Co-Operative Organization: An Android Based Mobile Application

By

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This Report Presented in Partial Fulfillment of the Requirement for the Degree of Bachelor of Science in Computer Science & Engineering.

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APPROVAL

This Project/internship titled **"Co-operative Organization Management system; an android based mobile Application"**, submitted by Name: Md. Shahadat Hosain, ID No: 162-15-8114 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 date-12-09-2019.

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I hereby declare that, this project has been done by me under the supervisor of **Anup Majumder, Lecturer, Department of Computer Science and Engineering,** Daffodil International University. I 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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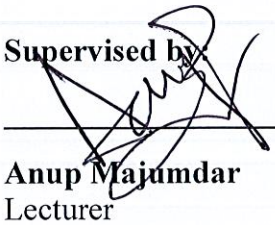

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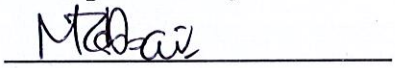

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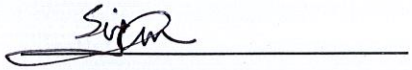

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Finally, I must acknowledge with due respect the constant support and patients of my parents.

ABSTRACT

With the development of time and information technology, it has become more than easy to use mobile apps our daily works. The technology becomes more advanced to our Society also. This project “Co-Operative Organization” An Android based mobile application is developed for the great support for people. They will have proper guideline to solve the critical problem. The application has a use friendly user interface. This application is in English Language. This Application is developed with the help of Android Studio and Firebase has been used as the core database for the application. With this application, I hope that people will be much benefitted by using our project. They don’t have to faces a lots of problem to create an co-operative organization. People can easily help poor people who can’t suffer their life like general person or who need much helps to live with their family members. By using my application I am trying to solve some problems we face on daily life regularly. I hope that it will be more helpful a lot of people.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Co-Operatives are Businesses Organizations that are owned and run by a group of individuals for their mutual benefit. Within a legal context they are an association or corporation established for the purpose of providing services on a non-profit basis to its shareholders or members who own and control it.

In our society we face different types of problems everyday like some poor can't bear their children education, some can't alive easily because want of enough money, enough help and so on. Some of them can be solved by the people of the society and some cannot be. Some time it needs proper equipment's to solve a particular problem. But the main problem is focusing the problem to the respected organization.

If they do not know about the problem they will not come to solve it. So that at first we need something that will be a media to present out problems to them. From that concept this idea to make an android application that can connect people with different government organization and different private sectors etc. came to our mind.

In our country we do not have any android application that can directly present people's problems to the respected authority. Therefore I came up with this idea to make an android application to inform our problems to be solved. Nowadays I think that If I create event for individual problems then users can help separate people by separated event.

Problem in our life. To avoid those extra waste of time, money, man power and resources we came up with this idea to create an android application to inform respected authority, respected people who wants to help others. I think that this app can help easily those types of problems to be solved on the right time. This application will be used by all who use android mobile anywhere and anytime through online.

1.2 Motivation

In developing country like Bangladesh, I face a lot of problem because of I don’t have required maintenance. Authority is not informed in right process.

In Bangladesh I don’t see lots researches and tasks regard this discipline. So I've got attempted to do an assignment to construct an app to conquer this problem. This is my first model; I will endeavor to create it more.

It doesn’t take a genius to work out that a workforce, team or any other group of people will perform better when it is motivated. But how do you go about motivating people? In the world of motivation there is a theory that unpicks how to get the most from your workers, volunteers or members called the “Hygiene-Motivation Theory” developed by Fredrick Herzberg and published in “The Motivation to Work” in 1959.The crux of this theory is that there are the factors which satisfy people in the work place and others that dissatisfy them. Motivation occurs where there is satisfaction occurs where dissatisfaction prevails. However, contrary to what you might expect, what motivates people at work is not just the opposite of what causes dissatisfaction.

1.3 Objective

A very well-defined and realistic goal is set by a company that often influences its internal Strategic decisions. Most corporate Co-Operatives Organization objective targets used by a business will specify the time frame anticipated for their achievement and how the company's success in doing so is to be assessed.

1. To reduce paper work.
2. To digitization
3. To secured System
4. To do the job very simply
5. To Work from anywhere

1.4 Expected Outcome

My Application purpose is to build an android application which can help me to complain easily and effectively. This app will be maintained by an admin. There are no Authority under admin, who will be given access to this application. User can be download apps and send money.

- Admin will be show who donates and which bank under he wants to join.
- User only donate and get membership and only Admin panel can solve the problem if someone faces any problem.

1.5 Report Layout

The project is consisting of 06 chapters. In report layout all chapter is condensed. I tried to summarize all the chapters. The summarization is given below:

1. In chapter one, I gave introduction to our co-operative organization app. I discussed its objective, motivation and expected output.
2. In second chapter I discussed about the literature review of the projects have been done before on co-operative organization app.
3. In chapter four there are discussions on the methodology I used on this project. Then I discussed about application development. I tried to give answer how I developed the project.
4. Chapter four is about result and discussion. I tried to analyze the output some of the components were explained with figure.
5. Chapter five is about implementation and testing. In this chapter I try to implement My database and testing my project.
6. Chapter six is about conclusion. In this chapter I explained our future plan on this project.

CHAPTER 2

BACKGROUND

2.1 Introduction

In this chapter I basically discussed about background study on co-operative mobile application. I discussed about few similar approaches that resembles our attempt. I discussed about what could be possible outcome.

