



Daffodil
International
University

Project Documentation

Project title: KUKMU

Submitted By:

Mojes Tudu

ID: 183-16-359

Department of CIS,
Daffodil International University

This Report Presented in Partial Fulfillment of the Requirements for the Degree of
Bachelor of Science in Computing and Information System

Supervised by

Md. Abdullah Bin Kasem Bhuiyan

Lecturer

Department of Computing and Information System, Daffodil
International University.

Submission Date: 21 November 2022

APPROVAL

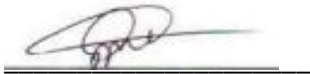
This Project titled “KUKMU”, Submitted by Mojes Tudu, ID No: 183-16-359 to the Department of Computing & Information Systems, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computing & Information Systems and approved as to its style and contents. The presentation has been held on- 21-11-2022.

BOARD OF EXAMINERS



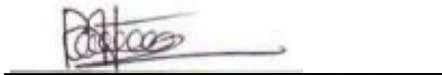
Mr. Md Sarwar Hossain Mollah
Associate Professor and Head
Department of Computing & Information Systems
Faculty of Science & Information Technology
Daffodil International University

Chairman



Mr. Abdullah Bin Kasem Bhuiyan
Lecturer
Department of Computing & Information Systems
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Mr. Md. Mehedi Hasan
Lecturer
Department of Computing & Information Systems
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Dr. Saifuddin Md. Tareeq
Professor & Chairman
Department of Computer Science and Engineering
University of Dhaka, Dhaka

External Examiner

Declaration

I hereby declare that; this project has been done by me under supervision of Abdullah Bin Kasem Bhuiyan, Lecturer, department of Computing and Information System (CIS) of Daffodil International University. I am also declaring that this project or any part of there has never been submitted anywhere else for the award of any educational degree like, B.Sc., M.Sc., Diploma or other qualifications.

Supervised By



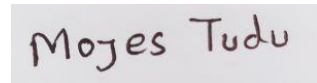
Mr. Abdullah Bin Kasem Bhuiyan

Lecturer

Department of CIS

Daffodil International University

Submitted By



Name: Mojes Tudu

ID: 183-16-359

Department of CIS

Daffodil International University

ACKNOWLEDGEMENT

First and foremost, I want to remember and thank the great creator God for his holy blessing, which enabled me to successfully complete my final year project. I am truly grateful and indebted to **Md. Abdullah Bin Kasem Bhuiyan**, Lecturer, Department of CIS, Daffodil International University, Dhaka. deep knowledge and the keen interest of our supervisor in the field of "KUKMU" to carry out this project. His wearisome creativity, insightful heading, productive consolation, reliable and energetic oversight, helpful assessment, basic encouragement, and investigating different fair drafts and changing them at every stage have made it possible to finish this undertaking.

I would like to convey our deepest appreciation to **Associate Professor Mr. Md. Sarwar Hossain Mollah**, Head, Department of CIS, as well as other academic members and personnel of Daffodil International University, for their assistance in completing my project.

I'd like to thank my entire course mate and everyone at Daffodil International University who took part in this debate as part of their academic work.

Finally, I additionally need to thank my highly regarded parents, who consistently uphold me.

ABSTRACT

Bangladesh is one of those countries with a vast population, and it has been recognized as the human resource for the country. There are many religions and peoples, including Muslims, Hindus, Christians, and Buddhists, as well as indigenous peoples. The Santal, Chakma, Marma, and Mandi are the most populous indigenous peoples in Bangladesh. [3] The first and last of these are considered plains-dwelling Adivasis, whereas the Santal live in the north-west. Santal is one of the largest indigenous communities in our country. KUKMU is a non-profit Santali organization that works for this community to ensure its health, education, and cultural development. The organization arranges medical camps in many rural areas and keeps their working reports manually. They also provide financial assistance to poor students so that they can continue their education. This project aims to ensure that every Santal resident lives a healthy lifestyle and to provide educational support for students who are concerned about the environment. So my vision is to solve this issue, and I have made this system for KUKMU. They can keep track of medical camp reports as well as educational support reports. The data will be recorded in the database forever. As a result, it will be simpler, more adequate, and take less time.

TABLE OF CONTENTS

CONTENTS	Page No
APPROVAL	ii
Board of examiners	ii
Declaration.....	iii
Acknowledgement.....	iv
Abstract.....	v
Table of Contents.....	vi
List of Figures	x
List of table.....	xi

CHAPTERS	Page No
CHAPTER 1: INTRODUCTIO.....	1
CHAPTER 2: Initial Study.....	3

2.1 Project Proposal.....	3
2.2 Background of the project.....	4
2.3 Problem Area.....	4
2.4 Possible solution.....	4
 CHAPTER 3: Literature Review.....	 5
 CHAPTER 4: Methodology.....	 7
4.1 What to use.....	7
4.2 Why to use.....	7
4.3 Sections of methodology.....	8
4.4 Implementation plan.....	8
 CHAPTER 5: Planning.....	 10
5.1 Project Plan.....	10
5.2 Work Breakdown Structure with time boxing.....	10
5.3 Gantt chart.....	11
5.4 Test Plan.....	12
5.5 Required tests.....	12
5.6 Experiment.....	13

CHAPTER 6: Feasibility.....	16
6.1 Technical Feasibility.....	16
6.2 Operational Feasibility.....	16
6.3 Financial Feasibility.....	16
6.3 Managerial feasibility	17
6.3 Budget and schedule risk:.....	17
6.4 DSDM.....	18
 CHAPTER 7: Foundation	19
7.1 Problem area identification	19
7.2 Functional Requirements	19
7.3 Non-Functional Requirements.....	20
7.4 rich picture example.....	21
7.5 Technology to be implemented.....	22
 CHAPTER 8: Exploration	23
8.1 Old Full System Use Case.....	23
8.2 Activity diagram.....	24
8.2 Prototype of new system.....	25

CHAPTER 9: Engineering.....	26
9.1 New System Modules.....	26
9.2 Use case.....	26
9.3 Use case description.....	27
9.4 ERD.....	30
9.5 Sequence Diagram.....	31
9.6 Gantt chart.....	33
9.7 System Interface.....	34
 CHAPTER 10: Deployment / Development.....	 45
Core Module Coding Samples.....	45
Possible problem break down.....	50
CHAPTER 11: Implementation.....	51
Training.....	51
Big Bang (no pilot, parallel implementation scheme)	51
 CHAPTER 12: Testing.....	 54
13.1 Required tests.....	54
 CHAPTER 13: Lessons Learned.....	 61

Object that could be met.....	61
Success rate against the object.....	61
How much better have been done.....	62
How better is the feature of the solution.....	62
Which feature could not be touched.....	62
 CHAPTER 14: Lessons Learned.....	 63
Pre project – review – closing:.....	63
What have I learned:.....	63
What problem I have faced.....	63
 CHAPTER 15: Conclusion.....	 64
Summary of the Project.....	64
Goals of the Project.....	64
Success of the Project.....	64
Value of the Project.....	64
 Appendices.....	 65
Appendix-1.....	65
Appendix-2.....	69
 Reference.....	 73

List of Figures

Figure 1 DSDM life cycle.....	9
Figure 2 Gantt chart.....	12
Figure 3 Ole use case.....	23
Figure 4 prototype of new system.....	25
Figure 5 new use case.....	26
Figure 6 ERD.....	27
Figure 7 Sequence diagram.....	28
Figure 8 Gantt chart.....	33
Figure 9 Home page.....	34
Figure 10 Google Authentication	35
Figure 11 blood donor list.....	36
Figure 12 user profile.....	37
Figure 13 user profile and logout.....	38
Figure 14 contribution page information.....	39
Figure 15 edit user profile.....	40
Figure 16 edit user profile1.....	41
Figure 17 request dashboard.....	42
Figure 18 contact admin and feedback page.....	43
Figure 19 educational help application.....	44
Figure 20 home page code.....	45
Figure 21 admin panel activity.....	46
Figure 22 main function.....	48
Figure 23 Contribution financial code.....	49

List of Table

Table 1 Time boxing.....	9
Table 2 Use case description.....	27
Table 2 Use case details information.....	28

CHAPTER 1

INTRODUCTION

The system I developed:

The aim of my project KUKMU is connect a large number of the santal people's. Santal is one of the backward communities of Bangladesh. The objectives of KUKMU is to ensure medical care and educational transition among these backward communities and nurture their own culture. In this mobile application "KUKMU" connect people each other and help a large number people who need actually help. Many people can't effort proper medical care in this community so KUKMU try to remove this circs and arrange free medical camp those ruler area. And KUKMU also try help those student who want to study but his/her family can't effort his/her study cost.

Motivation:

I am also belong this community that's why I saw it up close their life style and KUKMU organization is based on this community and want to develop this community. This application helps our community to make a bridge of every occupation people of this community and to keep up with the mainstream population of Bangladesh.

Features:

- ❖ Have individual user id and password.
- ❖ Record blood donor information.
- ❖ Record Student application.
- ❖ Record volunteers information.
- ❖ Record Contributor information.
- ❖ This application is supported by smart phones also tablets.

A short overview of the project:

The system is mobile application the user can easily use the system with their smart phones devices. Admin can log in to the system and check student's application and also approve the request by checking the details. User can register in this system with their information. After register/login user can search blood donor and able to student application. And check their information whenever he or she wants.

CHAPTER 2

Initial Study

2.1 Project Proposal

I want to develop a mobile application named “KUKMU”. Which will be help poor people to achieve their basic needs like Health and Education. And also take care their own culture and language. It will be finished utilizing mobile app upheld dialects like Kotlin, XML, Firebase phone number authentication, firebase database, and firebase storage.

Requirements Catalogue:

Admin:

- Log in
- Check pending request
- Give approval
- Log out

User:

- Register
- Log in
- Search
- Check information
- Edit or update renter information
- Delete information
- Logout

2.2 Background of the project

There are about 50 indigenous peoples living in Bangladesh. “SANTAL” is one of them. The number of santal people are poor and lives ruler area of our country they can’t get proper education and medical care. KUKMU create a vision to ensure those kind of support for those people. The market value of this apps is high. It will be increase communication the number of people and students to change their society. It will be take a great part in this Society and our country.

2.3 Problem Area:

The main problem of this project is kukmu is manage funding for free medical camp and medicine to provide those people. And communication gap cover in this community. A number of people are not digitalized. They can’t get those kind of opportunity in a same place which are change their lifestyle.

2.4 Possible solution:

This project are try to solve those problem of this community through this application. The volunteers are help people to register and find out there problem which they need. In this application user register themselves with their basic information and bring together and archive their basic needs like medical support and educational support.

CHAPTER 3

Literature Review

The Santals, a huge community among the 50 indigenous individuals in Bangladesh, hold a rich cultural heritage, and their language, Santali, bears their exceptional social personality. Over the years, voices have been raised for lawful freedoms for the indigenous minorities of the world and for the conservation of indigenous languages. With its rich social heritage and history, the Santali language has a remarkable incentive for the Santals and merits unique consideration for preservation. A multilingual school system with voice lessons for mother tongue training is a method for advancing care for their etymological heritage and can be a compelling method for empowering indigenous individuals in Bangladesh to become familiar with their conventional language, the public language, Bangla, alongside English [1]. Kukmu is the first Santali organization to work in health care and education with this community.

The members of Kukmu are all Santal, and they face the actual obstruction of this community. So they try to improve the current situation in this community. Their main goal is to keep good bonds with all people and take care of their own language, culture, and identity.

This is the first digital platform for those people, which is only being developed for them to ensure their basic needs and contributions to their community and country.

In this project, the main challenge is creating a user-friendly interface because those people are totally new to this type of digital platform. So I develop very simple and user-friendly applications. And this application process will be continuously updated in the future with new inventions when they are connected with this application.

CHAPTER 4

Methodology

4.1 What to use

Methodology is a vital part of any turn of events. Setting up a proper and amazing methodology is a critical component of development. The procedure ought to be viable with an improvement zone. Lithe is a renowned and compelling system. In coordination, there is a procedure named Dynamic Systems Development Method (DSDM). This is a technique that gives a structure for fabricating and dealing with framework improvements. It came from the adaptation of the sociological principle. DSDM is an iterative code strategy in which each focus maintains the 80% standard, which means that barely enough effort is required for each addition to promote progress to the subsequent augmentation. The extra information is usually completed later, when a large number of business requirements have been recorded or revisions have been stated and agreed upon.

4.2 Why to use

DSDM highlights a more extensive concentration than most option agile methodologies in that it manages projects rather than just the turn of events and conveyance of an item (regularly programming). The venture setting needs consideration on the more extensive business need and each one parts of the appropriate response that develops to satisfy that require. DSDM highlights a long record of fruitful agile task conveyance through and through types of organization conditions, and has checked to be absolutely versatile, working successfully in small straightforward organizations, enormous, convoluted associations and in much directed conditions. It moreover has been demonstrated to be similarly viable for every IT and non-IT projects, for example business alteration projects.

4.3 Sections of methodology

DSDM consistently centers on certain chiefs which conveys an ideal item to the client.

