

**“DONATE” - ONLINE ASSISTANCE SYSTEM FOR PEOPLE IN
NEED**

BY

Md. Subbir Chowdhury Topu

ID: 152-15-5654

Noor Mohammad Akash

ID: 152-15-5685

Ayesha Akter

ID: 152-15-5648

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

Supervised By

Md. Riazur Rahman

Senior Lecturer

Department of CSE

Daffodil International University



DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

MAY 2019

APPROVAL

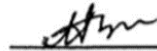
This Project titled “Donate, Online Assistance System For People In Need”, submitted by Md. Subbir Chowdhury Topu, ID: 152-15-5654, Noor Mohammad Akash, ID: 152-15-5685, Ayesha Akter, ID: 152-15-5648 to the Department of Computer Science and Engineering, Daffodil International University has been accepted 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 04 May, 2019.

BOARD OF EXAMINERS



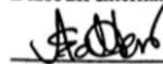
Dr. Syed Akhter Hossain
Professor and Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Chairman



Nazmun Nessa Moon
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Abdus Sattar
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



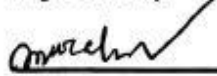
Dr. Mohammad Shorif Uddin
Professor
Department of Computer Science and Engineering
Jahangirnagar University

External Examiner

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **MD. Riazur Rahman, Senior 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.

Supervised by:



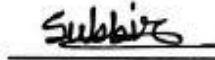
MD. Riazur Rahman
Senior Lecturer
Department of CSE
Daffodil International University

Co-Supervised by:




Md. Sadekur Rahman
Assistant Professor
Department of CSE
Daffodil International University

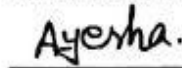
Submitted by:



Md. Subbir Chowdhury Topu
ID: 152-15-5654
Department of CSE
Daffodil International University



Noor Mohammad Akash
ID: 152-15-5685
Department of CSE
Daffodil International University



Ayesha Akter
ID: 152-15-5648
Department of CSE
Daffodil International University

ACKNOWLEDGEMENT

First we express our heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete the final year project/internship successfully.

We really grateful and wish our profound our indebtedness to **Mr. Riazur Rahman, Senior Lecturer**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of “*Android*” to carry out this project. His endless patience scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior draft and correcting them at all stage have made it possible to complete this project.

We would like to express our heartiest gratitude to **Syed Akhter Hossain, Head, Department of CSE**, for his kind help to finish our project and also to other faculty member and the staff of CSE department of Daffodil International University.

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

This project is an android application named “Donate: Online assistance system for people in need” which is built to provide financial helps to the peoples who doesn’t have money to take proper medical treatment. There are a huge number of people in our country suffering from various vital diseases and they cannot get proper treatment because of their lacking of money. To help those people we have built this application. By using this application people can post the details about the patient. The details include the medical documents, the details of the disease and the condition of treatment, needed money for treatment, picture of patient and the account information of bank and Bikash also. Now after the user posts new entry about a patient, it doesn’t appear directly in the newsfeed. The admin of the app should approve the posts and only then others can see it on newsfeed. Admin also can remove the post without approving if they find the post fake. People can see the donation amount that how much money is collected and how much is still left. Users can donate using the “Donate Now” option of the application. Users also can view all the posts that he/she have posted. The admin of the application can delete any post after the donation amount is fulfilled. All the data of the application is stored in online firebase database so that the data doesn’t get lost. After the building process was done, we have tested this app in different devices and it worked perfectly fine.

TABLE OF CONTENTS

CONTENTS	PAGE
Board of examiners	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
CHAPTERS	
CHAPTER 1: INTRODUCTION	01-02
1.1 Introduction	01
1.2 Motivation	01
1.3 Objectives	02
1.4 About our app	02
1.5 Expected Outcome	02
CHAPTER 2: BACKGROUND	03-04
2.1 Introduction	03
2.2 Related Work	03
2.3 Comparative Studies	03
2.4 Our Project Work	03
2.5 Scope of the Problems	04
2.6 Challenges	04

CHAPTER 3: REQUIREMENT SPECIFICATIONS **05-09**

3.1 Introduction	05
3.2 Requirement Collection and Analysis	05
3.3 Use Case Model	06
3.4 Business Process Model	07
3.5 Design Requirements	08
3.6 Activity Diagram	09

CHAPTER 4: DESIGN SPECIFICATION

4.1 Front-end Design	10-18
4.2 Back-end Design	10
4.3 UI Design	10
4.3.1 Home Screen	10
4.3.2 Entries	11
4.3.3 Option	12
4.3.4 Insert Data	13
4.3.5 Patient Document	14
4.3.6 User Design Option	15
4.4 Implementation Requirements	16
4.4.1 Android Studio	17
4.4.2 Android SDK	18
4.4.3 Java Implementation Kit	18

CHAPTER 5: IMPLEMENTATION AND TESTING	18
5.1 Usability Test	18
5.2 Result of Usability Test	18
CHAPTER 6: CONCLUSION AND FUTURE SCOPE	19
6.1 Discussion and Conclusion	19
6.2 Limitations	19
6.3 Scope for Future Development	19
APPENDIX	20-23
REFERENCES	23

LIST OF FIGURES

FIGURES	Page
Figure 3.1: Use Case Model	06
Figure 3.2: Business Process Model User	07
Figure 3.3: Business Process Model Admin	07
Figure 3.4: Activity Diagram	09
Figure 4.1: Application Opening	11
Figure 4.2: Home Screen	12
Figure 4.3: Home Option	13
Figure 4.4: Insert Data	14
Figure 4.5: Patient Document	15
Figure 4.6: User Donation Option	16
Figure A1: Plagiarism Report	23

CHAPTER 1

INTRODUCTION

1.1 Introduction

Bangladesh is an over populated country. Most of the people are student and students are playing a major role in country's development. The future of any country depends on its students. They are the future leader. But in social media, newspapers we often see that some of the talented students are suffering various types of disease and they had not enough money for treatment. Not only students but also common people are suffering for the same problem. Some people want to help these suffering people but they cannot get enough opportunity to help them. And if someone donates money s/he has no surety that victim get money or not. So, now we are going to open an online donating system where you can easily give money to the victims. There has no third- party system. You can give money by your mobile phone.

1.2 Motivation

A report in a daily newspaper in Bangladesh says that “4% of people goes under poverty line for the high expense of medical treatment” [10]. Most of the people in our country are poor or lives a middle-class life. While they become effected by vital disease, all the money they spend on the treatment and become helpless. They often seek help of others and it becomes really tough to arrange the money. Hence the suffering goes high. Thinking about this problem we started to find out a solution to make the suffering less by arranging a platform where they can get financial help. Nowadays a lot of peoples are using internet and smart phones. So, we decided to make and android application where people can seek for financial help to get the proper treatment. We started to study the peoples for the demand of them that will help us to build the features for the application. After collecting all the study, we started to build the application to meet the goal of fulfilling all the features.