The concept of this portal is simple. The process is easy. Whenever a person face any kind of problem, but don't know where to complain, then he or she will download this app and search about his or her problem. User must include a photo to join our membership. User must give his phone number, email, NID and date of birth. Moreover, there won't be any spamming. This will be simple medium of communication of general people and Admin or any kind of organization who are in charge of public service.

A co-operative organization is not a new concept. To protect the interest of weaker sections, the co-operative organization is formed. It is a voluntary association of persons, whose motive is the welfare of the members.[3]

2.2 Related Work

A Co-Operative is an Autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled expedition. Cooperatives may include:
A Consumer co-operative organization is an expedition owned by user and admin which aims at fulfilling the needs and aspirations of their members.They operate within the market, independently of the state, as a form of mutual, oriented toward service rather than pecuniary profit. A worker cooperative is a Co-Operative that is created by management by itself. This control may be exercised in a number of ways. A cooperative enterprise may mean a firm where every worker-owner participates in decision making in a democratic fashion, or it may refer to one in which management is elected by every worker-owner, and it can refer to a situation in which managers are considered, and treated as, workers of the firm.

2.3 Comparative Studies

The another applications are helpful for specific type of information, these are not fully helpful. My project gives a full package of information those are very helpful. If I compared to other applications, some gives you only the polli lenden, some of gives the co-operative management, some of gives you the only money status But we gives you the whole system that is there are different types of bank are working together here. Like DBBL, ASA, KRIHI BANK, GRAMEEN BANK, BRACK BANK. So, my application gives whole package like, Donation, Total fund, Social work, Annual program, join event to help people and so on. So, there is no doubt that this application will provide the best need of a user. My application is fully controlled by an admin but in future I have a plan to implement user efficiency for more improvement.

2.4 Scope of Problem

There were lots of problem to complete this project. Some problems are solved or some were too difficult to cope with. After a hard work finally most of problems are solved to make a proper system for our user. To complete a project, Only one person it is quit tuff cope up with time schedule. Perfect time schedule applying is much harder than I thought. And the data wasn't so reliable. So, it gives me an extra trouble or effort to collect data.

2.5 Challenges

Though there are great scopes to work on, besides that there are great challenges to. I am going to emphasize on the challenges we are going to face in this field.

I know internet is not widely available in Bangladesh. Though there are available connection of internet in Dhaka and other cities of Bangladesh, the connection or availability of internet in rural area is very poor. If someone needs to complain via our app they must have internet connection. I hope I am going to overcome this problem. Moreover that, user must need to login became to get our app membership. Then he or she finds out our event and they choose their entire target to do help someone. so that admin or authority can identify the problem. So I can easily say that complainer must need an android phone to capture the problem.

Second problem is popularization of the system. Though I have built a successful system, but I must remember users are the heart this system. The more user I get, the more system will be the useful. It will encourage me to development in future. So I must popularize the system.

Third problem is future development and maintenances. As I have limited resources and financial solvency, it will be hard for me, if I don't get any sponsor or fund to run the system and make further development. I hope, I will get some funds on this project to make it more updated.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business processing model

Business Process Model (BPM) is kind of toll that for building a flow diagram. It creates a model that gives a demo the appropriate flow of data from the start to end. Basically every engineering projects process by a Business Process Model and it can boost up the work speed for developing or implementing the project. A Business Process Model is always flexible the project to the user and to the developer.

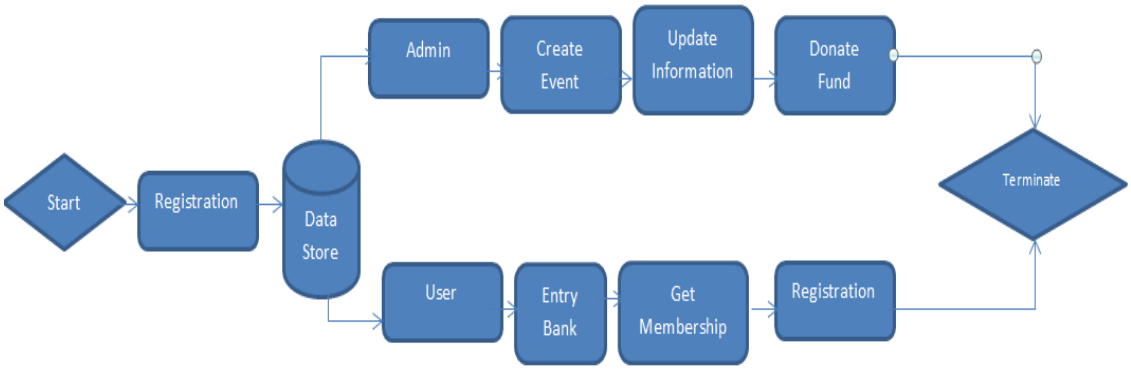

Figure 3.1: BPMN of an android application of Co-Operative Organization

3.2 Requirement Collection and Analysis

Software Requirements

To develop this application I used following Software and tools:

- Operating System: Windows 10.
- System Design: Photoshop
- Language: Java
- Database: Firebase Real-time database
- Tools: Android Studio [3]
- Technologies used: Java, XML.
- Debugger: Android Dalvik Debug Monitor service

For running the application those following are the Software Requirements:

- Operating System: Android 4.2.2 or higher versions
- Network: Wi-Fi Internet Network or Cell Phone data
- Minimum space to execute: 100 MB

Hardware Requirements

To develop this application I need following Hardware Requirements:

- Processor: Intel Core I3 & Higher
- RAM: 8GB or Higher
- Free space on disk: minimum 10GB