- ❖ Focus on the business need
- ❖ Deliver on schedule
- ❖ Collaborate
- ❖ Never bargain quality
- ❖ Communicate consistently and plainly

4.4 Implementation plans

To execute the DSDM in the undertaking improvement, I need to follow a few stages which will permit me actualize DSDM impeccably.

Dynamic Systems Development Method Life Cycle

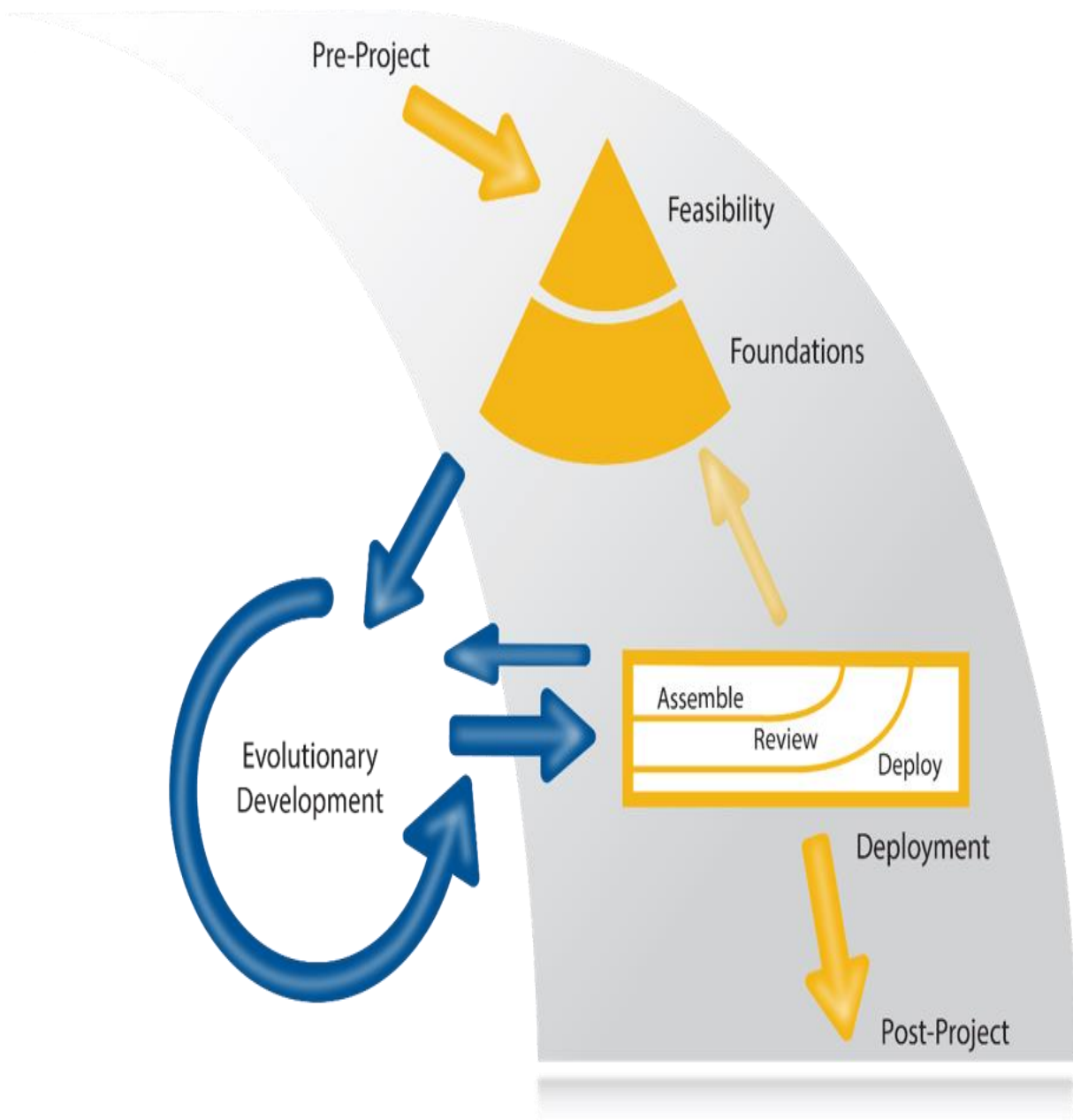


Figure 1 DSDM life cycle

Feasibility Study

It sets up the fundamental business requirements and limitations including the applying to be planned at that point checks whether or not the applying might be a doable contender for the DSDM system.

Design and Build Iteration

It returns to models planned all through supportive model emphasis to shape sure that everyone has been planned all through a way that will modify it to deliver functional business regard for end guests. Now and again, accommodating model cycle and style and fabricate emphasis be at a similar time.

CHAPTER 5

Planning

5.1 Project Plan

Project arranging alludes to all that you are never helping to up your undertaking for accomplishment. It's the technique you bear to determine the means expected to diagram your undertaking destinations, explain the extent of what must be done and build up the errand rundown to attempt to do it. Undertaking arranging programming framework is generally wont to encourage create intensive task plans

5.2 Time Boxing

Task	Starting date	Ending date	Time periods
Starting project	10/4/2022	14/04/2022	10/5/2022
Project proposal and submission	18/04/2022	25/04/2022	18/04/2023

Table 1 Time boxing

5.3 Gantt chart



Figure 2 Gantt chart

5.4 Test Plan:

5.5 Required tests

The framework must be tried in certain ways so the frame come miraculous and doesn't contain any bugs. The tests will help with making the framework more ideal for genuine use. Without them programming may contain a ton of bugs which will beget major issues, all goods considered.

- Unit testing
- Module testing
- Integration testing

5.6 Experiment

Experiment is a set of situations or criteria that an analyst uses to determine if a framework under test satisfies the requirements or operates successfully.

System Proposal

Project Name	KUKMU
Creation date	10/04/2022
Project charter status	
Project sponsor signature	
Proposed project start date	01/05/2022
And end date	31/09/2019

Project Description

blood donor, student educational support application and volunteer's details.

Project Purpose

Medical camp details and ensure health care

Project Goals:

1. Make a large communication system among this community
2. Increase Blood donor
3. Make Contributor

Project scope

Features

- ☐ user profile
- ☐ Record user information
- ☐ easily connect with blood donor
- ☐ Contribution system
- ☐ This application is supported by Smart phones also tablets.
- ☐ Medical camp history will be store permanently.
- ☐ all information can be checked by user.

Proposed Technology

XML and Kotlin

Stakeholders

1. Myself

Competitive Advantage

1. This is the first app and never had anyone make this kind of app.

CHAPTER 6

Feasibility

6.1 Technical feasibility:

This app is made under the conditions what consumer wants, so this app has no technical errors and issues which can bother the consumer.

The adventure ought to be grown with the end goal that the essential capacities and prosecution are fulfilled. The framework has been created utilizing XML and Kotlin the undertaking is in fact plausible for advancement.

6.2 Operational feasibility:

The operational feasibility of this application is user friendly and easy to adopted and easy to use and also rune time is very first which are made this application more effective and efficient.

6.3 Financial feasibility:

People can download it from app store and google play store without any charge so this app is completely free. And this app will help the consumer to understand the app for first time using. This feature is included specially to help the user to get the app.

6.4 Managerial feasibility:

This app will help the consumer to understand the app for first time using. This feature is included specially to help the user to get the app.

6.5 Budget and schedule risk:

When they've acquired all of the facts, they can on fundamental details, evaluated the dangers, and are as certain about their estimation as they can be, they may proceed to significantly further expand the organization budget using alleviation activities for all of the risks identified. For example, if a detail has a high risk score, they can guard against any consequences. You can also plan alternate courses of action well in advance of a risky situation taking place. You may indeed, even close, in view of the risk appraisal that the budget should be changed in accordance with represent the risk-reward compromise you've revealed. This is especially significant while taking a gander at details in light of low certainty suppositions. Overall, surveying and archiving the risks in budgeting will set each expert included straight. Months not too far off, has nobody needed to be set in a place of scrambling to legitimize their estimating after its gone south.

Estimated cost analysis:

Hardware	1st year	2nd year	3rd year
Software	300	800	500
Server	500	750	500
Internet	250	250	250
Training	300	100	0
Development	1000	1000	1000
Total	2350	2900	2250

6.6 DSDM (Dynamic System Development Method):

DSSM is trafficker-free, covers the entire lifecycle of an adventure, and will provide stylish practice direction to being on, in-budget projects, with demonstrated versatility to address tasks, only those results considered, and for any business area.

CHAPTER 7

Foundation

7.1 Problem area identification

I used interview, observation and questioner technique to find out the actual problem area. In this process I observed some specific area and meet a large number of people who actually help me in this project to make application user friendly. And find out the actual requirement of this project.

7.2 Functional Requirements

7.2.1 Functional Requirement documents: (Admin)

- Log in into the system
- Approve pending Student application
- Add Admin panel
- Check /update volunteers

7.2.2 Functional Requirement documents: (User)

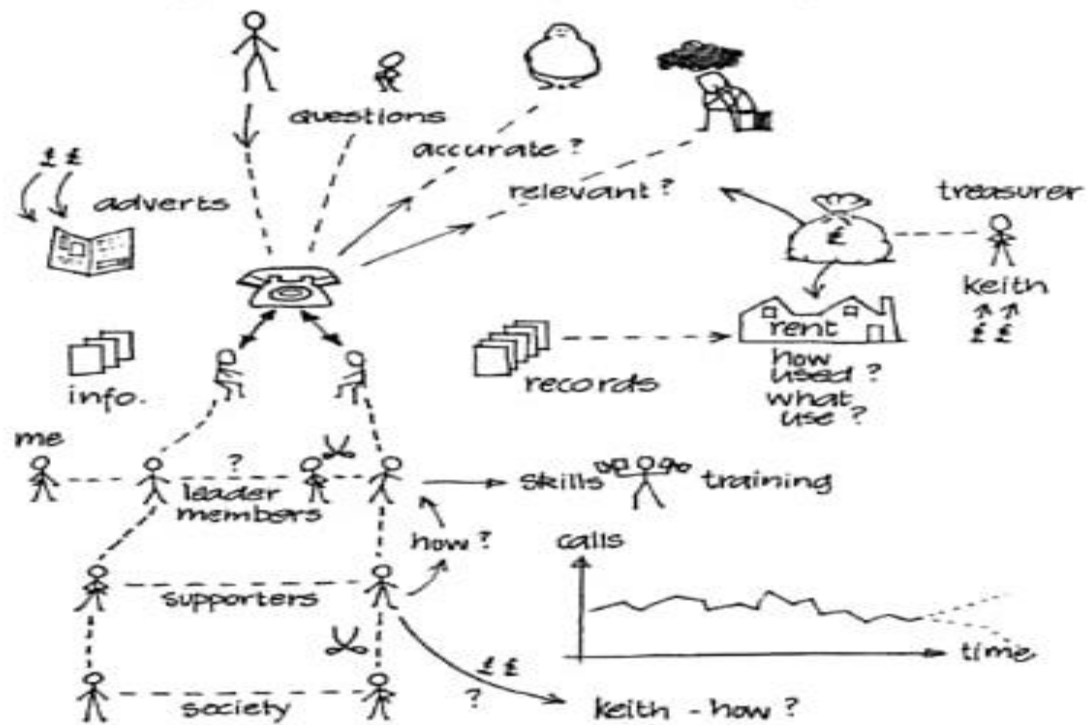
- Register account
- Login system

- User id and password
- Enter basic information
- View blood donor details.
- Make educational support application
- Enter blood group details.
- logout system.

7.3 Non-Functional Requirements:

- **Login system**
- **Automatically data store**
- **About us**
- **Contract us**
- **User friendly system**
- **Feedback**
- **add volunteers**
- **donate us**

7.4 Rich picture example



7.5 Technology to be implemented

Implementation of front-end design:

In terms of android application development, the program's front end is actually made up of numerous screens or activities. The design and functioning of these activities are vastly different. The user interfaces were created using the Android Studio IDE and the XML design language. The standard and official design language for designing Android apps is Extensible Markup Language, or XML. In other cases, I had to utilize Adobe Photoshop and Illustrator to build the app's logo, icons, and backdrop. In scenarios, I also used the Android Studio IDE.

Implementation of Database

To improve the effectiveness and speed of this project, I used three different types of databases.

➤ **Shared Preference:** The internal data storage system on Android is a common preference.

When an application is running, it is used to store little amounts of data that are needed. There are a few little pieces of information stored in this storage, including login status, username, password, and other numbers. Users do not have direct access to any of the data contained in shared preferences; instead, the program itself is the only one who can access the data.

➤ **Room Database:** For access phone memory or SD cards, Android users can utilize this offline database management solution. The both app and other giving us a chance on the device can access data recorded in the Room database. To store and access data for online use, we used Room.

➤ **Firestore authentication:** Google created and provides comprehensive Firestore, a database management and storage solution specifically for Android. In terms of storing and maintaining huge number of users online Firestore is significantly faster and easier to use than traditional alternative authentication method. For user authentication, our app makes advantage of Firestore.