1.3 Objectives

- Making a user-friendly application with easy UI.
- People can search for financial help by themselves.
- Frauds can't get money from the people.
- Only authentic patients will get help.
- The money transaction happens directly "donor to patients".
- Making sure the patients get fastest help.
- To make sure all the peoples get their desired help.

1.4 About Our App

This is basically an android app. Using this app people can donate money. Those who need money for treatment. People donate amount by this android application. We tried our level best to improve this and this application is beneficial for all types of people who are suffering from vital diseases and doesn't have enough money to take proper treatment. This application can run on low end smartphones. This application is user friendly and that's the main point.

1.5 Expected Outcome

At the time we started to build the application we had one thing in our mind that no matter what we need to build the application in a way that our targeted peoples doesn't get upset. People will be able to get the financial help to take the proper treatment. The frauds can't come between the money transactions and hence the donation system is going to be secured. User must be able to post the disease details with the necessary documents so that the peoples who wants to donate the money can check if it is fake or real. The admin panel should be able to check the posts and delete the posts if necessary. The data should be in an online database so that the risk of losing data doesn't appear.

CHAPTER 2

Background

2.1 Introduction

First of all, if anyone writes code what he or she have to do? So, if anyone wants do anything first, he or she has to wish to do this that means passion. So, wishing power is the most powerful weapon below wishing program. Today's programming is the fundamental weapon in technology. Every nation is going ahead by technology. So, this is the main part in any country. And android apps are the most popular in today's world.

2.2 Related Work

When we decided to build this app as our final year project, we have looked through the internet and found no such app that is like ours. Then we started to discuss this idea with our friends and with our relatives to know much better about the problem. The reason for this discussion was to know the problems in real, cause almost in all family this kind of incidents happens. If we can know the problems only then we can build a proper user-friendly application. As new features come, we had to learn those android features to make those happen. We took help from the android development website to learn those feature [7]. Our concept of this app is really different. Our app is totally unique. We tried our best to improve something which really looks different.

2.3 Comparative Studies

We have visited many sources and websites to compare our work with other apps or websites. But there is no similar app like ours. There are some other apps in internet which have one or two common features like ours but our app works on completely different purpose. By collection information from the internet and by collecting the demands and problems of peoples we started to build the application. The experience of peoples facing the financial problem in case of treatment helped us much more on building this application. We are sure enough to say that our app is unique and very different.

2.4 Our Project Work

We wanted to build an android application. This application helps the people who really need money for alive. We wanted our application as a complete package. In our project we tried to focus on human need. It's an android application that's why we have used Java and XML programming language. We have used online firebase database for storing purpose.

2.5 Scope of the Problem

We have tried our best to make sure that all the features works fine. But there is a problem in the money transaction system and that is for “we don't have the gateways to make the transaction in real. So, have designed all the required things to make the transaction happen just the gateways are missing. Our application is just only for mobile device not for others. We hope that the user interface is enough user friendly so the users will enjoy using it. It is easy to handle and helpful for the situation.

2.6 Challenges

When we started to build this application by gathering all the features, we have faced so many challenges. Some of these are- the database works, inserting and retrieving data form firebase database, using recycler view to show the data in a card view, inserting images form the gallery, inserting multiple images from the gallery, creating the admin panel to approve or remove the posts. But the happy thing is that now the app is built. We have completed making all the features and those are working perfectly. And we are trying to give 100% valid information to the users. Wrong information is harmful to people.

CHAPTER 3

Requirement specification

3.1 Introduction

Studying the requirements before making an android application or any kind of software system is must. We did few research in the app market and we asked peoples about their requirements in this kind of android app. This chapter contains those requirements related works.

3.2 Requirement Collection and Analysis

Seeking for financial help for critical patients is a very common case. There is not enough platform to seek help online where nowadays most of the people can be found in internet. As we studied few cases we found so many things that is creating the obstacle to collect money for patients. So we have look forward to make the platform which will contain all the necessary requirements. The vital requirements that we found is:

- Creating an android based platform.
- People can seek for help.
- Patients can post with the disease details.
- There should be a donation system where people can donate to the patient.
- Adding necessary documents like prescription, medical reports with images.
- There should not be any false post in the timeline.
- Admins should make sure the authentication of every post.
- Admin should be able to delete or approve the posts.
- There should be multiple payment method.

After gathering all the requirements together we started to discuss about how we can fulfil all the goals. We started to learn new things to develop the application. It took a lot of time. Analysing the goals, we started to build the system.

3.3 Use Case Modelling

Use case modelling is a must to understand the relations between user and the admins with the applications working process. How the user and admin will interact with this app. In this application user and admin must login to continue the process of the app [1].