Functional Requirements

- Graphical User interface which the application user
- Give ease of understanding to the application through Wi-Fi or cellular network Firebase Real time Database that stores the data or information to be displayed to the user

3.3 Use Case Model and Description

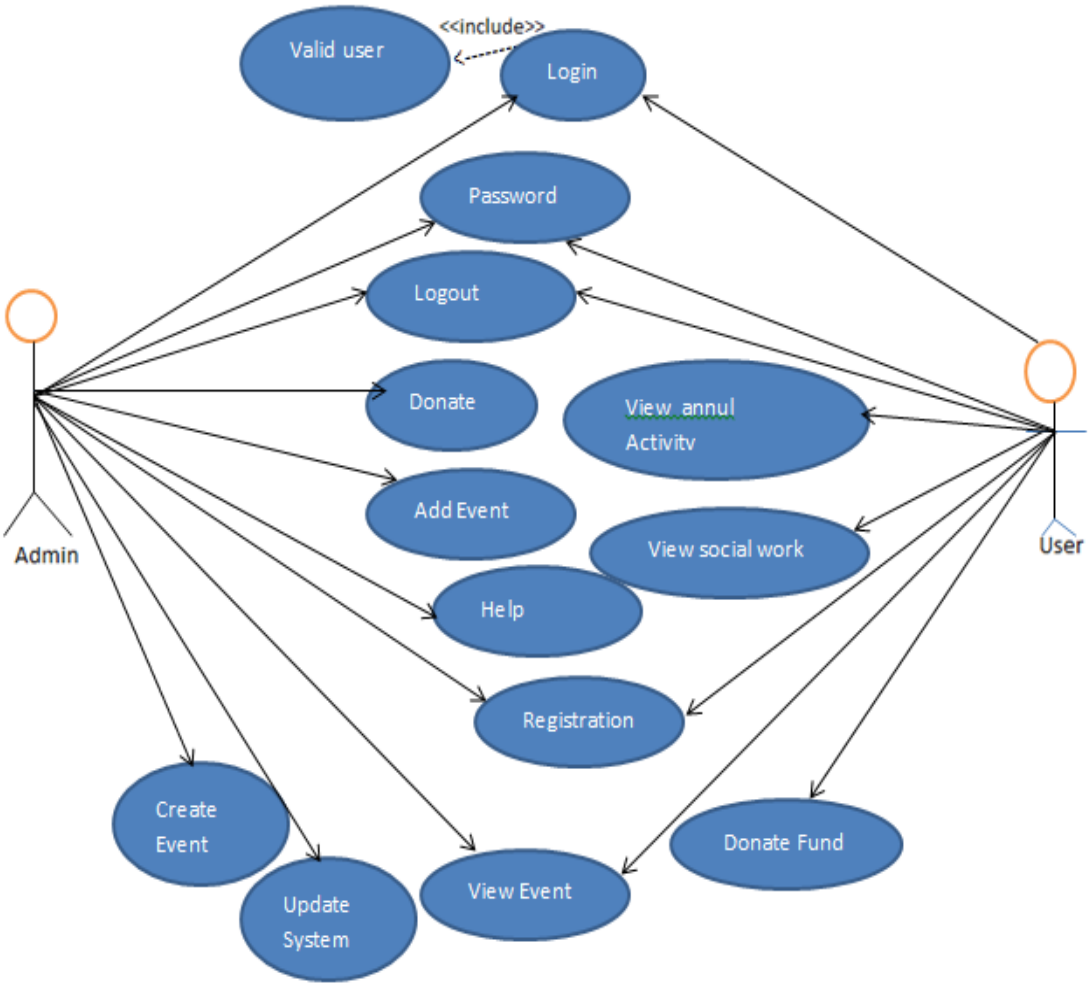

Figure 3.3: Use Case model of an android application of Co-Operative Organization

3.4 Logical data modeling:

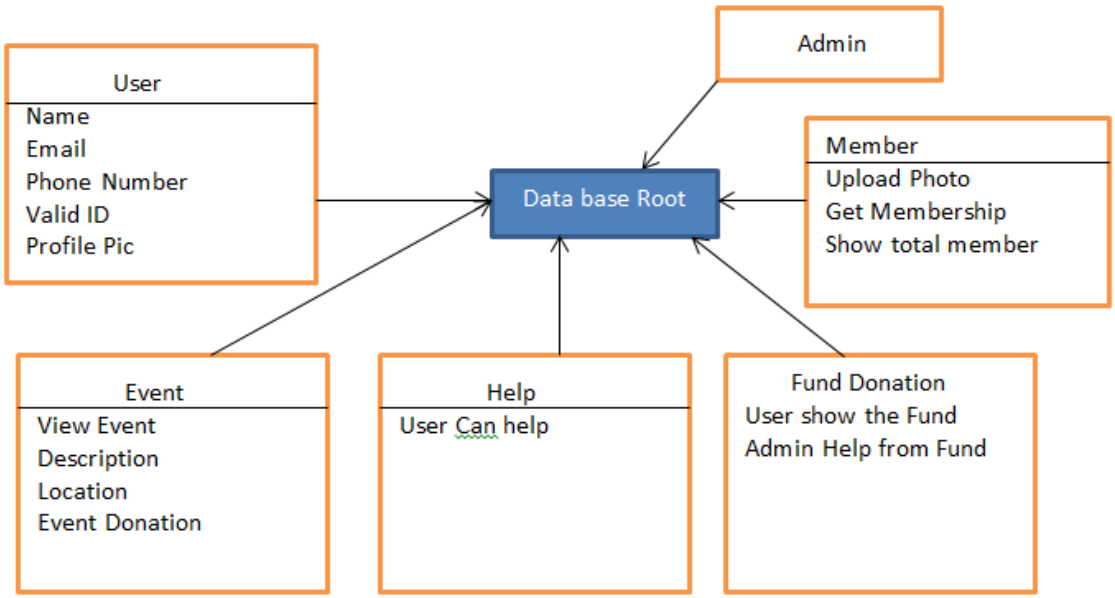

Figure 3.4: Logical Data modeling of android application of Co-Operative Organization