CHAPTER 8

Exploration

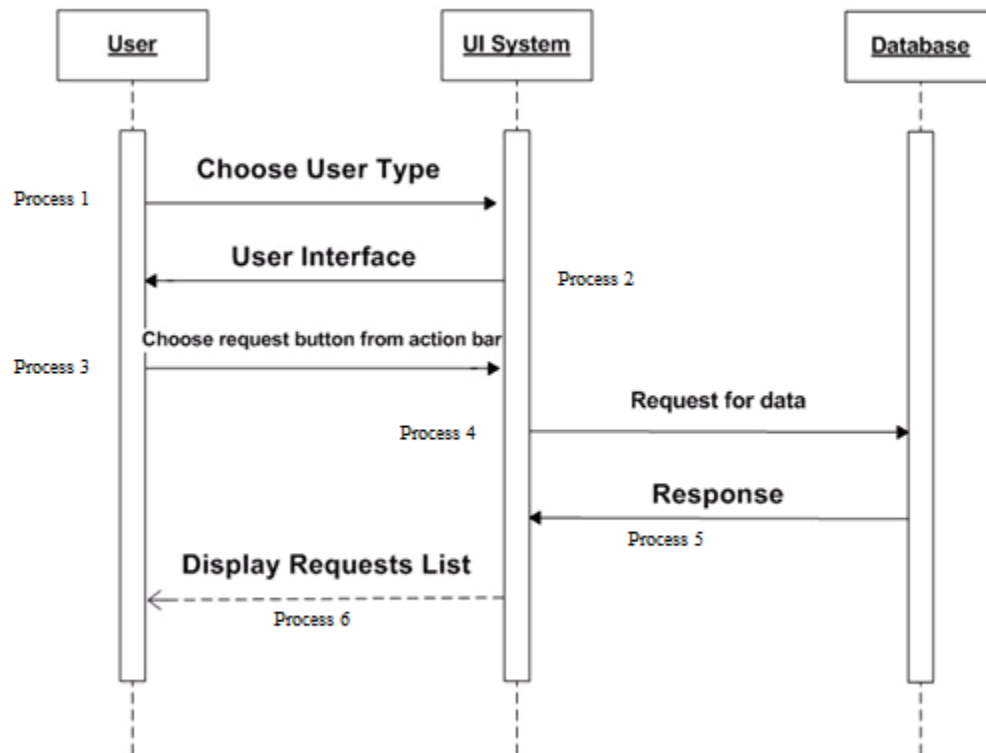
8.1 Old Full System Use Case



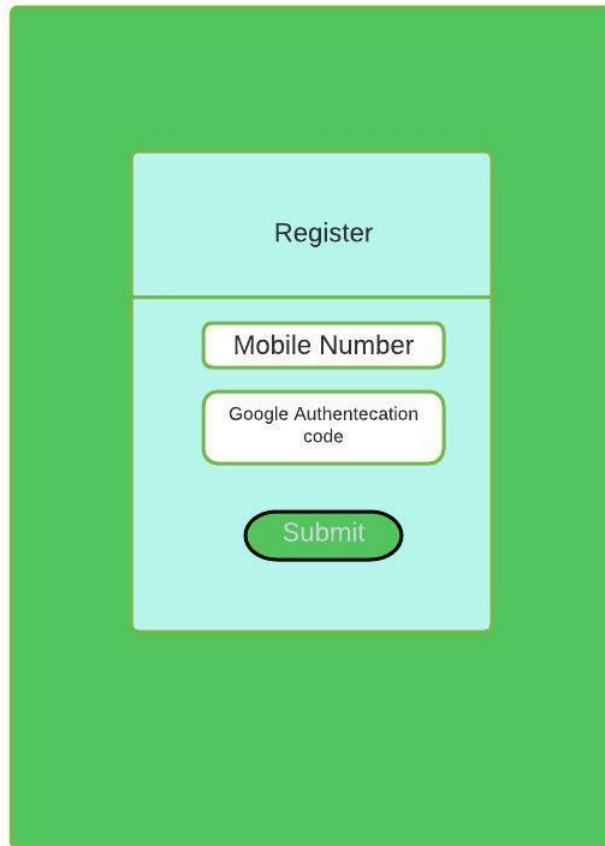
Figure 3 Ole use case

8.2 Activity diagram:

View Requests:



8.3 Prototype of new system



The image shows a prototype of a registration form. It features a solid green rectangular background. Centered on this background is a light blue rectangular box. Inside the light blue box, the word "Register" is centered at the top. Below it, there are two white input fields with green borders. The first field is labeled "Mobile Number" and the second is labeled "Google Authentecation code" (note the spelling error). Below these fields is a green rounded rectangular button with the word "Submit" in white text.

Figure 4 prototype of new system

CHAPTER 9

Engineering

9.1 New System Modules

The system modules are as follows: shown by some diagram to understand and it is given below.

9.2 Use case:

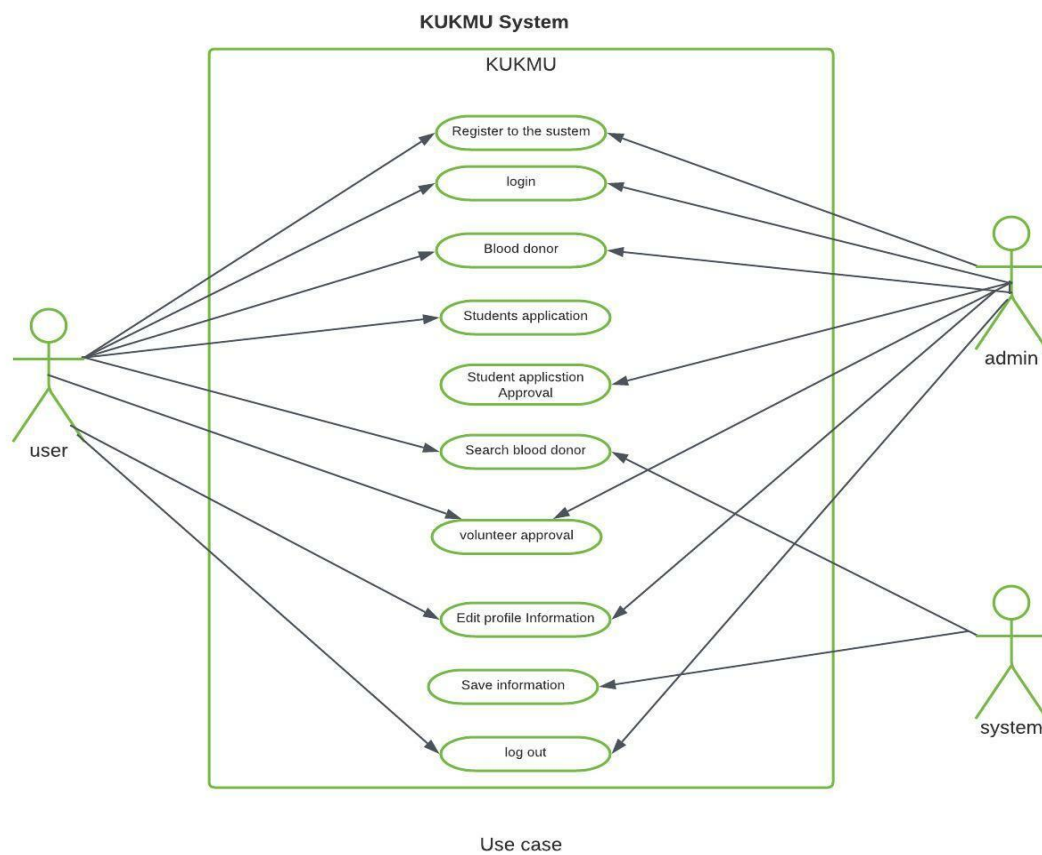


Figure 5 new use case

9.3 Use case description:

Use Case Name: KUKMU	ID: 01	Importance Level: High
Primary Actor: User	Use Case Type: Details, Crucial	
Stakeholders and Interests:	User – personal basic information details.	
Brief Description:	This use case explains how a user uses the app to obtain information.	
Relationships:		
Association:	User	
Include:		
Extend:		

Generalization:	
Alternate/Exceptional	
Flows:	Contribution details volunteers details

Table 2 Use case description

9.4 Use case details information:

Admin	❖ Login ❖ Check request ❖ Give approval ❖ Provide volunteers ❖ Check user history ❖ Logout
-------	---

User	❖ Register ❖ Login ❖ Give information ❖ Check information ❖ Edit of update information ❖ Delete information ❖ Logout
System	❖ Save all the data