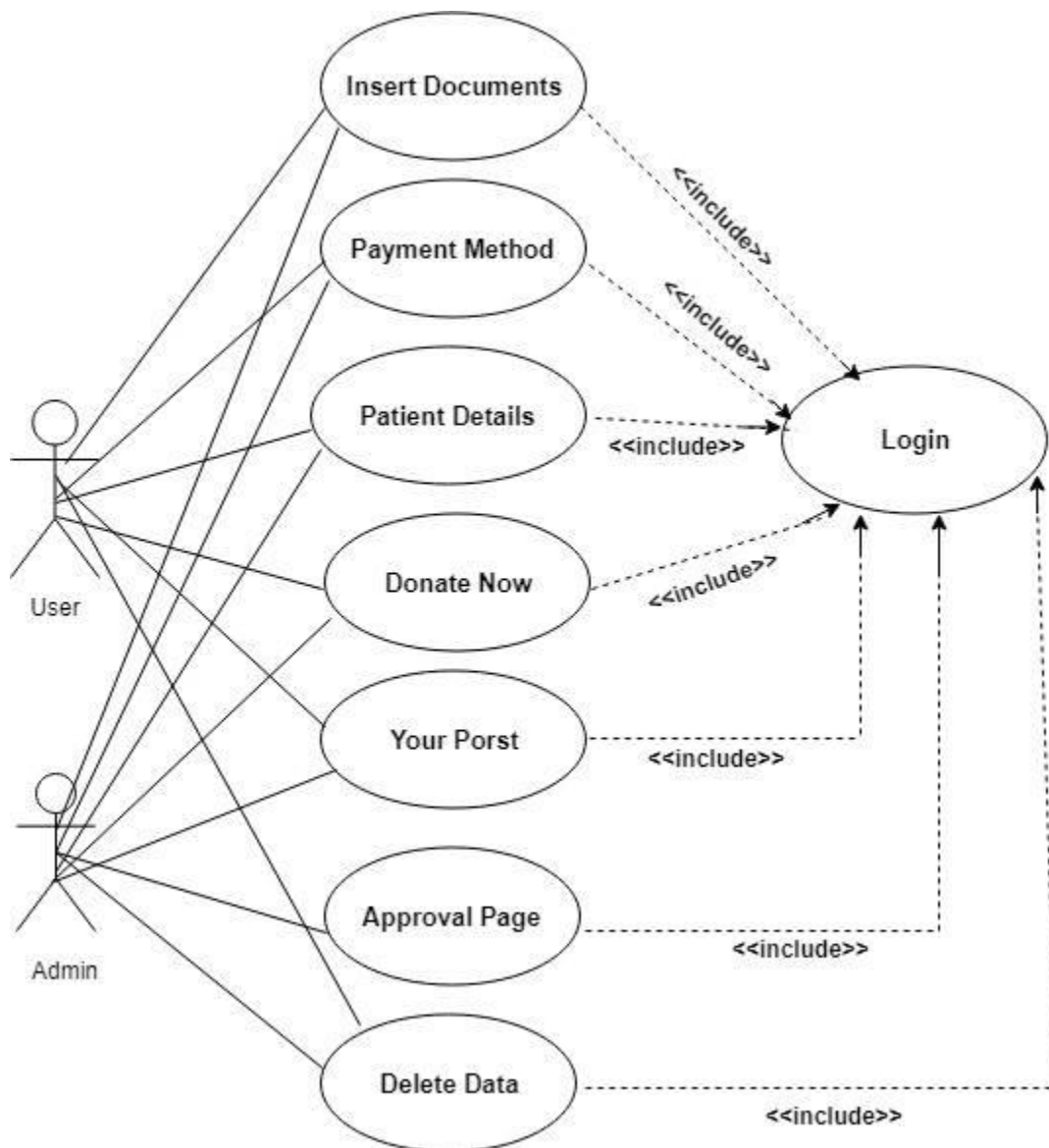


Fig 3.1: Use Case Model

3.4 Business Process Modelling

Business process modelling (or) process modelling, is the analytical representation or put simply an illustration of an organization's business processes. Modelling processes is a critical component for effective business process management. Process modelling software gives an analytical representation of 'as-is' processes in an organization and contrasts it with 'to-be' processes for making them more efficient [2].

Figure 3.1 Shows the overall Business Process model of our proposed system:

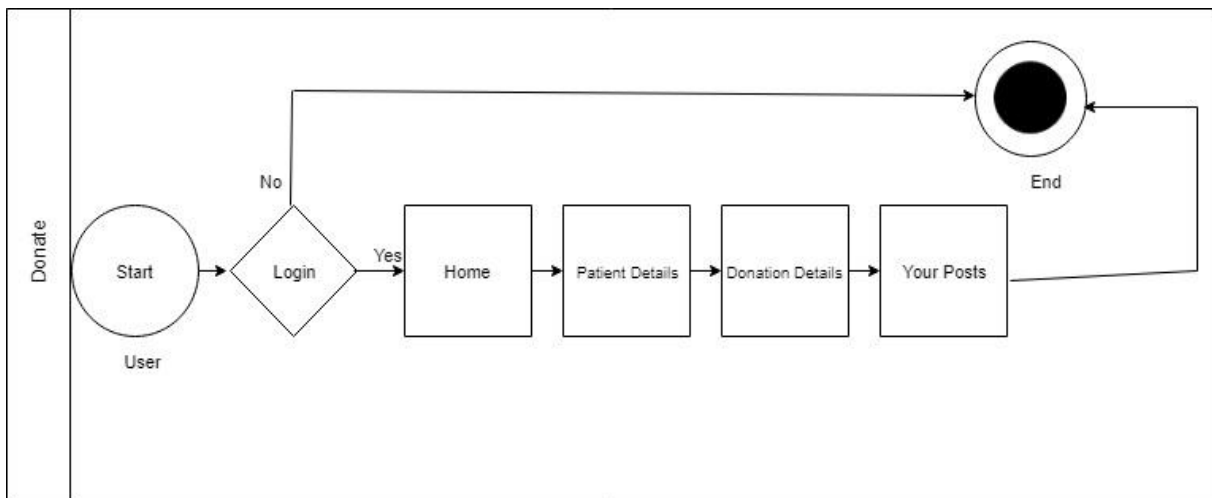


Figure 3.2: Business Process Model User

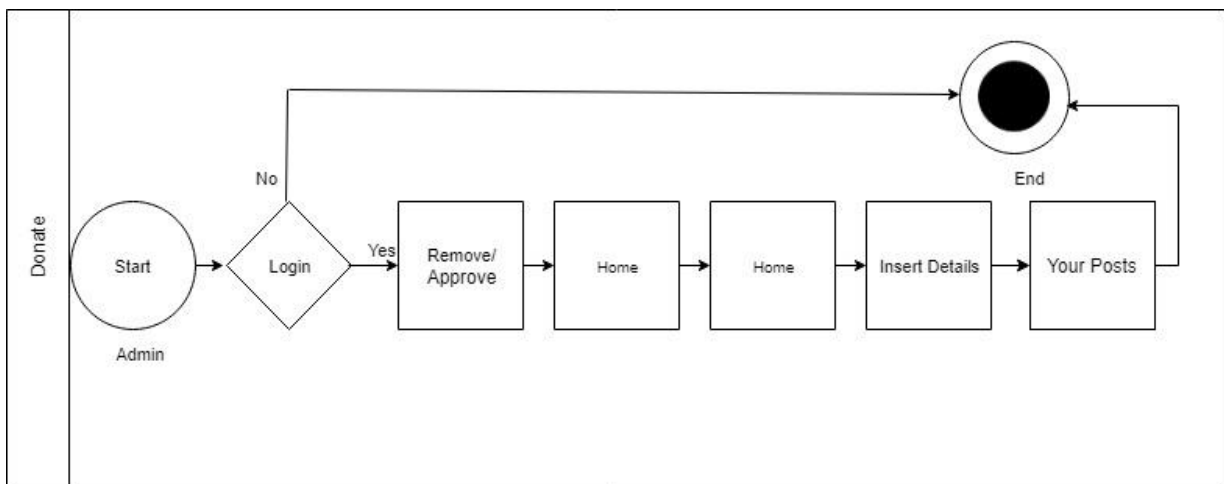


Figure 3.3: Business Process Model Admin

3.5 Design Requirements

After the functioning requirements of the system then comes the design requirements which should be easy to use. The finalize features from the data is kept to design the app goals.

Design requirements for User:

1. Splash Screen
2. Timeline
3. Details of Posts
4. Donation Option
5. Donation Method
6. Users all post list
7. Admin Approval
8. Logout

3.6 Activity Diagram

The figure bellow shows the activity diagram of the application.