3.5 Flow Chart

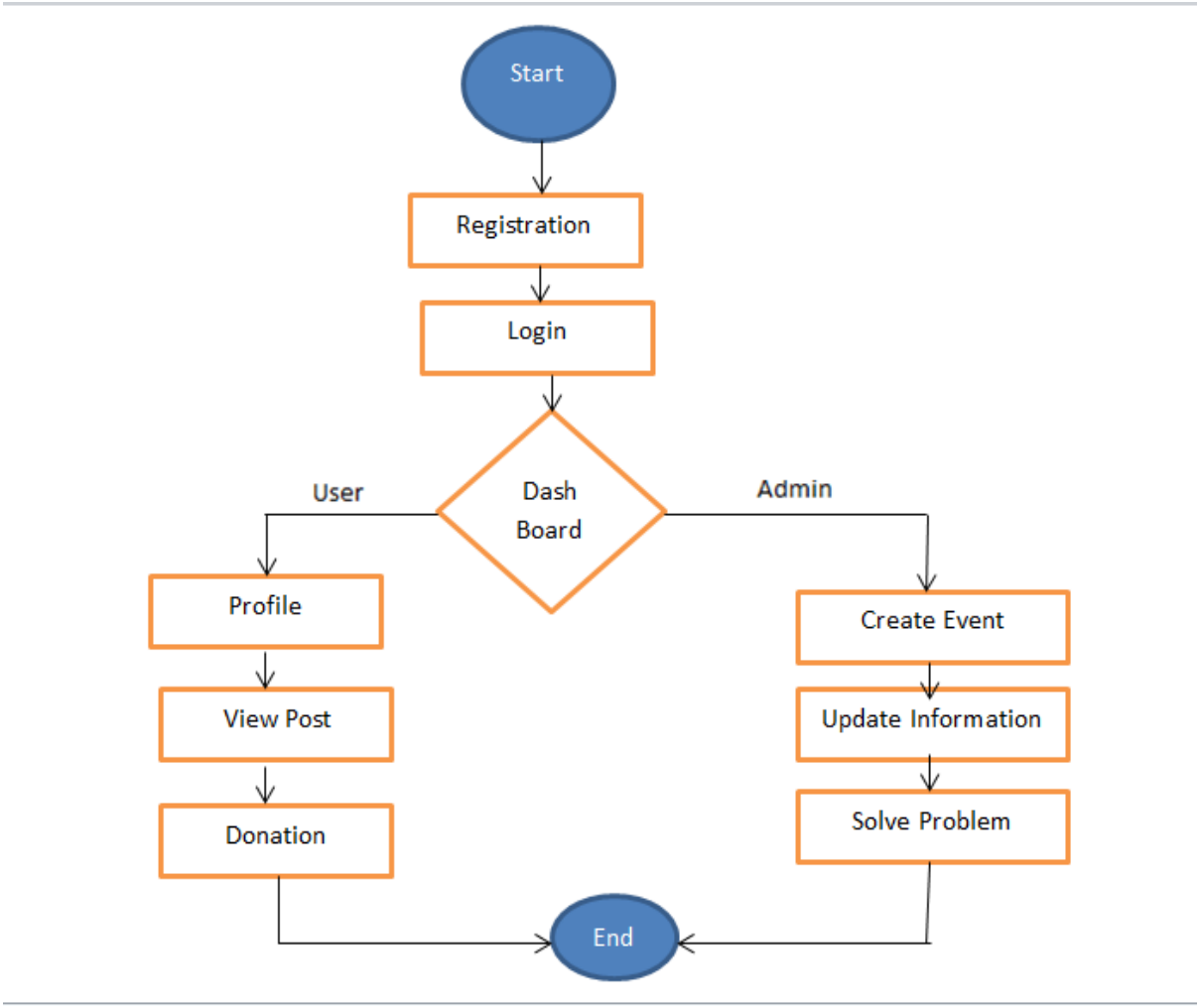

Figure 3.5: Flow chart of android application of Co-Operative Organization

3.6 Design Requirements

For every system the front end and back end design play a vital role to run smoothly. And these are some requirements:

Efficiency: The application must be lightweight that means the system design should be arranged. And keep in mind that the performance will be differ for different devices. So, the system should built such a way that it could run all the device without lagging or delay.

Compatible to various Android version: There has been a lots of developed android SDK versions. The current SDK running in the market is PIE which has been released on August 6, 2018. And this application has been developed to its latest version.

User Friendly: This application is made to be user friendly interface. User can easily find their expected information.

- In my application, there is an authentication for admin.
- Admin can add, update the information.
- There will be one type of user.
- This application runs any android device without lag or delay.

CHAPTER 4
DESIGN SPECIFICATION

In the part of Design Specification shows the development process or how the system being done. This part is detailed document that it's providing the information about the project that the developer will meet. A structure of a system is made in this part . Now I provide the Front End and Back End design of my application those are used tools in my developed application.[4]

4.1 Front-End Design

Front-End Design is the main attraction of an application. It also should be user friendly. My application I designed a beautiful front-end Design. I also try to design user friendly. In font-end Design my Application has some activity screen.