Table 3 Use case details information

9.5 ERD:

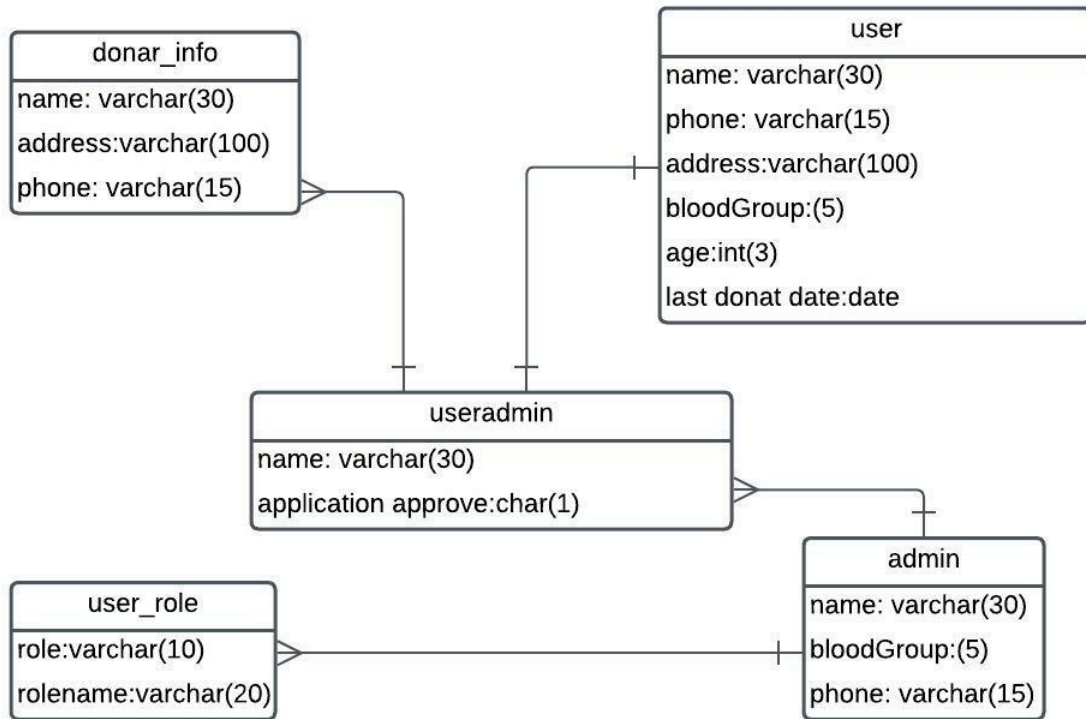


Figure 6 ERD

9.6 Sequence diagram:

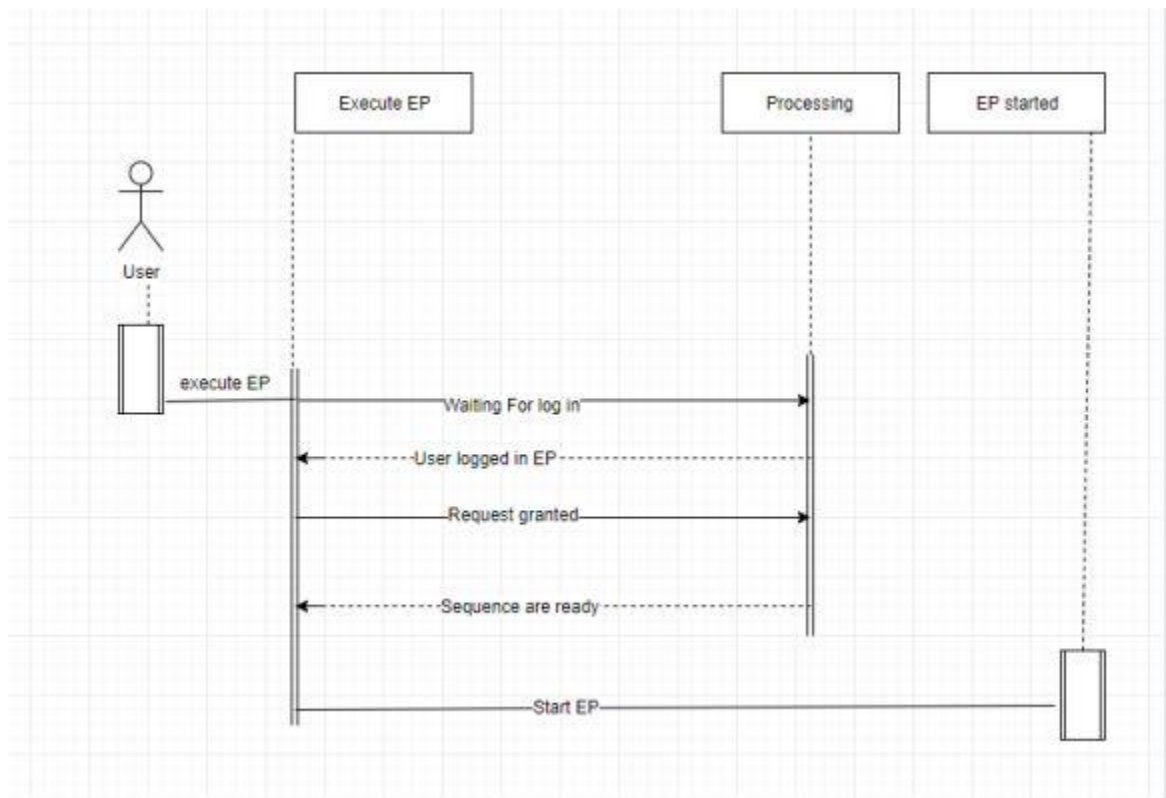
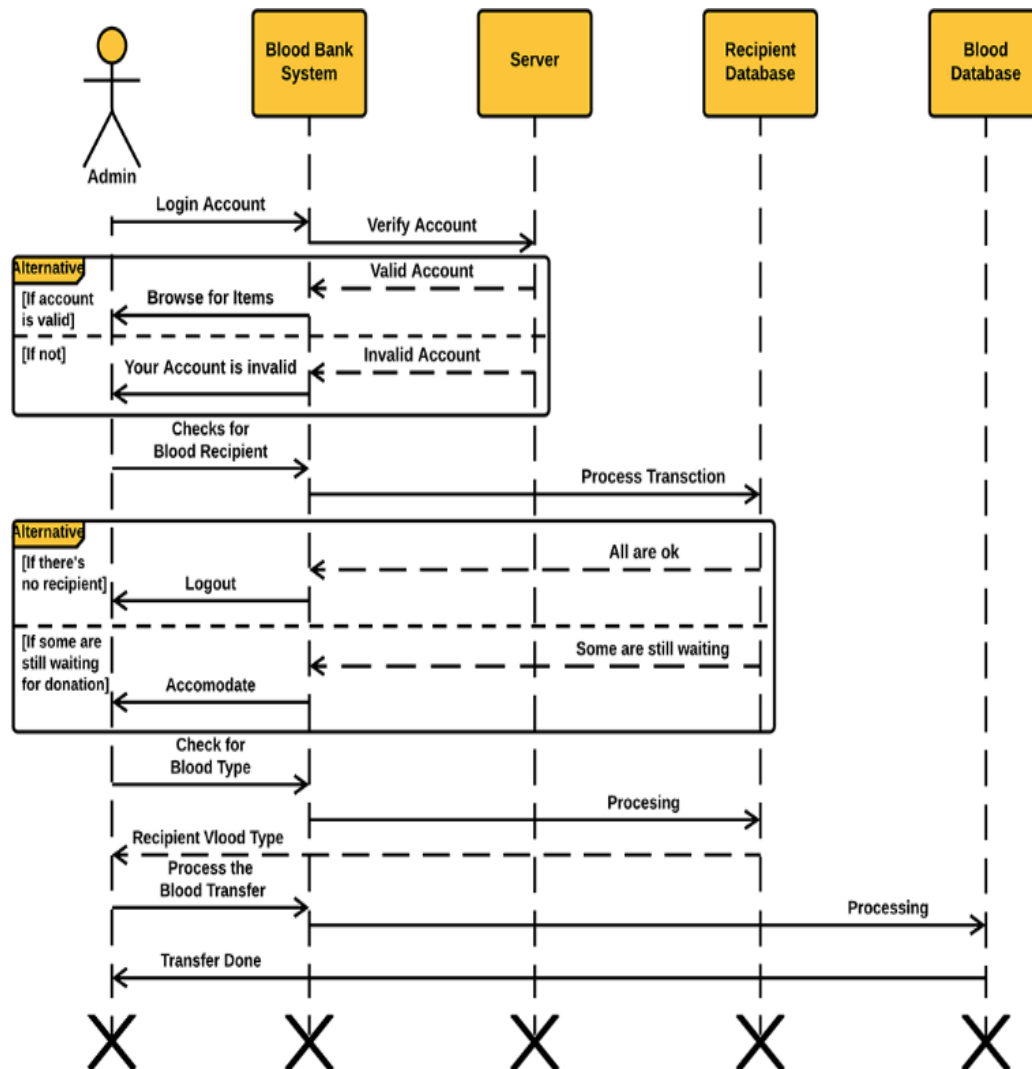


Figure 7 Sequence diagram

Management system Sequence diagram:



9.7 Gantt chart:

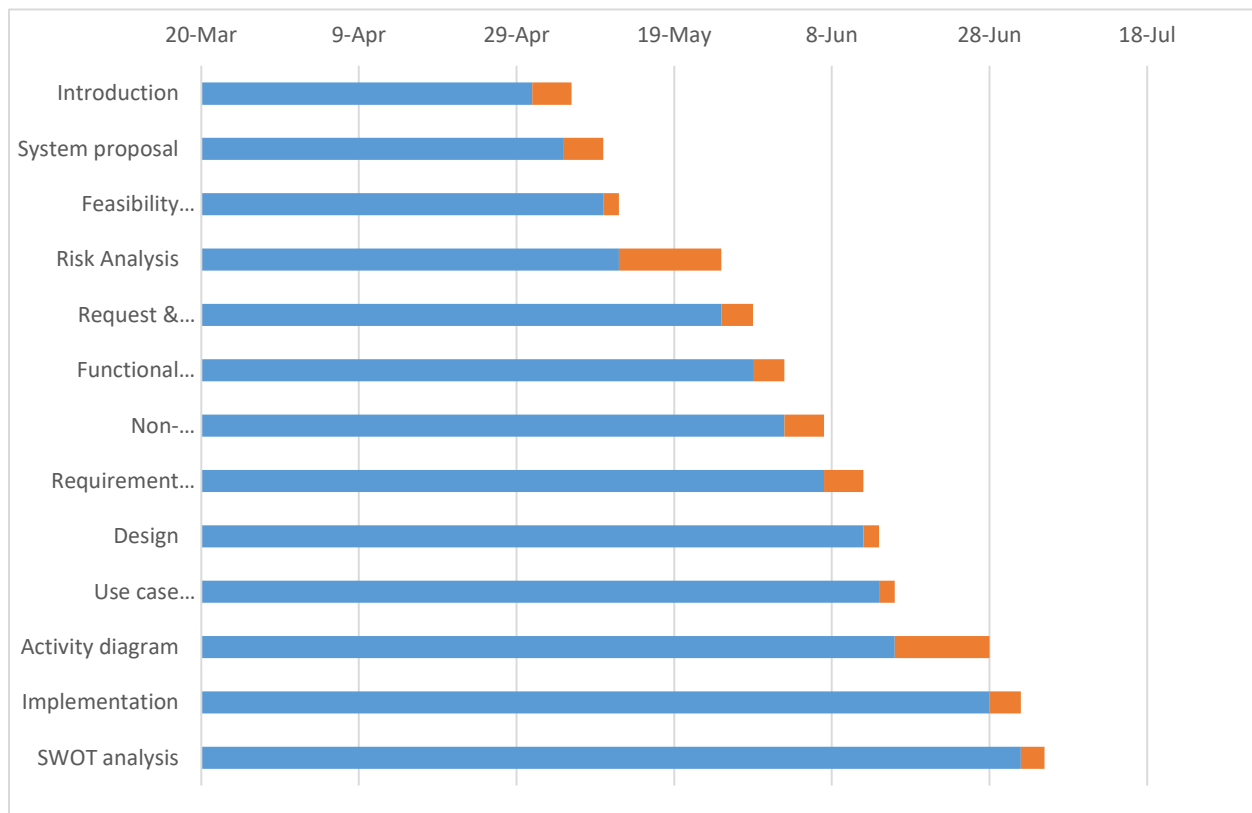


Figure 8 Gantt chart

9.8 System Interface Design / Prototype

Some of my project user interface is given bellow:

Front-End Design

For android, the XML and Kotlin code that makes up a user interface is called front-end design [2].