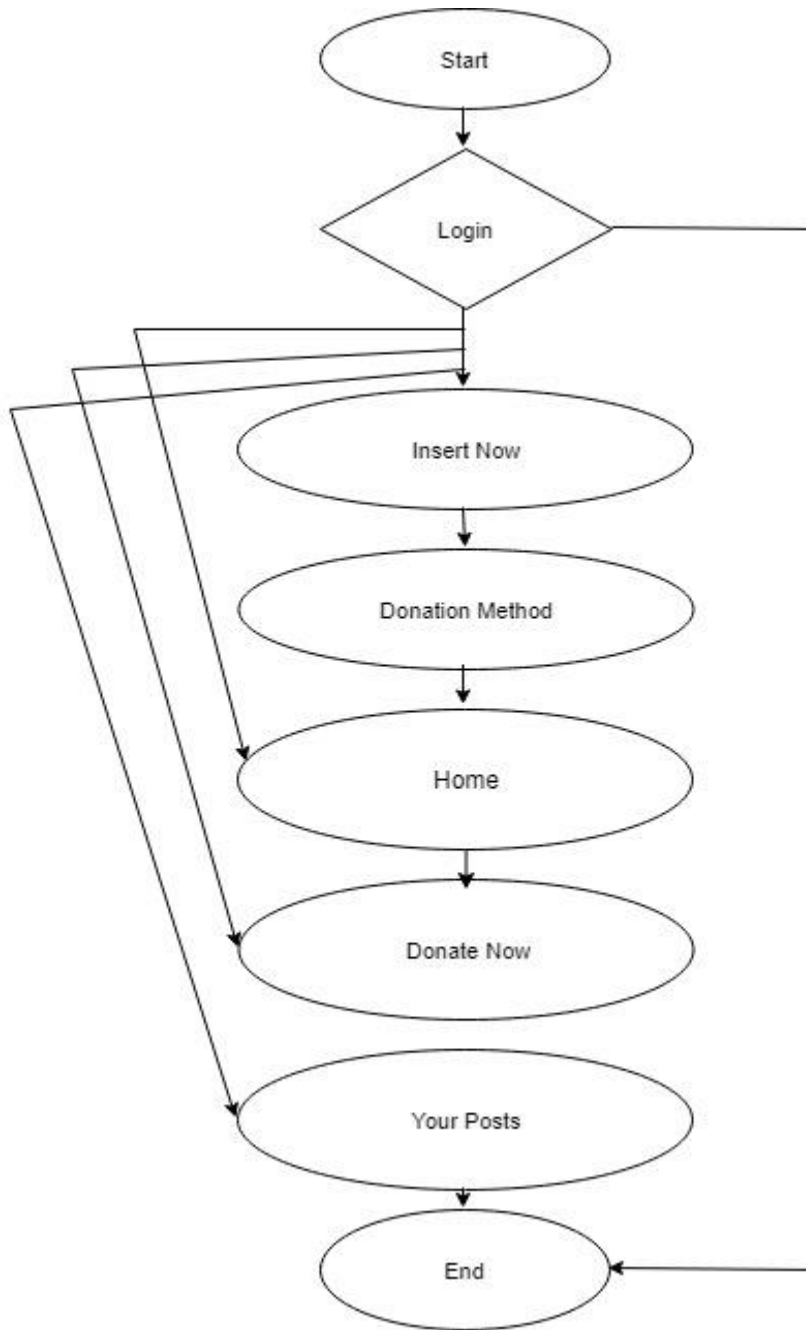


Figure 3.4: Activity Diagram

CHAPTER 4

Design specification

4.1 Front-end Design

The front-end is everything involved with what the user sees, including design and some languages. The front-end design is the interface users see when he/she opens the app or website. That means to keep the users interested in the application and website, the most important part of a project is front-end designing. Usually most of the users expect a simple user interface or graphical user interface from the developer. If the front-end design is so complex, the application fails to attract of the user. System architecture shows the structure and behavior of a system, how the system works and how it interacts with users [3].

4.2 Back-end Design

The back-end is also called the server side design. It controls the behavior of the site upon an action is taken. The back-end is the core portion of a website or application from where everything is being controlled whereas the front-end is the visual representation of the back-end. Back-end is the most important part. So the security, structure, content management of it is very much important. The back-end has basically three parts such as server, database and application. In the back-end of this application we have used Java, SQLite and XML for the user interface and interaction with front-end to database [4].

4.3 UI Design

User Interface (UI) that allows user to interact with the mobile devices or other electronic devices. UI design usually refers to the design of Graphical User Interface (GUI), but can also refer to others, such as natural and voice user interfaces [5].

4.3.1 Home Screen

The picture bellow shows the welcome screen of the application.

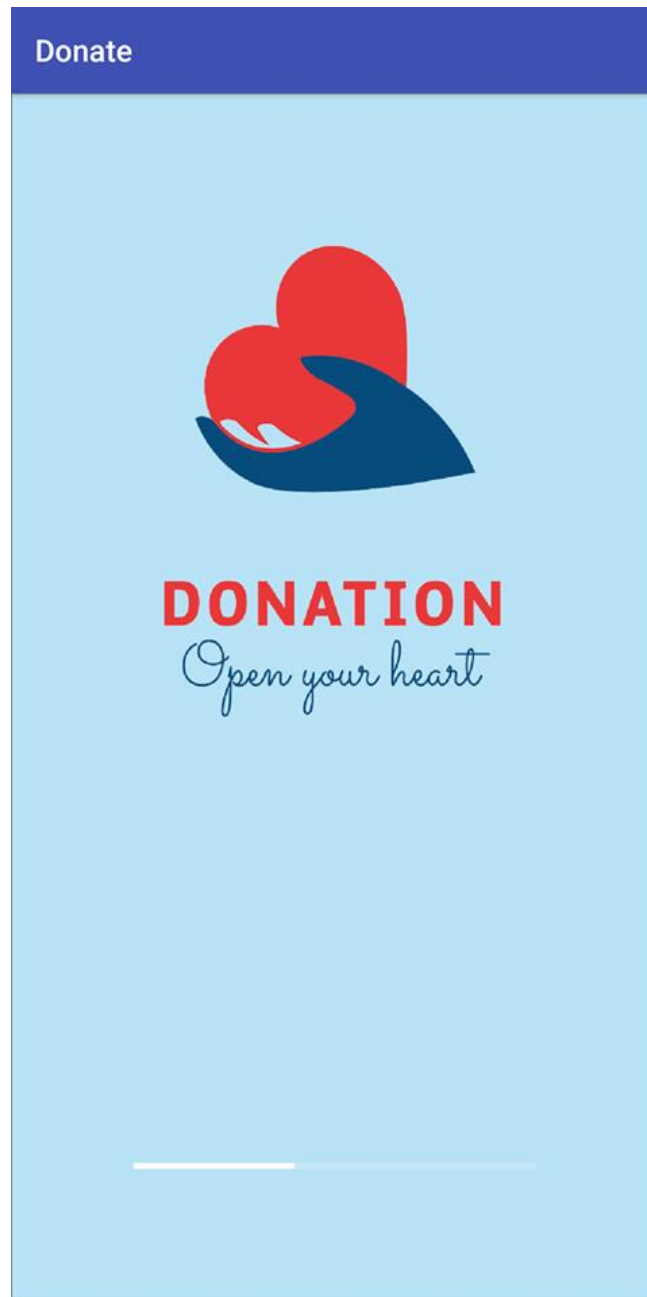


Figure 4.1: Application Opening

4.3.2 Entries

The following picture bellow shows the home screen of the application.