Figure 4.1.1: Splash Screen

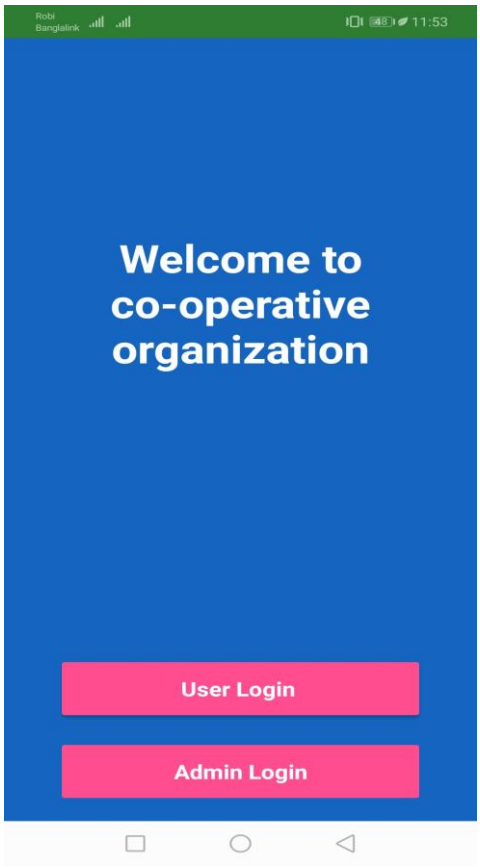

Figure 4.1.2: Home page

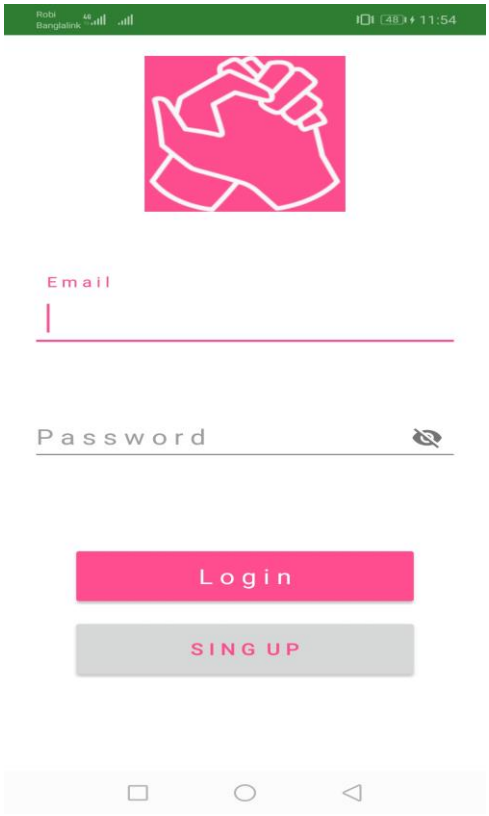

Figure 4.1.3: Registration Form

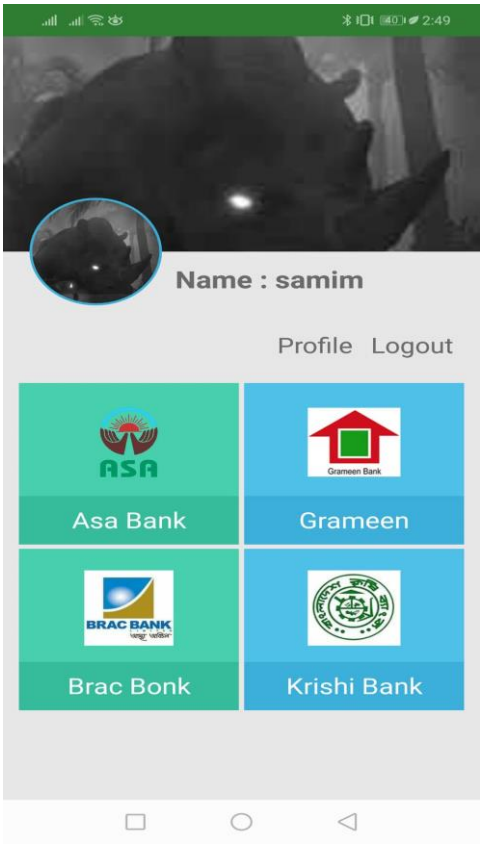

Figure 4.1.4: Grid view

In Figure 4.1.3: Number if anyone interested to registration my apps then they must be need to give valid email and password. And then he can join our software.

When he or she give valid information then they can also choose any types of bank like Asa, Grameen, Brack, Krishi Bank then he also member under this bank easily.