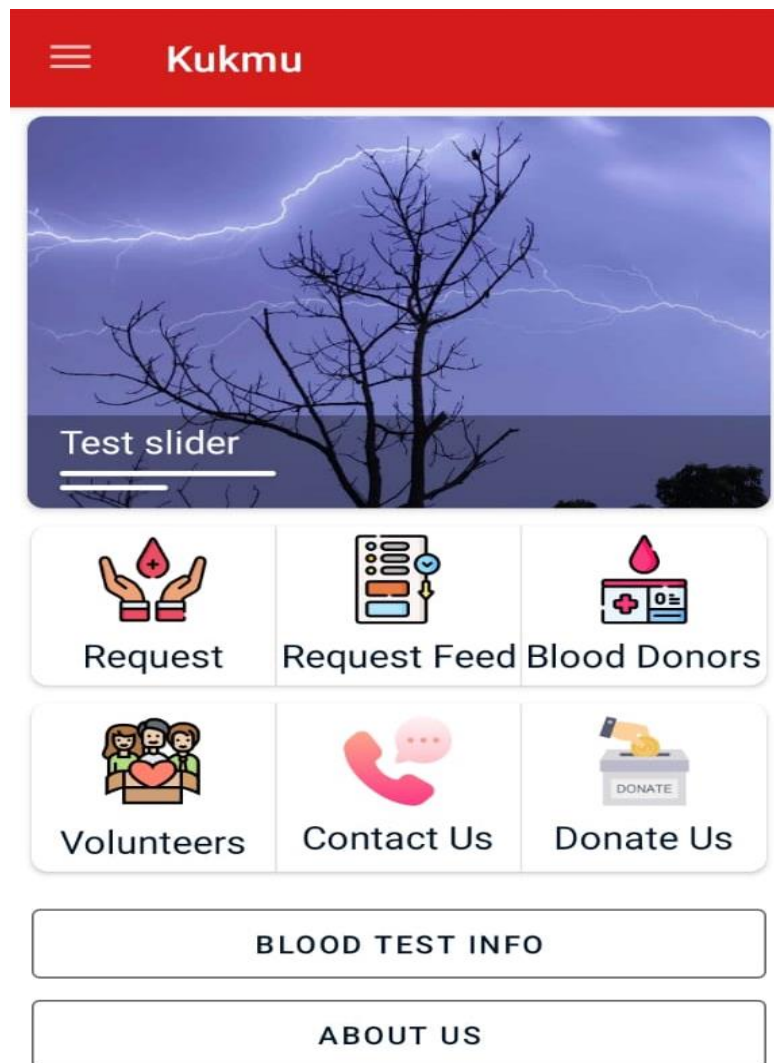


Figure 9 Home page



ENTER 11 DIGIT MOBILE NUMBER

You will receive a verification code by
entering your phone number

+88 11 digit mobile number

SEND VERIFICATION CODE

Figure 10 Google Authentication

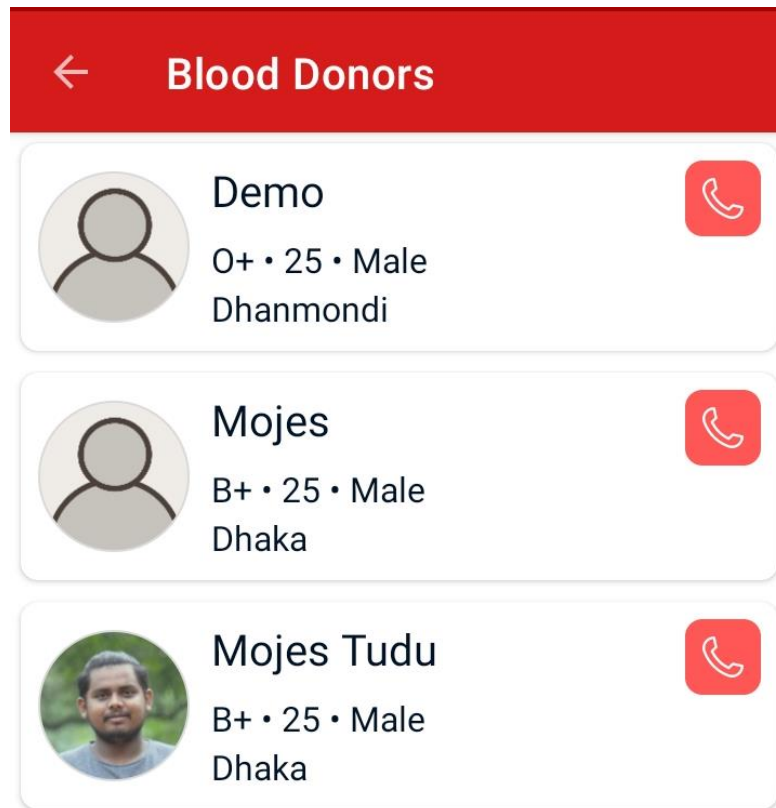


Figure 11 blood donor list

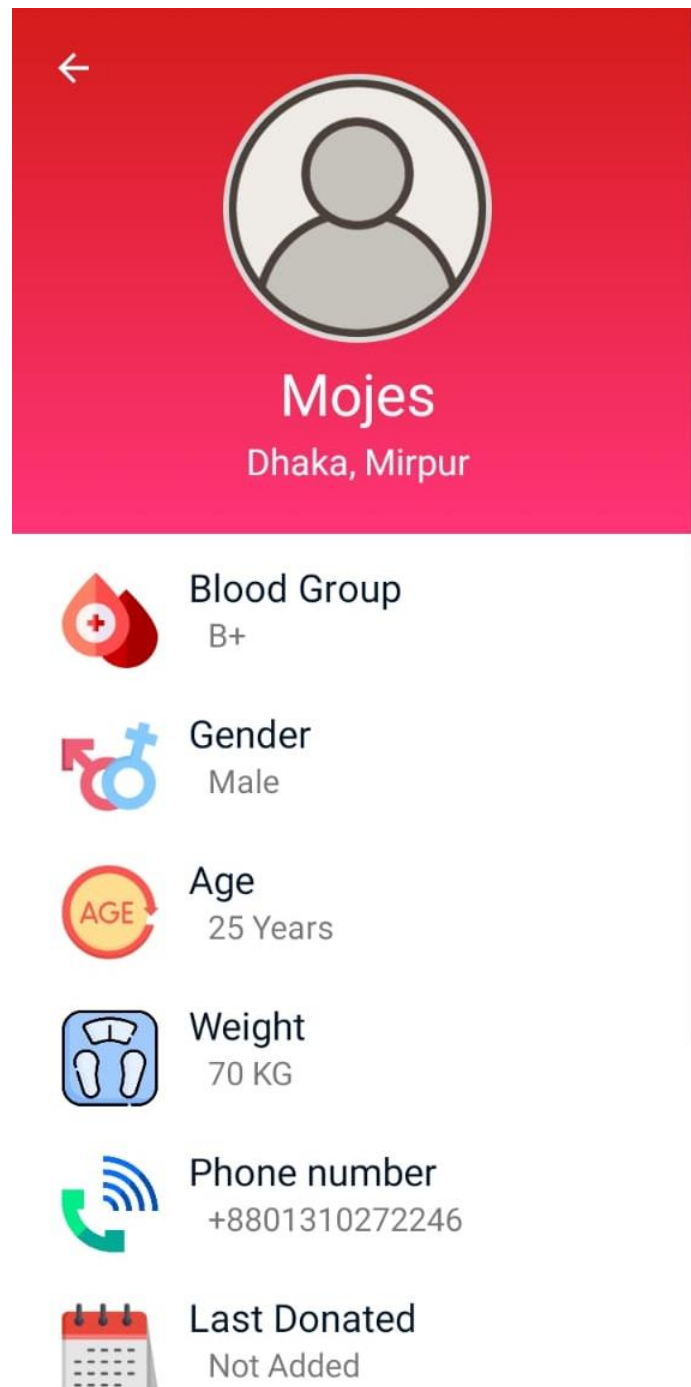


Figure 12 user profile

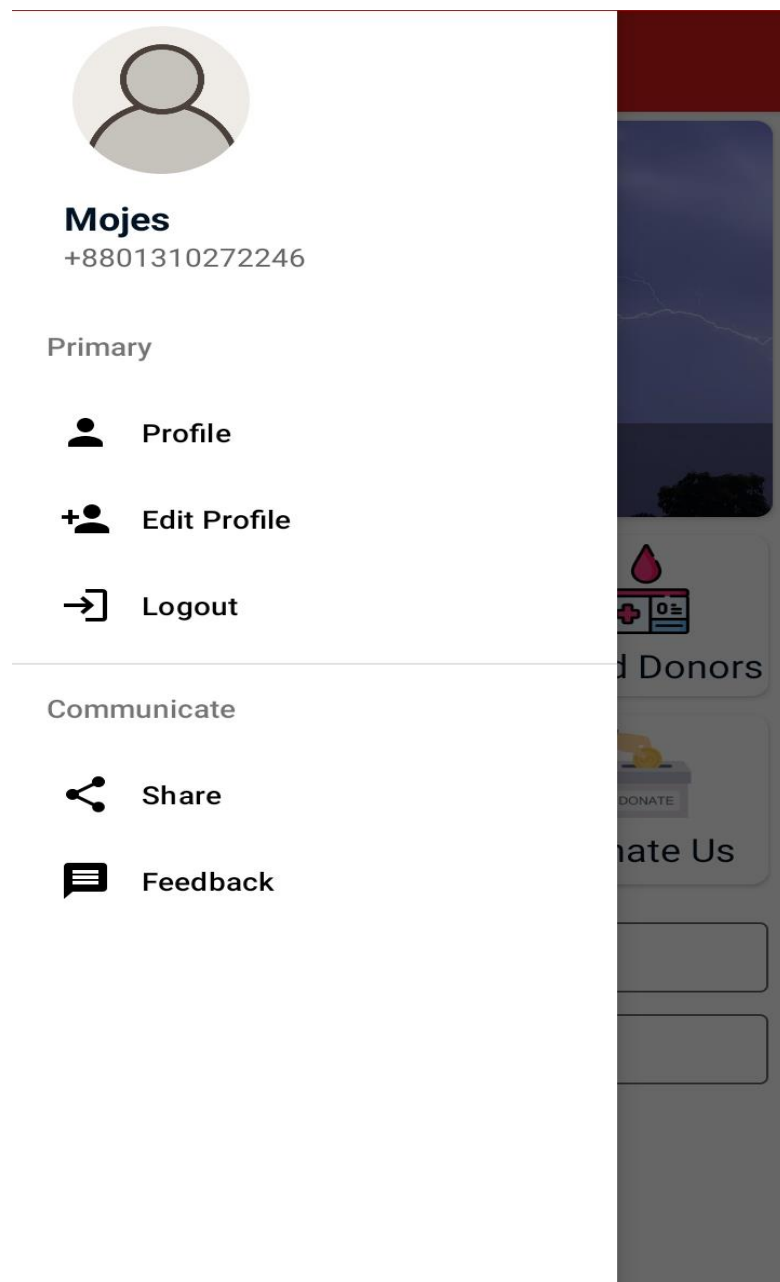


Figure 13 user profile and logout

Donate Us

Bkash

12123123

12312312

Nagad

12321312

123123

Bank Account

13123

1231231

13123

CALL FOR DONATE

Contributor List

13213123

Figure 14 contribution page information

 **Edit Profile**



Your name

Phone number

Your Address

Your Address

Your Age

Your Weight

Your Blood Group

☐ A+

☐ A-

☒ B+

☐ B-

☐ AB+

☐ AB-

☐ O+

☐ O-

Figure 15 edit user profile

←

Edit Profile

Your Address

Dhaka

Your Age

25

Your Weight

70

Your Blood Group

A+

A-

B+

B-

AB+

AB-

O+

O-

Your Gender

MALE

FEMALE

Last Donated

Last Donated

▼

I Want To Donate

SAVE CHANGES

Figure 16 edit user profile1

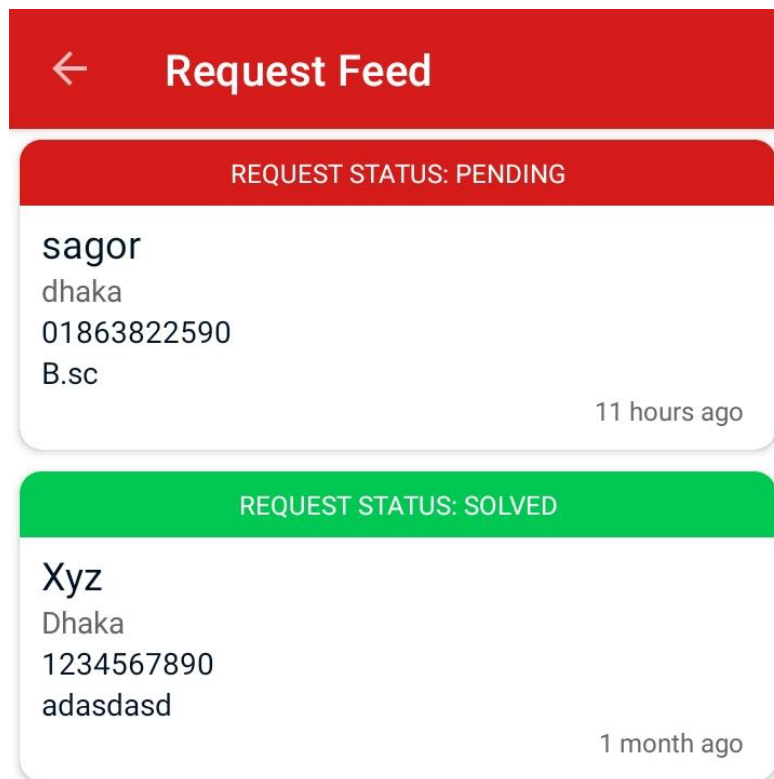


Figure 17 request dashboard

 **Contact Us**

Your name

Phone number

Email Address

Your Message

Your Message

SEND

Figure 18 contact admin and feedback page

 **Add Help Request**

Name

Phone number

Your Address

Age

Your Gender

☐ **MALE**

☐ **FEMALE**

Study Info

Reason

Figure 19 educational help application

CHAPTER 10

Deployment / Development

Core Module Coding Samples

Here I provide some code of my code which are help to thought understanding this project KUKMU.