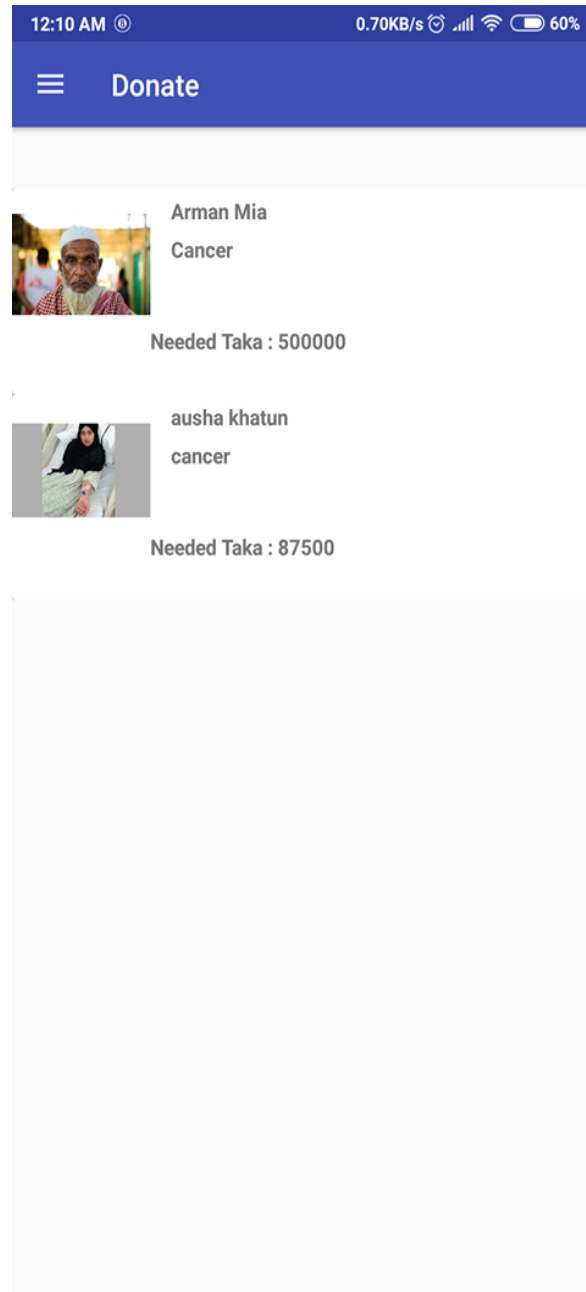


Figure 4.2: Home Screen

4.3.3 Option

The picture bellow shows the drawer layout where the all the features included and in the upper section the user info is shown.

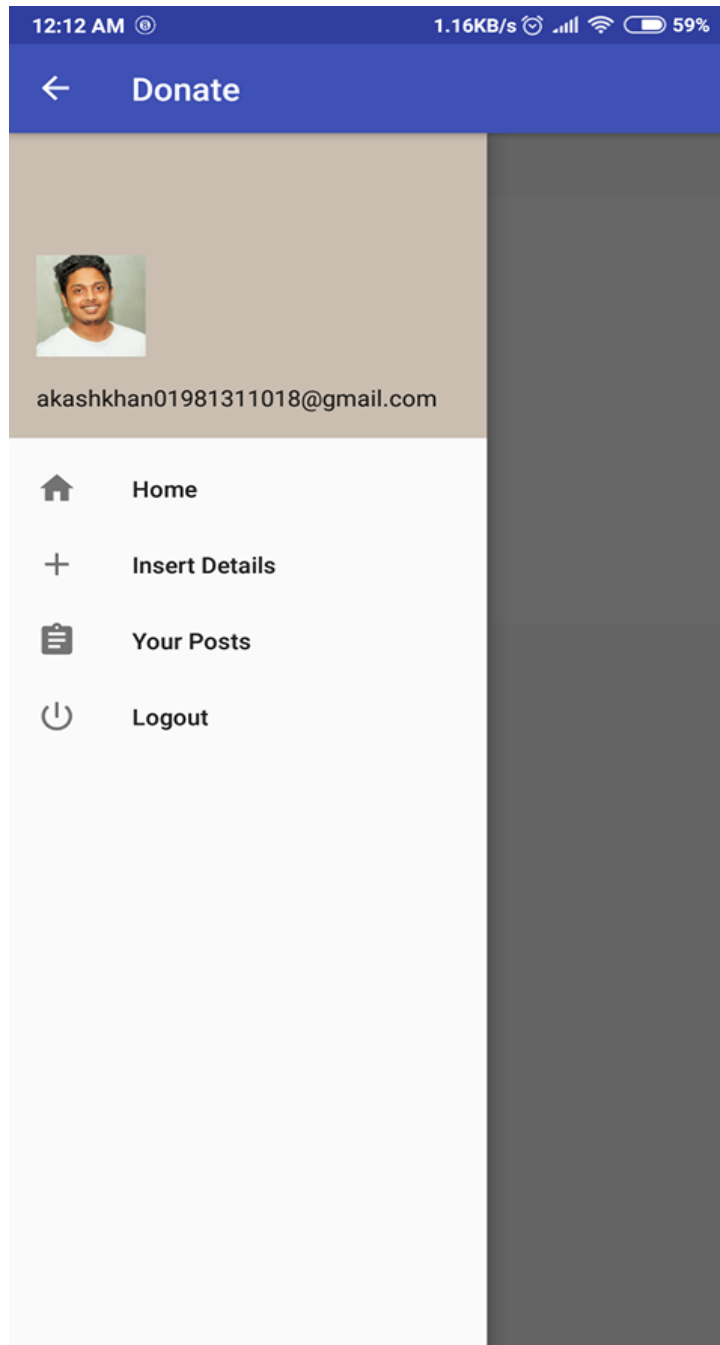


Figure 4.3: Home Option

4.3.4 Insert Data

The picture bellow shows the inserting information page.

The screenshot shows a mobile application interface titled "Donate". At the top, there is a blue header with a hamburger menu icon and the text "Donate". Below the header, the main content area is white and contains several input fields and buttons. The fields are: "Victims Photo" (with a grey button), "victims name..." (with a red underline), "Disease", "Contact No", and "Needed amount". Below these fields, there is a grey button labeled "Insert Necessary Documents" and a grey button labeled "SAVE". At the bottom of the form, there is a grey button labeled "Donation Methods". The status bar at the top of the phone shows the time as 12:13 AM, a data speed of 2.60KB/s, and a battery level of 59%.

Figure 4.4: Insert Data

4.3.5 Patient Document

The picture bellow shows the details of a patient regarding the post [6].



Figure 4.5: Patient Document

4.3.7 User Donation Option

The picture bellow shows the donation options of the application.

