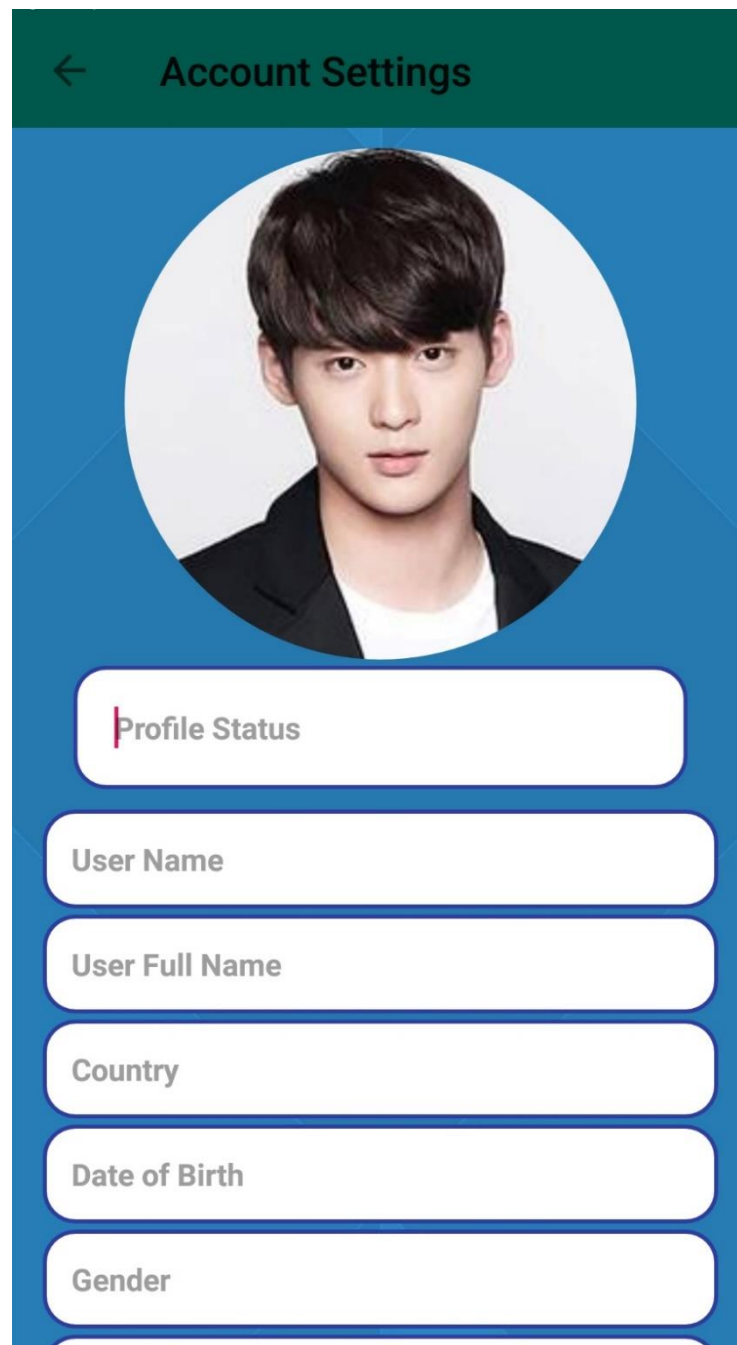
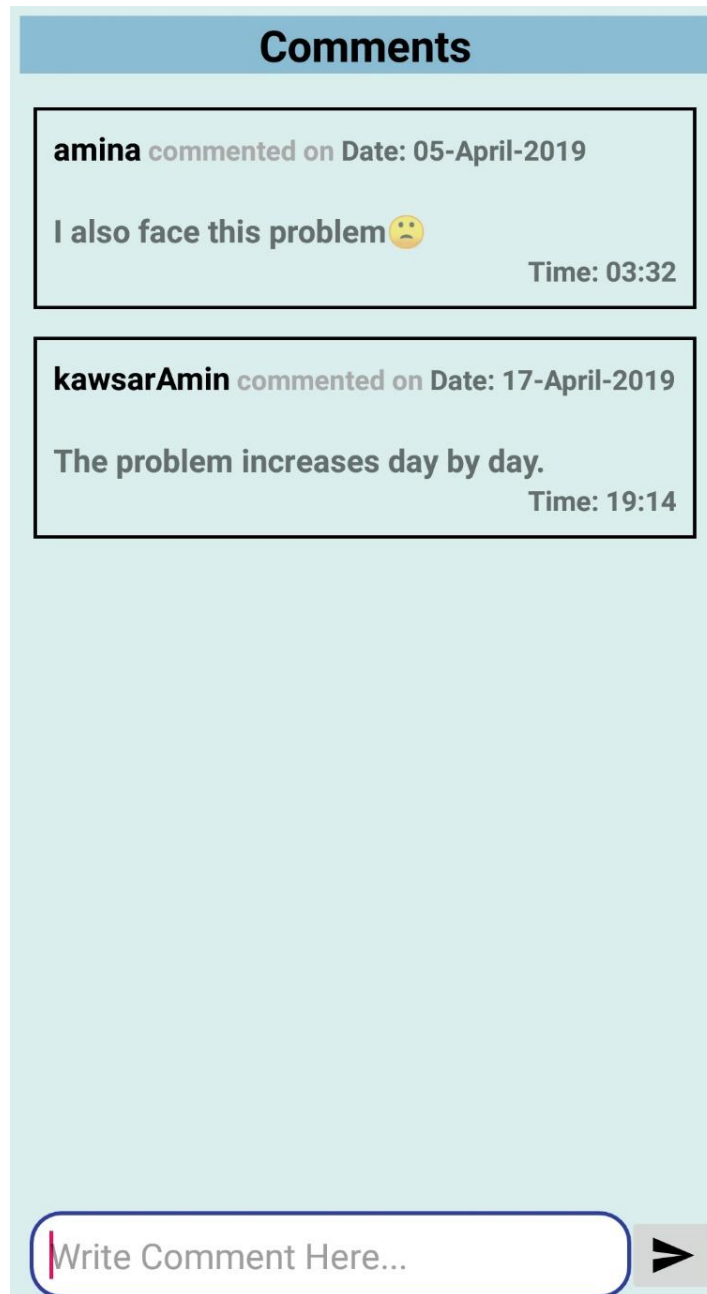
The image shows a mobile application interface for 'Account Settings'. At the top, there is a dark green header bar with a white back arrow icon on the left and the text 'Account Settings' in white. Below the header, the background is a solid blue color. In the center, there is a large circular profile picture of a young man with dark hair, wearing a black jacket over a white shirt. Below the profile picture, there are six white, rounded rectangular input fields stacked vertically. Each field has a label in a light gray font: 'Profile Status', 'User Name', 'User Full Name', 'Country', 'Date of Birth', and 'Gender'. The first field, 'Profile Status', has a small red vertical line at the beginning of the text.