Home page

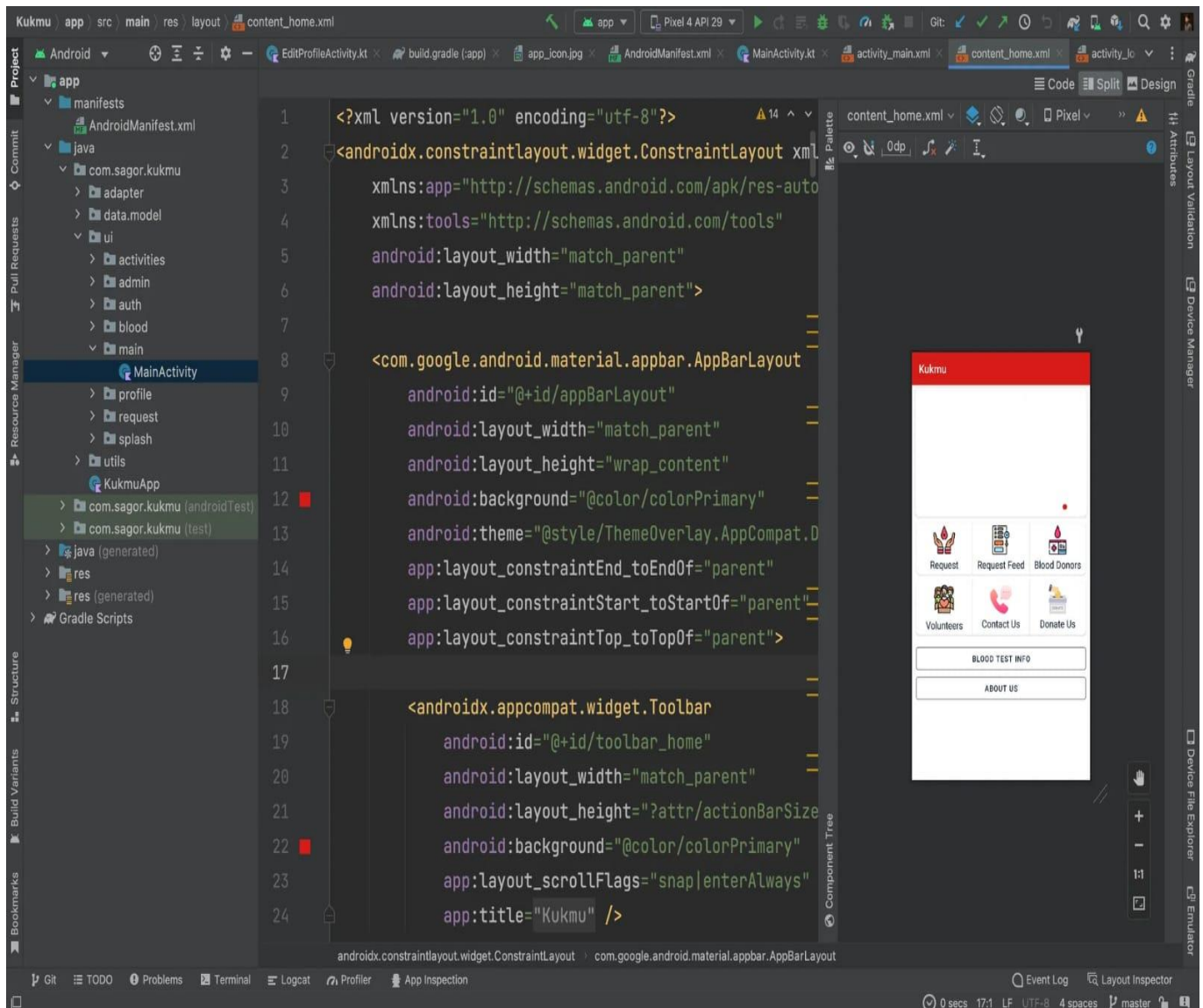


Figure 20 home page code

Admin panel Activity

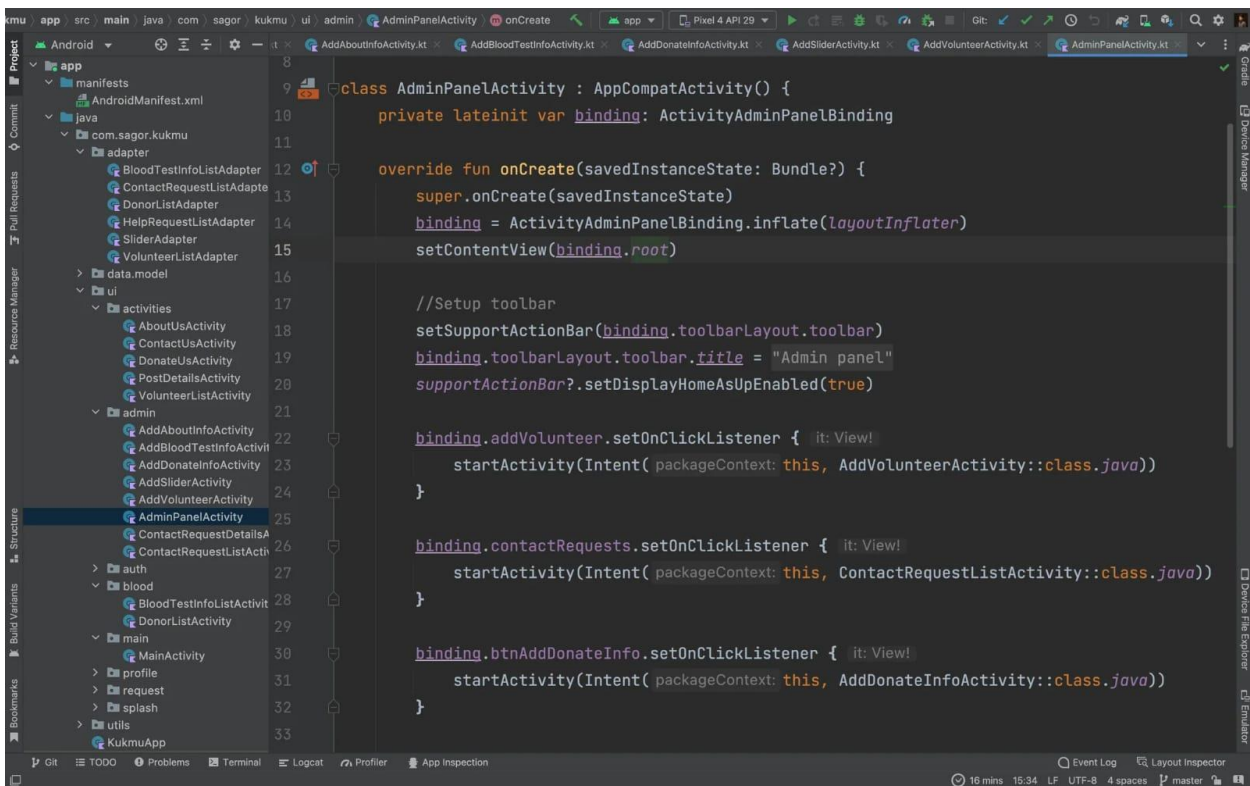


Figure 21 admin panel activity

 **Firebase**

[Project Overview](#) 

Project shortcuts

[Realtime Database](#)

[Storage](#)

[Authentication](#)

What's new

[Extensions](#) NEW

Product categories

[Build](#) 

[Release & Monitor](#) 

[Analytics](#) 

[Engage](#) 

 All products

Spark
No-cost \$0/month

Upgrade



Kukmu 

[Go to docs](#) 

Realtime Database

[Data](#) [Rules](#) [Backups](#) [Usage](#)

 <https://kukmu-c4266-default-rtdb.asia-southeast1.firebaseio.com> 

```
https://kukmu-c4266-default-rtdb.asia-southeast1.firebaseio.com/
├── AboutUs: "About info"
├── BloodTestInfo
├── DonateInfo
├── HelpRequests
├── Sliders
└── Users
    └── EgQ6d4vSjvMuU1mxoOdVtmJKIiH3
        ├── _id: "EgQ6d4vSjvMuU1mxoOdVtmJKIiH3"
        ├── addedAt: 1659205983409 
        ├── address: "Xyz"
        ├── admin: true
        ├── age: 24
        └── area: "Mirpur"
```

 Database location: Singapore (asia-southeast1)

Main function

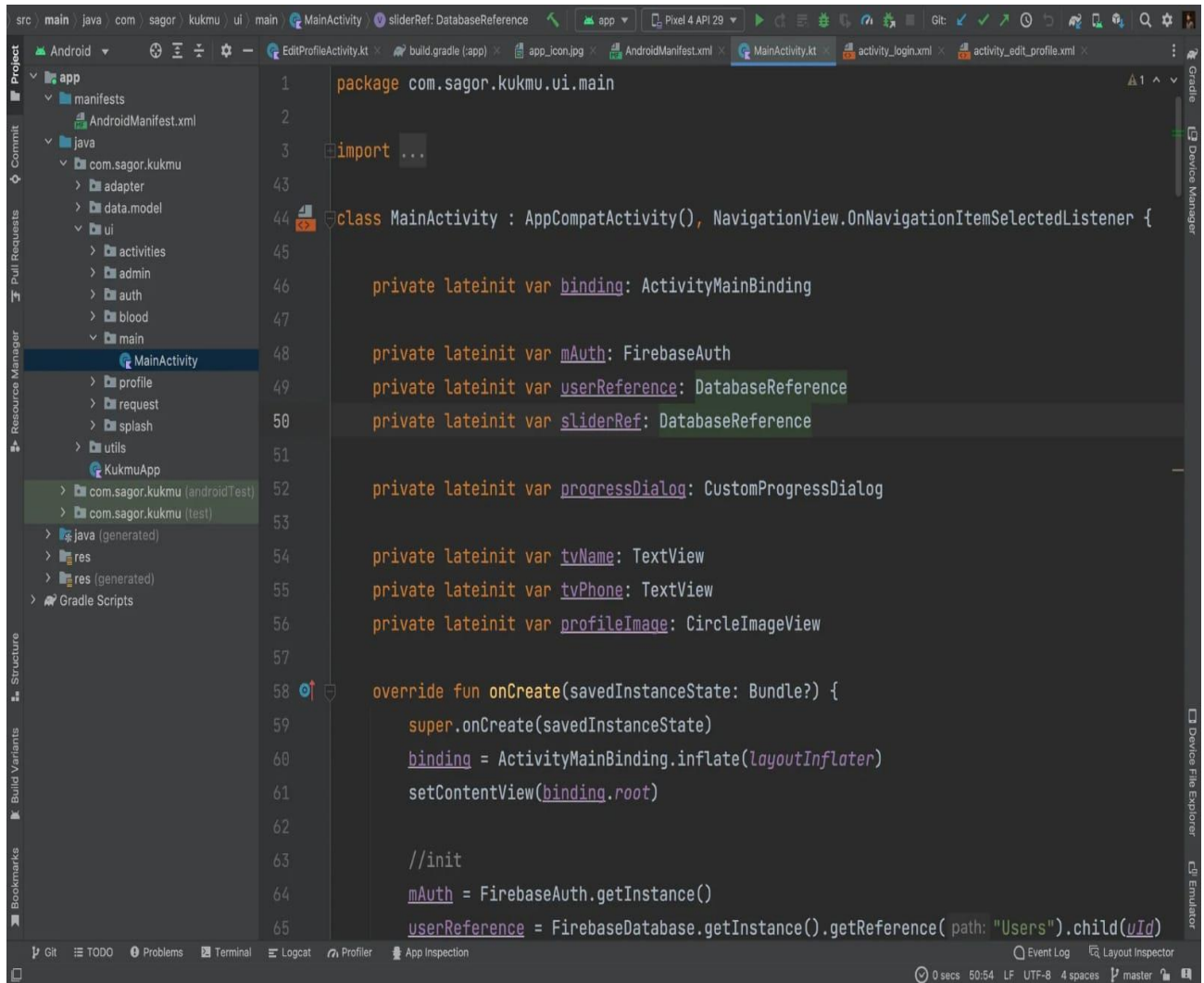


Figure 22 main function

Contribution financial

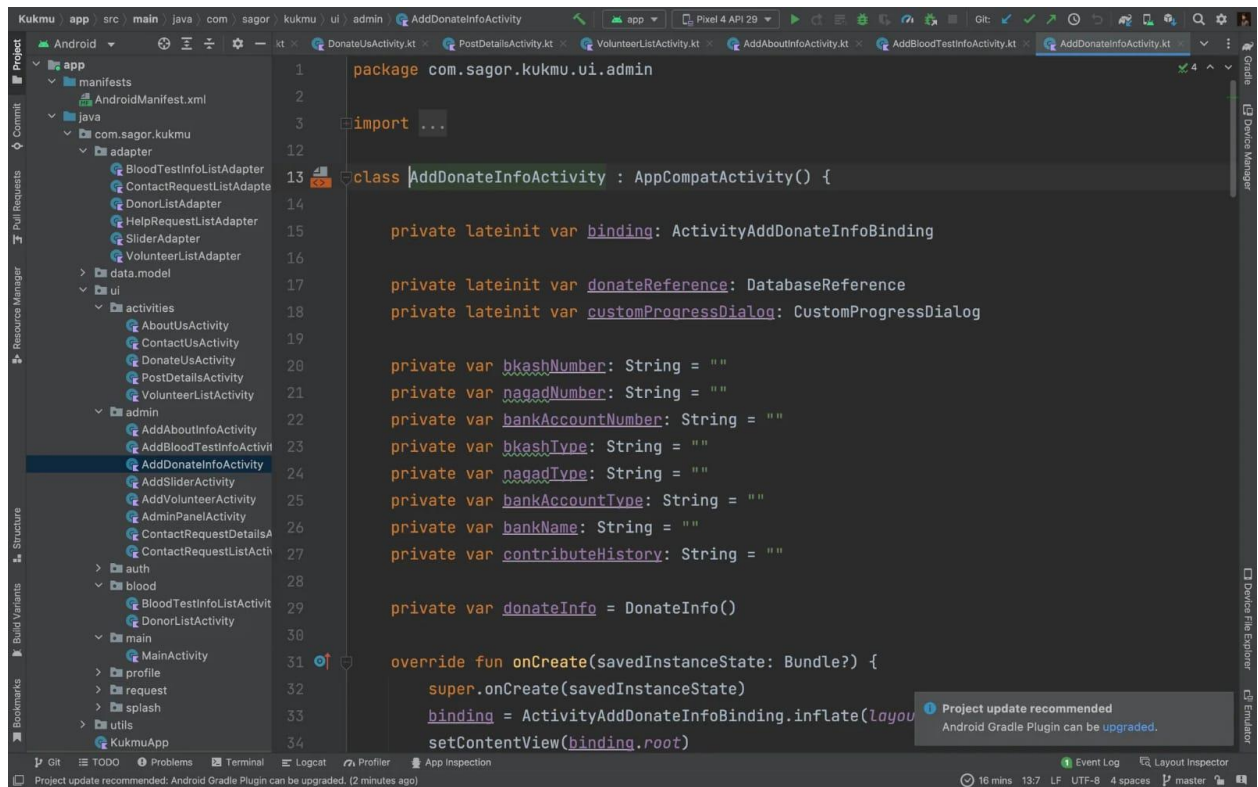


Figure 23 Contribution financial code

Possible problem break down

I have concentrated some conceivable basic issues and made breakdown with the goal that I don't need to confront them while building my framework. The potential issues could be:

- Data repetition can occur.
- Lack of mistake dealing with
- Requirement investigation need
- Lack of testing
- User acknowledgment lacking

To maintain a strategic distance from these potential issues, I have made a few strides like

- Created information structure maintaining a strategic distance from information repetition.
- Covered all conceivable mistake taking care of
- Created prerequisite investigation and confirmed from genuine client
- Tested utilizing different techniques
- User acknowledgment study done from genuine clients

All these potential issues are addressed.

CHAPTER 11

Implementation

Training

Software design are made to decrease torment of working, modernize most vital things. A good construction should be easy to use so clients of that system can without a truly surprising stretch run the system. By and by, whether being clear, taking into account nonattendance of information in IT locale two or three clients could get trouble utilizing the system. That is the clarification there ought to be a preparation season of any tremendous system.

My system is absolutely simple to utilize. Notwithstanding, I will similarly run arranging stage in the school where I will sell it.

I truly need to set up a lot of experts of school who can set others up in the school and social individuals. I will show entire system support and handiness to them essentially in a demo worker locale. After my show I will check whether or not they can do that impeccably. Just in the wake of showing them the arranging stage should be possible in fact.