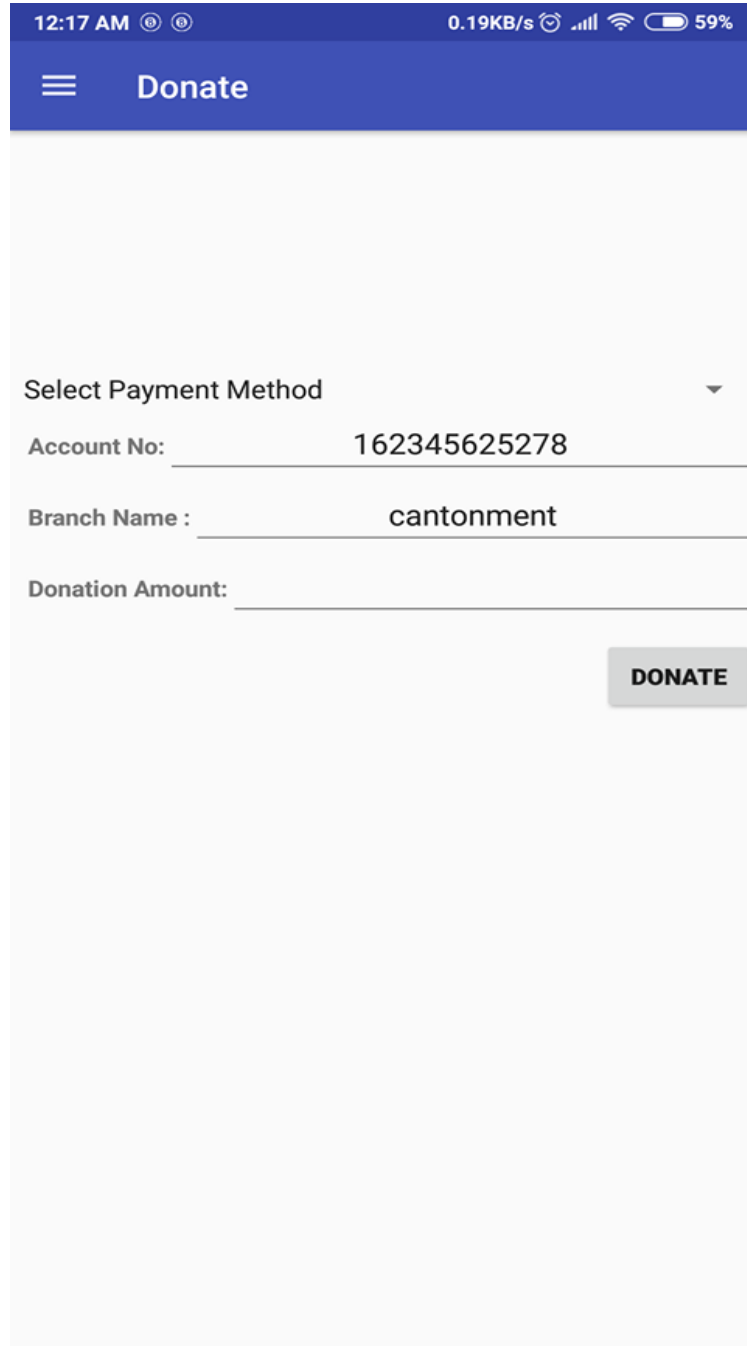


Figure 4.6: User Donation Option

4.4 Implementation Requirement

To build our application, we use different types of implementation tools, attributes and components. In this implementation requirement area, we discuss all those tools, attributes and components we used to develop this whole project.

The followings things are required to implement this application.

1. ACCESS_NETWORK_STATE
2. Internet
3. API

This application is a dynamic application. That's why internet is required to syncing data from the database and server.

4.4.1 Android Studio

Android Studio is the IDE (Integrated Development Environment) for android operating system [7]. It designed specifically for android application development. Using android studio, we developed our application.

4.4.2 Android SDK

Android SDK provides the API libraries and developer tools necessary to build, test, and debug android applications [8].

To develop Android application, Android SDK is the essential tool. This SDK is very comprehensive tool that contains not only the library for development, but also includes the simulator to test the application.

4.4.3 Java Development Kit (JDK)

JDK is an implementation of either one of the Java SE, Java EE or Java ME platforms [9].

CHAPTER 5

Implementation and testing

5.1 Usability Test

In usability testing basically, we as testers tests the ease with which the user interfaces can be used. We ran a survey among 30 users, aged between 18-25. Few questions were included in this survey which had parameters to ensure the success of this survey. The pattern of the survey form with questions is given in the Appendix.

5.2 Result of Usability Test

So, at the end we can carry out the results as the benefits of usability testing to the end user or the leaner:

- Better quality Application.
- Innovative idea for helping people.
- Application is easier to use.
- Application is more readily accepted by users.
- Shortens the information for new users.
- Better UI.

CHAPTER 6

Conclusion and future scopes

6.1 Discussion and Conclusion

From the real-life experience from our proposed system now we are very confident that our goals are finally completed. There were several difficulties during making the project. But we never stopped rather we have chosen to learn those things and now we made it right. In the timeline user can see all the posts about help and can see the details of the patient. Also, user can see the progress of the donation amount. Whenever someone donates, the app calculates the money and subtract it from needed money. So here user can see the money needed and the money already collected. In “Your Posts” segment user can see all of the posts that he/she posted earlier. User should wait for the admin approval to get the post in timeline. This process is added to confirm the authentication if the news is false or true. Admin also can delete the posts if he/she notice any false documents added by the user. All the features are working perfectly. The user experience is also satisfactory. We hope that all the poor patients who need financial help for treatment and for all those people who wants to help other they both have now a platform where they can be satisfied.

6.2 Limitations

The limitation of the app is the donation method where someone should collect the user donation method and he/she should donate physically from bank or from Bkash. The reason is it wasn't possible for us to manage gateways from banks and bkash. In future we will definitely cover this feature while we get enough budget for the project. Phone authentication is not working.

6.3 Scope for Future Development

It is not possible to cover all the feature and make it a perfect project because there is always a chance to do things better. We hope that in future this app can be helping hand to all the peoples who are in need of money for their treatment and also for other purposes.

- Adding Bank and Bkash gateways to complete the donation inside the app.
- Authentication and sign up process with Facebook and Phone Number.