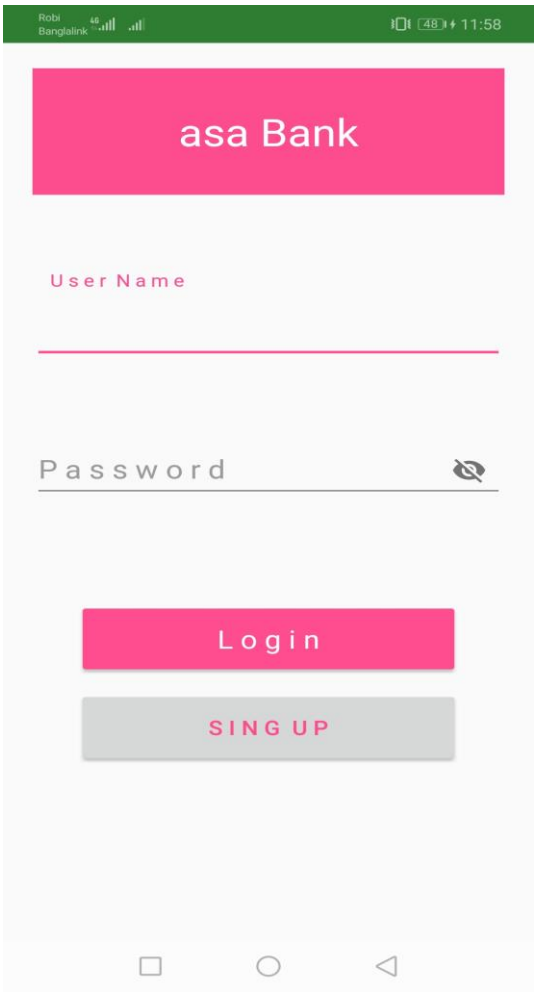

Figure 4.1.5: Asa Bank Reg Form

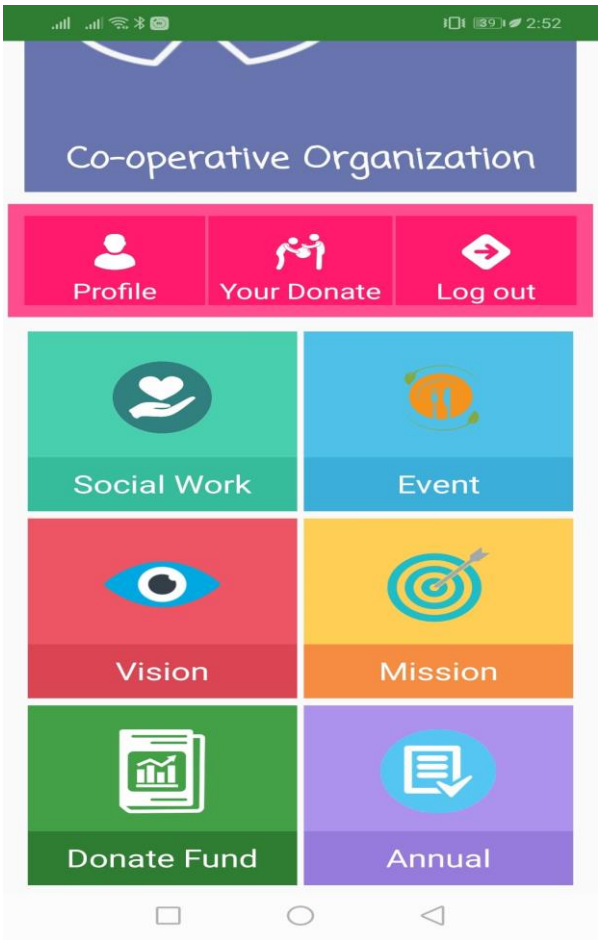

Figure 4.1.6: Dash Board

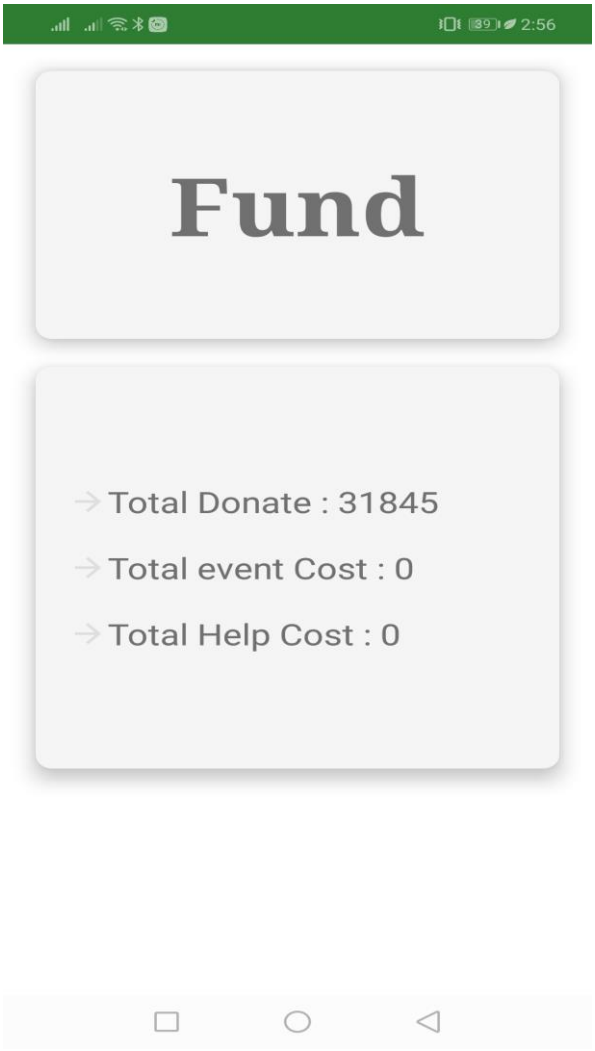

Figure 4.1.7: Fund

Here, the figure 4.1.1 is the Splash screen. After the splash screen the main activity page will come to the open. The figure 4.1.2 is the Home page welcome to my Co-Operative Organization, where all the main activity. After choosing the Registration Form Completely figure 4.1.3 then the next page will show some option of Grid view & Figure 4.1.4. Then Choose any type of bank like Asa bank for Registration Form. Figure 4.1.5. Finally will show the list of the Dash Board Figure 4.1.6. Then show the Figure number 4.1.7 which is Fund.