Big Bang (no pilot, parallel implementation scheme)

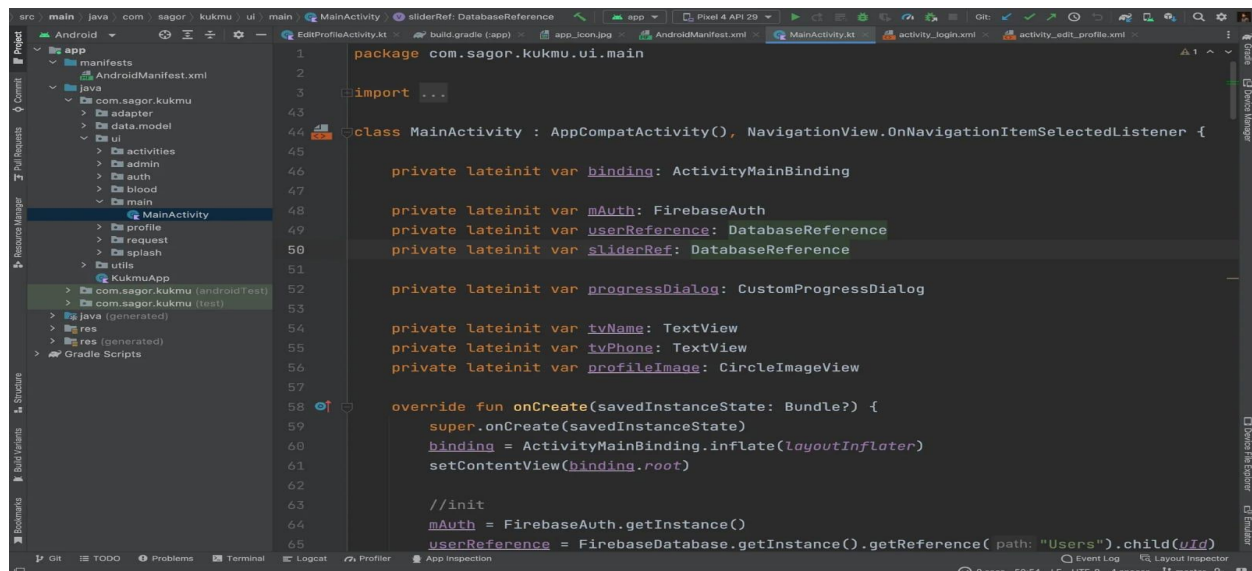
The Big Bang model of programming movement is organized around the possibility that, starting with nothing, a speedy development and extension of code will rapidly arise, hence making something completed in a fundamental second. Enormous blast is a system where a construction can move beyond structure information regularly. It seems to be animating designs where information doesn't free in any case the system gets resuscitated. This part making is a really long sureness. I kept away from this part in my system. Client should enter old system information really. Regardless, I have plans to secure this part inside my system future.

Implementation of Interface

I used a responsive and user-friendly UI to make it easier for users to utilize. I included an icon and a button so that the user may quickly grasp how my software works. My program has been designed in such a way that it is simple to use.

Register

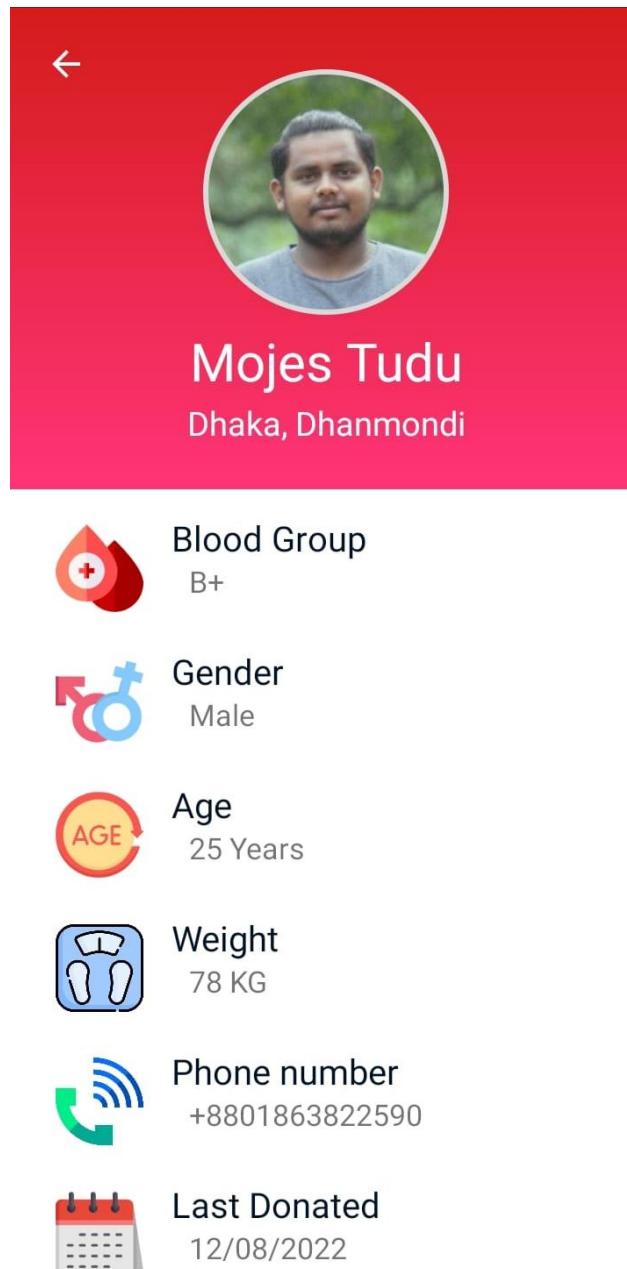
Registration is the basic condition of any system to create user for system. So I create registration / login form for this system. And this is worked and also user friendly.



```
1 package com.sagor.kukmu.ui.main
2
3 import ...
4
43
44 class MainActivity : AppCompatActivity(), NavController.OnNavigationItemSelectedListener {
45
46     private lateinit var binding: ActivityMainBinding
47
48     private lateinit var mAuth: FirebaseAuth
49     private lateinit var userReference: DatabaseReference
50     private lateinit var sliderRef: DatabaseReference
51
52     private lateinit var progressDialog: CustomProgressDialog
53
54     private lateinit var tvName: TextView
55     private lateinit var tvPhone: TextView
56     private lateinit var profileImage: CircleImageView
57
58     override fun onCreate(savedInstanceState: Bundle?) {
59         super.onCreate(savedInstanceState)
60         binding = ActivityMainBinding.inflate(layoutInflater)
61         setContentView(binding.root)
62
63         //init
64         mAuth = FirebaseAuth.getInstance()
65         userReference = FirebaseDatabase.getInstance().getReference(path: "Users").child(uid)
```

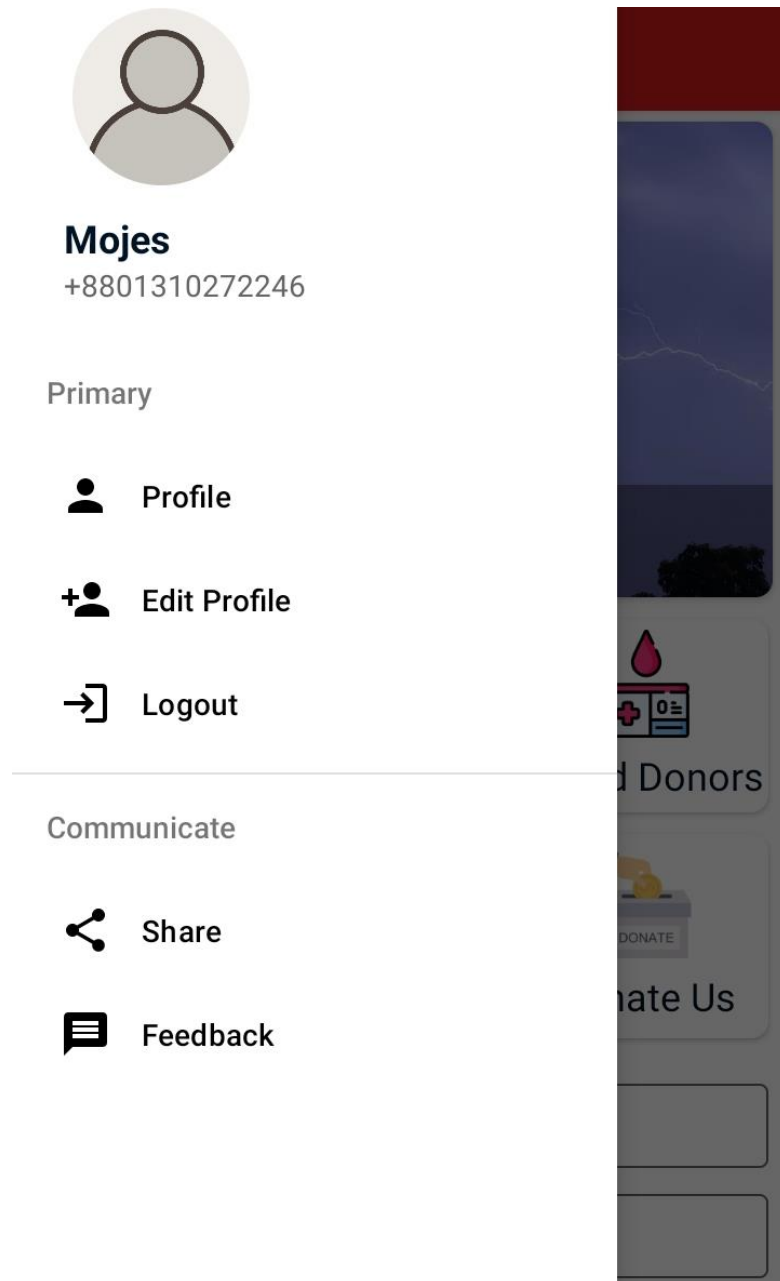
Profile

Profile is the page where a user can see individual user information, add information, delete information. Profile is the identity of a system user. User set their profile Username, phone number, blood group, weight, gender, age etc. I was tried to create very simple but user friendly user profile interface.



Logout

Logout is a main function of this system. When a user is login in system he can check every option of this project and saw every information. When he/she want to logout from application simple they go profile and press log out button and system logout them and system fetches login interface of this system.



CHAPTER 12

Tasting

Required tests

The framework must be tried in certain ways so the frame come miraculous and doesn't contain any bugs. The tests will help with making the framework more ideal for genuine use. Without them programming may contain a ton of bugs which will beget major issues, all goods considered.

- Unit testing
- Module testing
- Integration testing
- System Testing

Unit Testing

Unit testing is the first stage of programming testing levels. During this stage, analyzers assess individual parts of the framework to check whether these parts are working appropriately all alone.

For example, assuming your product depends on procedural programming, these units may be individual capabilities or program processes. Then again, in object-situated structures, these units can be as a solitary class. [6] Contingent upon the analyzer outline, the issue, these units can differ from one another.

Every one of the units chose is then tried to really take a look at whether it's completely useful. To play out this stage effectively, the analyzer needs to know about granular degrees of detail. Furthermore, it means quite a bit to do these means when you are

applying any progressions to the code base. By applying unit testing in code transforms, you can ensure that all issues are resolved quickly.

Integration testing

Testers perform integration testing in the following period of testing. Here, they test individual parts of the framework and afterward test them as an aggregate gathering. [6] This permits programming testers to decide the exhibition of individual parts collectively and distinguish any issues in the connection point between the modules and capabilities.

Despite how effectively a solitary part is running, you won't be aware on the off chance that the product is satisfying its motivation except if you apply integration testing. There are different ways of testing individual parts collectively, yet they can vary, contingent upon how each and every unit is characterized.