APPENDIX

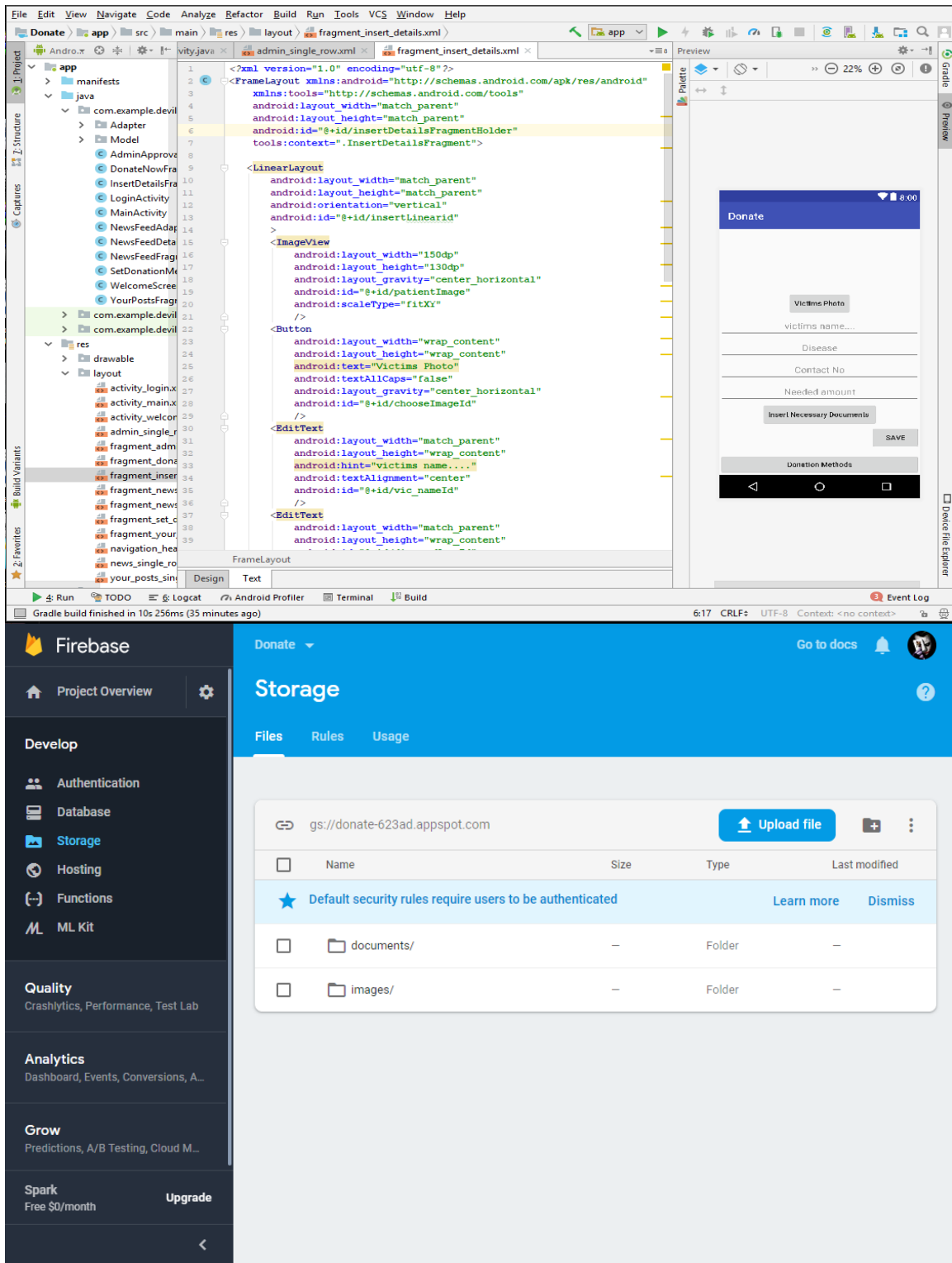


Fig 7.1: Backend and storage

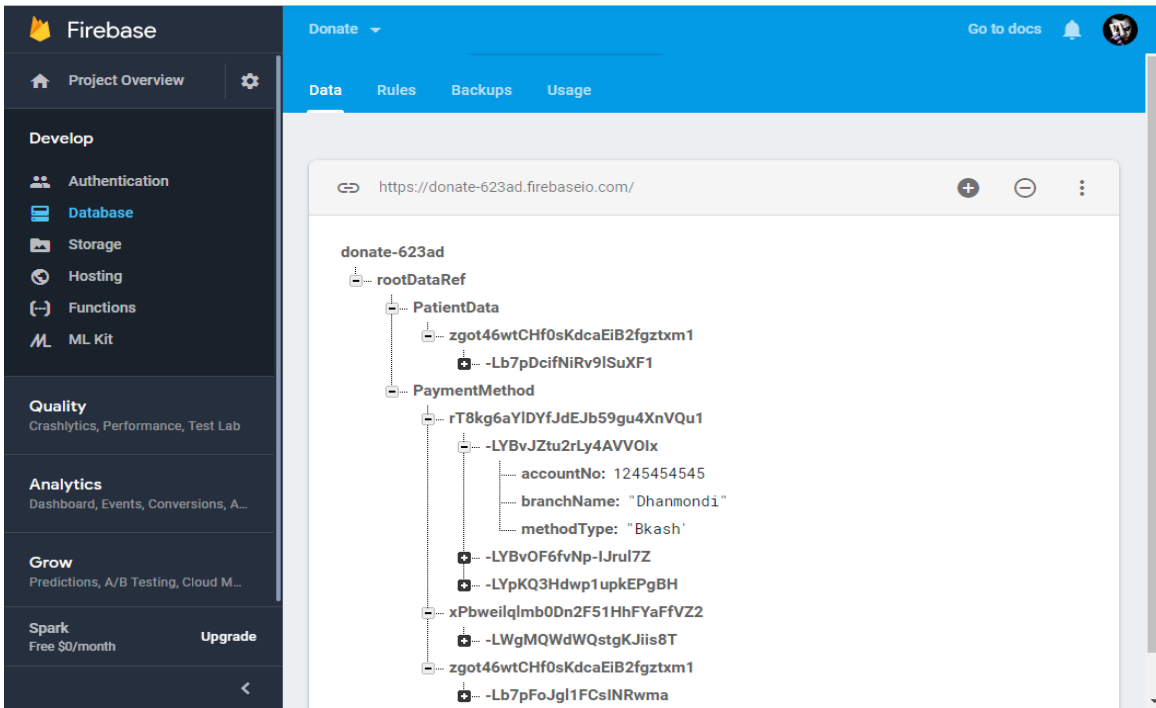
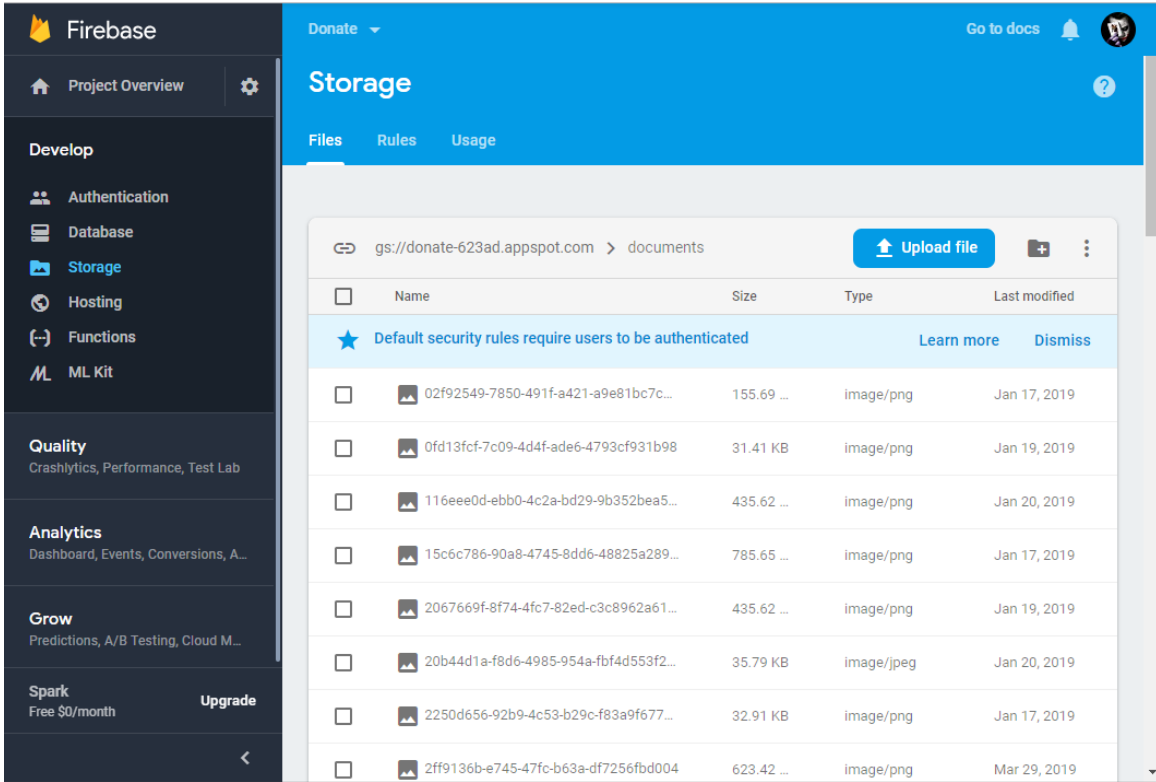