4.2 Back-End Design

From all over the Back-End design is the hard part and most important. How every single part of the logical part will done is made in this design part. How the application work or it behave and how it will be represented to the user that's all aspects depends on this section. The language, the database, the security and the authentication all other settings are related to the back-end design. For my development I used the core language XML and Java. Firebase has been used to represent the data which is a real time database.

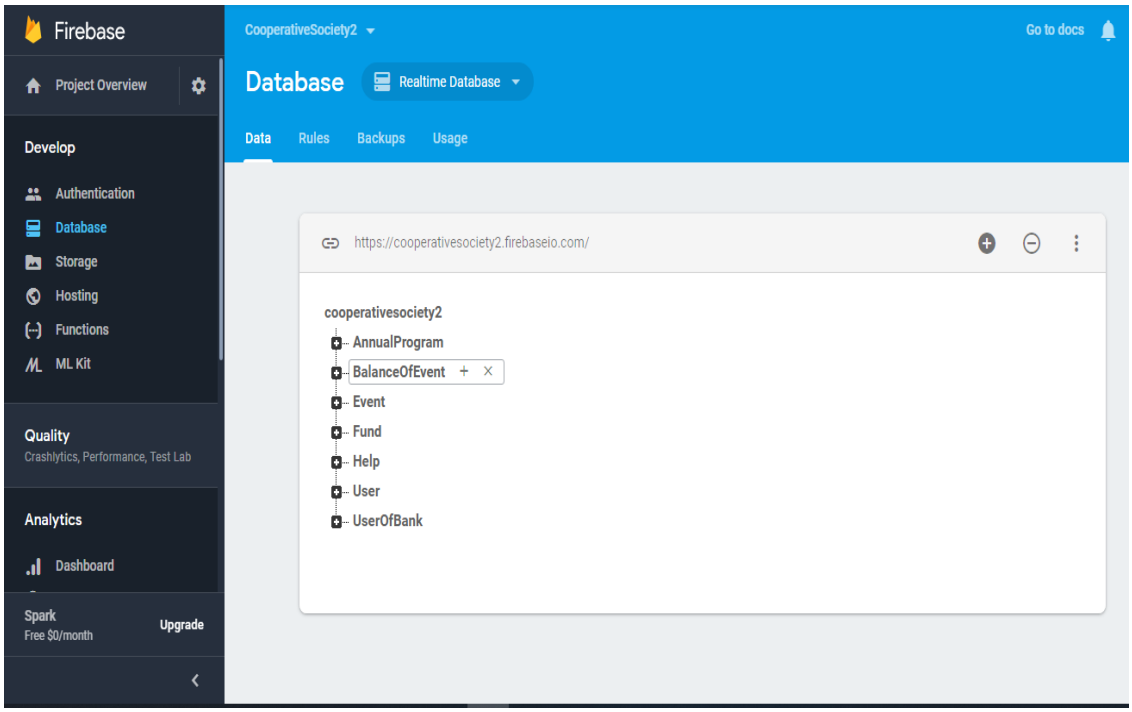

Figure 4.2.1: Real time Database

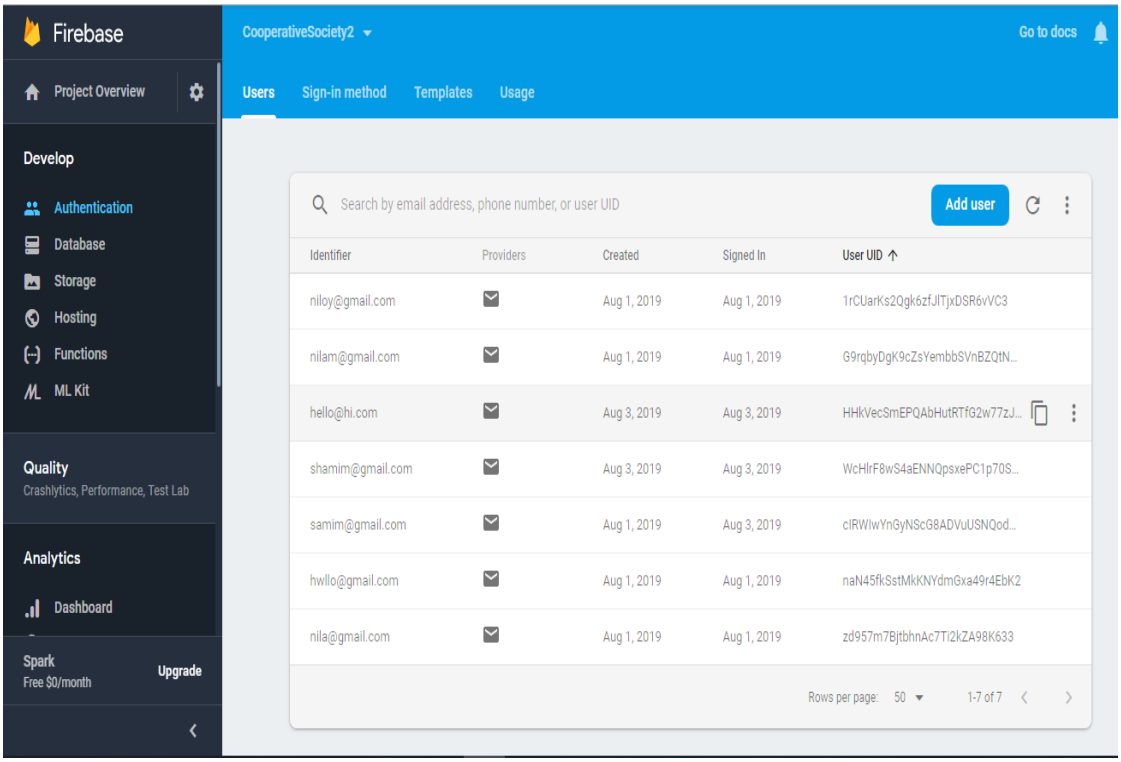

Figure 4.2.2: Quality page on database

4.3 Implementation of Requirements

This project is made by android studio along with Java and XML coding, the project Co-operative organization designed by Adobe Photoshop and Illustrator for UI design. And for data management used MS Excel for the database. This project is store in the online so that the real time database included, so the active internet connection must needed.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

In the phase of implementation the DBMS have to install the required device. Optimizing the database the best hardware and software. And it create a local data in the database, it will implement and optimize the application to it link. This data model contains all the needed logical and physical design choices. A data definition language is a physical storage parameters needed to generate a design, which can then be used to create a database. A database usually a fundamental component of the information system, especially in business modeling design system. Thus database design is the part of system development. To retrieving the data a new database is created to store data. A physical storage parameter needed for create a database. In a definition it can be said to as a physical storage parameter that's need to create. A database design is the part of system development. A good design starts with a list of the data that everyone want to include in all database and what to be able to do with the database later on. Without firebase this can all be written in their language. Database design is a process of producing a detailed data model. Thus database design is the part of development and it's a kind of information system like business modeling system. A good database design start with a good amount a list of data flow. So, for a database contains two essential settings like-

Primary key: - This field is unique for all application records.

Foreign key: - A set of relationship between table parts.

I use two types of table in my database for this system, that's are-

Admin table: - Here the admin user name, email, password and information of login stored.

Menu table: - Splash screen ,Home view, Events ,,Donate Fund, Social Work , Mission ,vision , Payment .

5.2 Implementation of Front-end Design

A user obviously impressed for a front end design. When a good design appears, user feel eager to that application. For making a good impression the front end design should simple and user friendly. User impressed when a front-end design is good. The impression is the last impression. But the main challenge is to make application more attractive Other problem is each of them come in different size. I create this software user friendly so that user visiting from different mobile or tablet will face no difficulties to see the application and have good user expert. So, I have to ensure taste of different people and make it comfortable to understand.