Figure 6. 9: User Profile Settings

6.1.10 Comment on Post

In every post there are a comment icon. User can comment on any post by clicking onto the icon. User can able to comment to the others post as well as their own post. Comment on Post page given in Figure 6.10



Comments

amina commented on Date: 05-April-2019
I also face this problem 😞
Time: 03:32

kawsarAmin commented on Date: 17-April-2019
The problem increases day by day.
Time: 19:14

Write Comment Here... ➤

Figure 6. 10: Comment in Post

6.1.11 Admin Login

Admin create on to the database directly. So there are no registration option for the admins. They can login to their account by giving their phone and password which are already stored in to the database.

Admin login page given in Figure 6.11

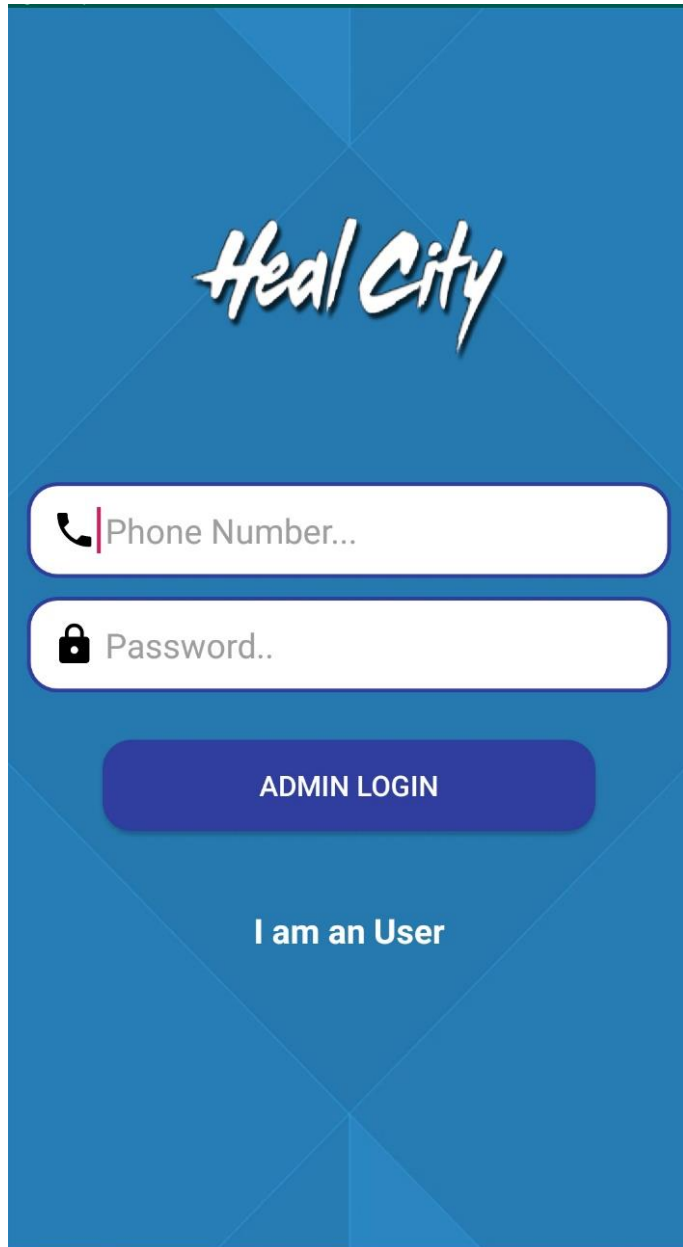
The image shows a mobile application login screen for 'Heal City'. The background is a solid blue color with a subtle geometric pattern of triangles. At the top center, the text 'Heal City' is written in a white, stylized, cursive font. Below the logo, there are two white input fields with rounded corners and a thin purple border. The first field contains a black telephone handset icon followed by the placeholder text 'Phone Number...'. The second field contains a black padlock icon followed by the placeholder text 'Password..'. Below these fields is a large, rounded rectangular button with a solid dark blue background and the text 'ADMIN LOGIN' in white, uppercase letters. At the bottom center of the screen, the text 'I am an User' is displayed in a white, sans-serif font.

Figure 6. 11: Admin login

6.1.12 Admin Activity

After login to admin account admin can see all the post which are posted by the users. Admin can see all the detail information here. Admin also can approve any post for donation. In users timeline that post are showing donation button which one are approved by the admins.