Fig 7.2: Firebase Database

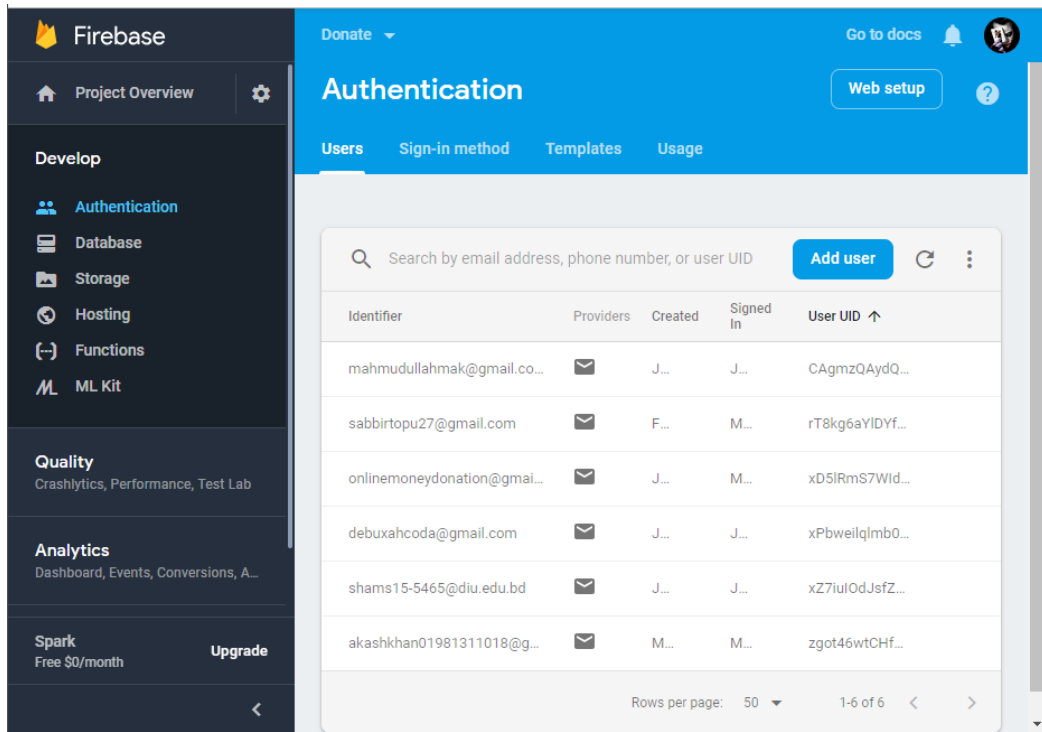


Fig 7.3: Firebase Database

REFERENCES

- [1] utm.mx/~caff/doc/OpenUPWeb/openup/guidances/concepts/use_case_model_CD178AF9.html, last accessed on 25-03-2019 at 9:00pm.
- [2] kissflow.com/bpm/business-process-modeling/, last accessed on 25-03-2019 at 9:30pm.
- [3] blog.prototypr.io/what-is-frontend-design-is-that-even-a-thing-3bafbf6c716e, last accessed on 25-03- 2019 at 9:40pm.
- [4] [thinkapps.com/blog/development/basics-back-end development](http://thinkapps.com/blog/development/basics-back-end-development), last accessed on 25-03-2019 at 9:50pm.
- [5] [interaction-design.org/literature/topics/ui-design learnui.design/](http://interaction-design.org/literature/topics/ui-design-learnui.design/), last accessed on 25-03-2019 at 11:00pm.
- [6] vsshp.fi/en/potilaille-ja-laheisille/potilasasiakirjat/Pages/default.aspx ,last accessed on 25-03-2019 at 11:25pm.
- [7] developer.android.com/studio, last accessed on 25-03-2019 at 11:40pm.
- [8] developer.android.com/studio, last accessed on 25-03-2019 at 11:45pm.
- [9] oracle.com/technetwork/java/javaee/downloads/jdk8-downloads-2133151.html, last accessed on 26-03- 2019 at 1:00pm.
- [10] prothomalo.com/home/article/150442/%E0%A6%9A%E0%A6%BF%E0%A6%95%E0%A6%BF%E0%A7%8E%E0%A6%B8%E0%A6%BE%E0%A6%AC%E0%A7%8D%E0%A6%AF%E0%A7%9F%E0%A6%AE%E0%A7%87%E0%A6%9F%E0%A6%BE%E0%A6%A4%E0%A7%87%E0%A7%AA%E0%A6%B6%E0%A6%A4%E0%A6%BE%E0%A6%82%E0%A6%B6%E0%A6%AE%E0%A6%BE%E0%A6%A8%E0%A7%81%E0%A6%B7%E0%A6%A6%E0%A6%B0%E0%A6%BF%E0%A6%A6%E0%A7%8D%E0%A6%B0%E0%A6%B9%E0%A6%9A%E0%A7%8D%E0%A6%9B%E0%A7%87 last accessed on 24-0-2019 at 10:00am.