5.3 Implementation of Interactions

For making this application more interactive, response UI has been used and we know the individual buttons are better for mass user and it is better than text. For that I should have use the call button and a visiting web site that has already previously made. But for lacking of time I couldn't implement it. But in future I obviously make it done.

5.4 Testing Implementation

For testing a system is another types of the software testing where complete software is tested and the main purpose of testing the software is to evaluate the compatibility and smoothness of the application. For development software it must. By proper testing the problems or bugs can be identified and can fix the issue. So I tested my application "**Co-operative Organization**" so many times by different users. Here is the test case evaluation is given below:[4]

Table 5.1: Test case Evaluation

SL.	Test Case	Input	Expected Outcome	Obtained Outcome	Pass/ Fail	Test Data
1	Login	Login for Admin	Success fully Login	Successfully Login	Pass	02/7/2019

2	Add new Information	Data input as entry	New data added successfully	New data added successfully	Pass	02/7/2019
3	Interface	Different types of Android	All support	All supported	Pass	02/7/2019
4	SDK	Run on version from 11 to 29	All supported	All supported	Pass	02/7/2019
5	Data Store & the load	Data load through Firebase	Data load	Data load	Pass	02/7/2019
6	Admin Logout	Click on log out button	Log out successfully	Log out Successfully	Pass	02/7/2019

5.5 Test Results and Reports

The result of testing of the application are gathered together to prepare the best report. The Report describes the reflection of the testing formally. It records the data obtained from the evaluation of the application and help to overcome the problems. It is a great help to achieve the objectives of the development project.

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

For the grace of ALLAH, I have successfully completed my project and documentation. After the long-term of thinking, Discussion, implementation I am in the last session and happy of completion.

During the development of this project I have started the working principle of android application. Specially I had to learn java & android studio.

The proposed system is developed with the combination of above stated to which will lead the user to hassle free use of a complaint app.

6.3 Scope for Further Developments

I have a future plan for the application. Some of the planes are:

- Add Real time chat with admin.
- Add Google map for automatically select the location on complaining.
- Feedback system for the problem solving.

REFERENCES

[1] “Co-Operative Organization” available at: https://www.inc.com/encyclopedia/cooperatives.html” [last Accessed: August 30, 2019 at 10.17am]

[2] “Co-Operative polli lenden ” available at: https://www.toppr.com/guides/business-studies/forms-of-business-organizations/cooperative-society/ 75888” [last Accessed: September 30, 2019 at 10.17am]

[3] “Co-Operative society” available at: http://sfp.ucdavis.edu/cooperatives/what_is/” [last Accessed: September 30, 2019 at 10.17am]

[4]“Software testing” available at: https://en.wikipedia.org/wiki/Software_testing [last accessed: august 02, 2019 at 1.1 am]

[5]“Software design” available at: https://www.google.com/software design/ [last Accessed: august 02, 2019 at 5.00 pm]

[6]“Firebase” available at: https://console.firebase.google.com/u/1/project/cooperativesociety-902c2/overview [last Accessed: August 03, 2019 at 5.10 pm].

Cooperative Society

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