Admin Activity page given in Figure 6.12

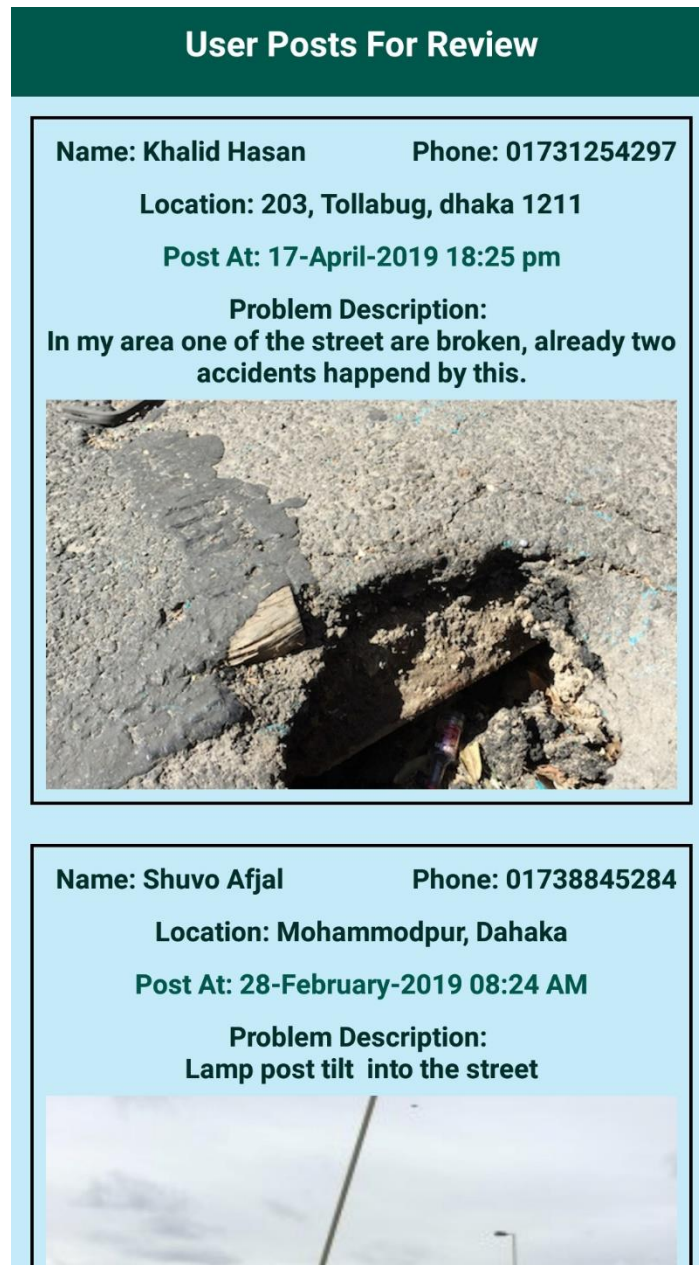


Figure 6. 12: Admin Activity

CHAPTER 7: PROJECT SUMMERY

7.1 Limitations

- System cannot manage large amount of data.
- System is not full error free.
- System is not fully bug free.
- System has no large amount of data.

7.2 Obstacles & Achievements

Obstacles & Achievements are given in table 7.1

Table 7. 1: Create post

Obstacles	Achievements
Form validation	Every field is validated.
Reduce response time.	Response time is within 2 seconds.
Showing update post on the top	Update posts are on top.
Matching user data with database when login.	User data matched when login.
Update user information	User can update their information any time after signup.
Password Recovery	Password can recover by providing an email address.

7.3 Conclusion

Considering such huge numbers of troubles all through the whole advancement process the android application and the system is prepared to be utilized by the user with high precision and proficiency. The system will be exceptionally simple to utilize and keep up as the documentation and client manual is accessible for the client.

The android application and the framework is better, more successful and quicker than the current all other existing system. The system is rich with data and accessible to everybody. The system will support all sort of android version.

This system is not developed for small purpose it has a long plan. Not simply in a couple of urban areas we need to make our framework accessible for each other little or huge urban communities in our nation. We need to help individuals by making open doors to contribute to their society.

7.4 Future Scope

Heal City will be a great medium for the general society people and the society policymaker to communicate with each other for making a better society. Corruption will reduce if people use the system for a good purpose.

Actuals problem will be solved super first so the cost will be reduced also. Our purpose is to connect with every user through our service. In the future, we want to take location from the map at the actual problem place. Then it will be easier to find the actual location for users and the authorities.

References

<https://acknowledgementsample.com/sample-acknowledgement-of-project-report/>
https://en.wikipedia.org/wiki/Sequence_diagram
https://en.wikipedia.org/wiki/Use_case_diagram
<https://www.ashtexsolutions.com/agile-methodology-company-approach/>
<https://www.geeksforgeeks.org/software-engineering-agile-development-models/>

APPENDIX

A

Acknowledgement
Activity Diagram
Approval

C

Conclusion
Class Diagram
Context

D

Data Flow Diagram
Declaration
Development Tools & Technology

E

Entity Relationship Diagram
Executive Summary

F

Future Scope
Functional Requirements

G

Goals of the Project

H

Hardware and Software Specification

I

Implementation
Introduction

J

Non-Functional requirements

P

Project Overview
Proposed System Model
Project Schedule

R

Requirements

S

Software Requirement Specification
Software Development Plan
Sequence Diagram
Stakeholders

T

Testing
Test case
Tools
Testing Environment

U

Use case diagrams
Use case description
User manual