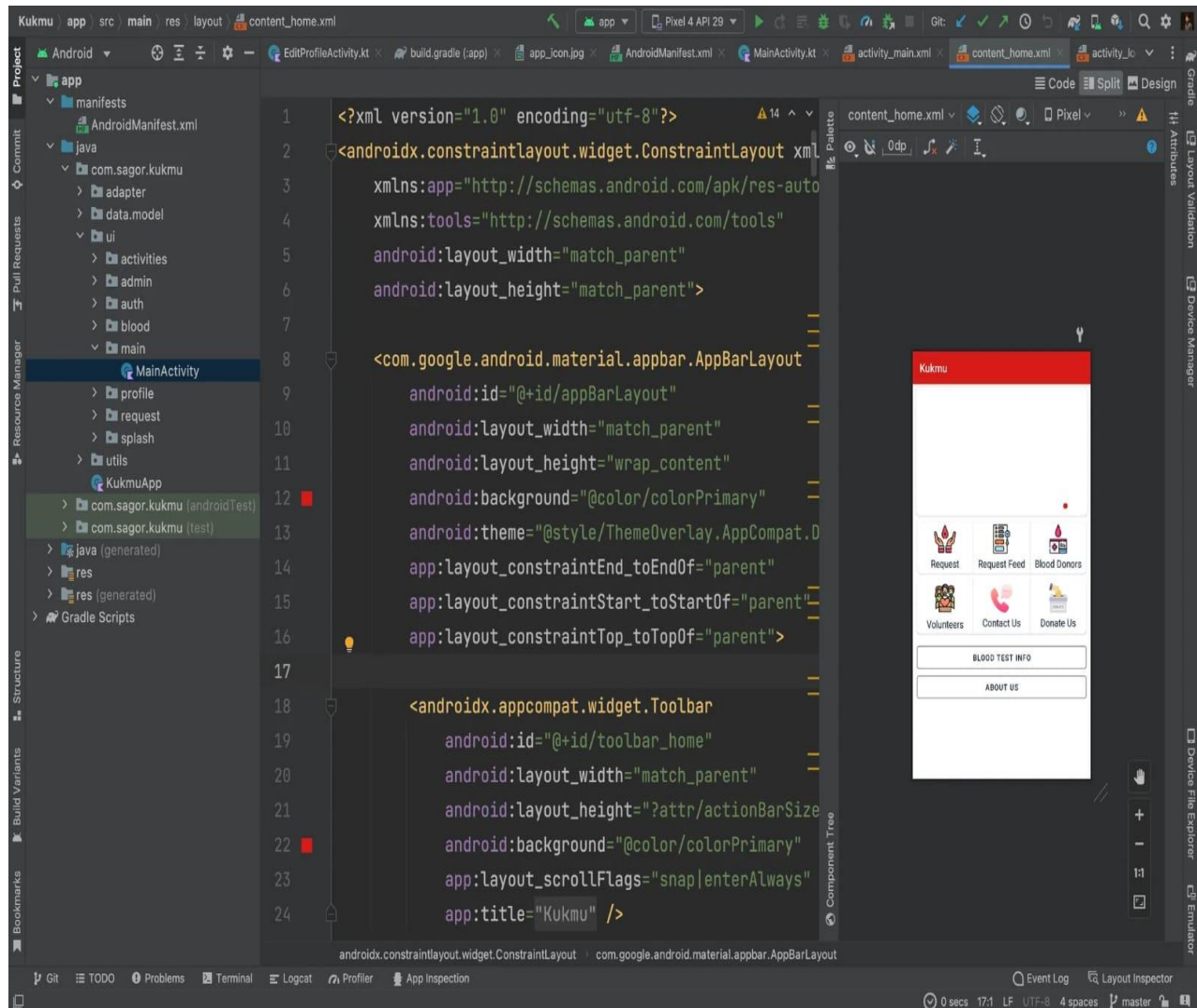
Module testing

System Testing

The final stage of the confirmation interaction is system testing. At this stage, testers determine if indeed the aggregate set of coordinated elements is working optimally. The interaction is vital for the quality life cycle, and testers strive to assess whether the system can fulfill the quality standards and meet all main criteria. [6]

System testing is essential because that ensures that the application satisfies the client's specialized, utilitarian, and business needs.

User Interface code testing:



Invalid authentication code:

in this process for every new registration Google authentication give unique 6 digit code for authentication .if any one can't give correct code they cannot get access or successful registration in this system.

Given test is invalid authentication code that's why system alert them.



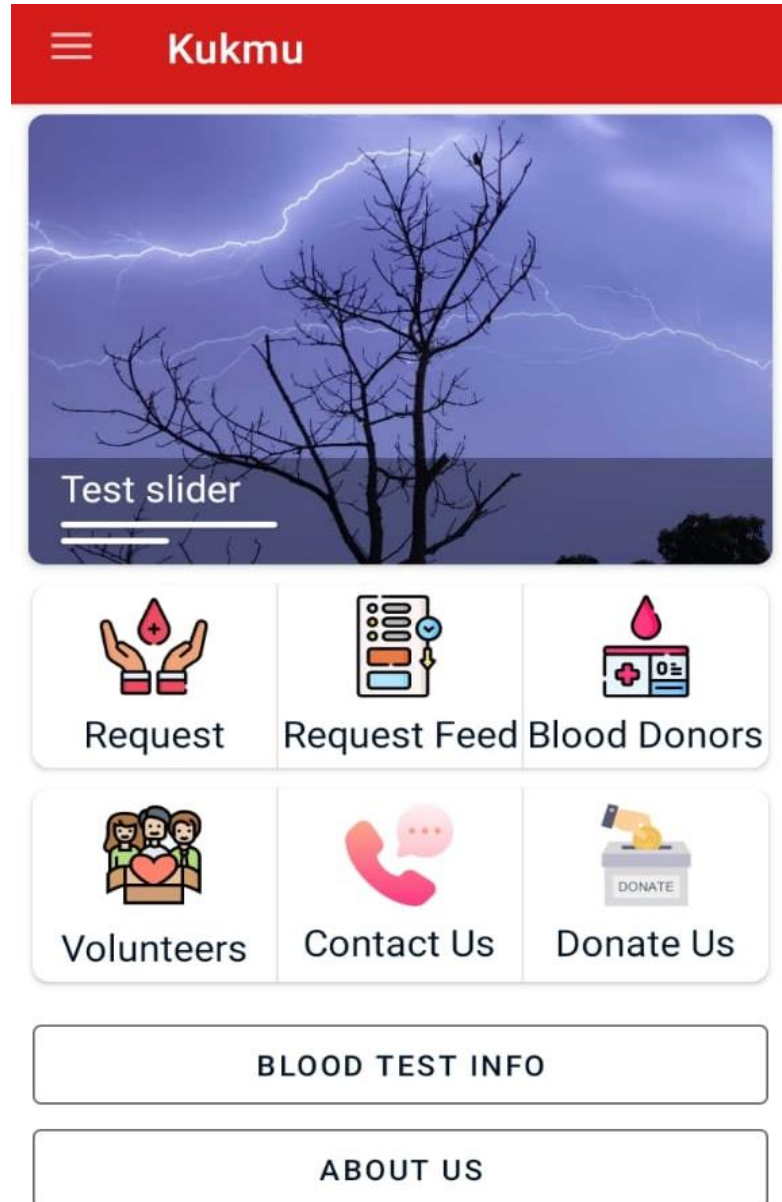
ENTER 11 DIGIT MOBILE NUMBER

You will receive a verification code by
entering your phone number

The sms verification code used to create
the phone auth credential is invalid. Please
resend the verification code sms and be sure
use the verification code provided by the
user.

Valid authentication code:

Given test is valid authentication code that's why system give access to in this system and go to system home interface.



Empty fields:



Nothing to show

CHAPTER 13

Critical Appraisal and evolution

Object that could be met

No system in the world is totally wrapped up. There is reliably a degree of invigorating. I have endeavored to fulfill every fundamental and required targets so a school can run this structure and use it for a really long time. However, there are a couple of expansions which could be met.

They are:

- User interface for school frontend for worldwide view.
- CMS for the UI.
- Different measurable portrayal of information.
- Staff pay the board.

These are a few extensions which could be met however without them the framework can be utilized appropriately on the santal community that all significant goals are satisfied.

Success rate against the object:

Success rate for the entire framework and all goals are acceptable. All connected information is taken and appeared in a superior manner so user can undoubtedly work. Understudy, parent and educator gateways contains all data with respect to them and all blunders are appropriately taken care of.

How much better have been done

The system is already built using Kotlin, XML which made the system updated and faster than any other similar systems. But it would be better if I could include artificial intelligence in the system.

How better is the feature of the solution:

I have made a kukmu mobile app for the farmer. If I use the system socially in our country and train the santal community then I think the features of my application will be useable to all and the goal of the system will be come out.

Which feature could not be touched:

I wanted to add some more feature like AI and maintenance dairy these features are not e touched because of covid-19 pandemic situation and those community are new about this application so I cannot touched more update feature. Otherwise, I would definitely include those features too.

CHAPTER 14

Lessons Learned

Pre project – review – closing:

Pre project I study about this kind of application of internet and study those article and think about my project. I share my idea about many people of santal community and they increase me to doing something of this idea .for completing start to end I always get help form many people. Firstly we decide about the main focus of this project and create a road map to complete the project. The review of this kind of application of this community is very supportive which is really help me to very much and give me more energy to finish this application.

What have I learned:

I have used to completing this project Kotlin programming language and XML. This project taught me many things like building models, class, objects, multiple objects, defining functions, multiple data accessing those are used in this project. And also I taught in this project real time database concept and how to relate with the framework. I have gathered a good knowledge and experience on Kotlin and XML for this project. These types of small technical things or issue are very important to finish this project timely. Those lessons are I gathered from this kukmu project. I also learn who to work in critical moment and how to handle that kind of situation KUKMU project was first real-life project for me.

What problem I have faced

The problem I face in this project those are ... implementation of requirement properly in this application. And the proper requirement collecting for real life application.

CHAPTER 15

Conclusion

Summary of the Project

People in the Santal neighborhood will be able to readily obtain basic medical and educational assistance through this project. And the Kukmu members and Society deal with every minor issue with ease.

Goals of the Project

My goal was to introduce my own Android application with my own people and change their manual processes to digital ones. They work in the most remote areas, performing routine tasks manually.

Success of the Project

This sense of achievement is that I do something which is help my own community to ensure their better life living and connect a large number of people of santal.

Value of the Project

I think this kukmu project is very valuable, because this project is designed very realistic issue of remotest regions santal people. If we can properly use this kukmu system in this santal society it must be helpful for santal community and also our country.

Thank You

Appendices

Appendix-1

The outline for the requirement catalog was addressed in the previous chapter of this article. The following are the remaining sections:

Requirement name: Sign in and sign up (Register).			
Source: User	Please sign off.	Users Priority: must have.	User ID: 01
Functional requirements:	The system must allow users to register for an account.		
Non-Functional requirements:	The program has been created in accordance with the specifications to ensure that no human users are harmed.		
Details:	The target range	Range that is acceptable	Overview
A User account will be created for the user.	As the need of situation	As a result of the requirement of the scenario, an account was created.	Users that join up can receive notification



ENTER 11 DIGIT MOBILE NUMBER

You will receive a verification code by
entering your phone number

+88 11 digit mobile number

SEND VERIFICATION CODE

Name of requirement: Logout			
Source: User is the source.	Please sign off. Users	Priority: Must have	User ID: 01
Functional requirements:	Users will be logged out of their access accounts and from this system.		
Non-functional requirements:	Return to the login page.		
Details:	The target range	Range that is acceptable	Overview
As the scenario requires, the user must have an account.	According to the requirements of the circumstance	According to the requirements of the circumstance	Logging out will terminate the user's current access to the account.



Mojes

+8801310272246

Primary



Profile



Edit Profile



Logout

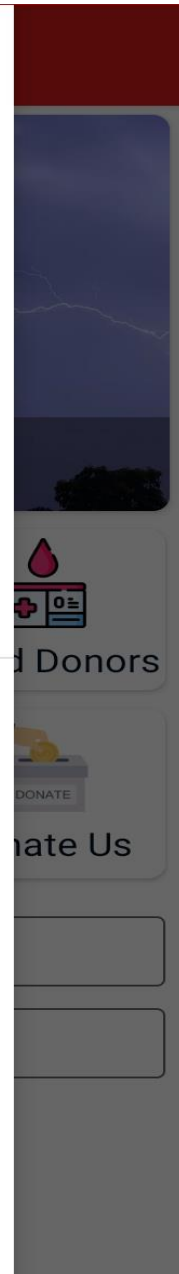
Communicate



Share



Feedback



Appendix – 2

In an earlier part of this statement, I defined the use case. The remaining sections are as described in the following:

See blood donor information's
Brief description: Donor information is visible to registered users.
This use case's actor is : a registered user.
Pre-conditions: You must first register in the system. The system database holds all information provided by the user.
Post Conditions: Successfully see the donor information.



Blood Donors



Demo

O+ • 25 • Male
Dhanmondi



Mojes

B+ • 25 • Male
Dhaka



Mojes Tudu

B+ • 25 • Male
Dhaka



See student application
Brief description: admin panel are see the request
This use case's actor is: admin.
Pre-conditions: It's indeed required to initially register in the system. The system database contains all information provided by the user.
Post Conditions: Successfully see the requested student's information and the criteria of problem

 **Request Feed**

REQUEST STATUS: PENDING

sagor
dhaka
01863822590
B.sc

11 hours ago

REQUEST STATUS: SOLVED

Xyz
Dhaka
1234567890
adasdasd

1 month ago

REFERANCE

[1] Language Maintenance & Shift among migrant Santals in Dhaka. Available:

<https://www.researchgate.net/project/Language-Maintenance-Shift-among-migrant-Santals-in-Dhaka>

[2] "What is Frontend Design? Is that even a thing? – Prototype", Prototype, 2018. [Online]. Available: <https://blog.prototypr.io/what-is-frontend-design-is-that-even-athing-3bafbf6c716e>. [Accessed: 22- Nov- 2018].

[3] World Directory of Minorities and Indigenous Peoples - Bangladesh : Adivasis. Available: <https://www.refworld.org/docid/49749d5841.html#:~:text=The%20most%20populous%20indigenous%20peoples,Santal%20in%20the%20north%20Dwest>.

[4]"Connect to Firebase | Android Developers", Android Developers, 2018. [Online]. Available: <https://developer.android.com/studio/write/firebase>. [Accessed: 22- Nov- 2018].

[5]"Design specification", En.wikipedia.org, 2018. [Online]. Available: https://en.wikipedia.org/wiki/Design_specification. [Accessed: 22- Nov- 2018]. [5] "What is Frontend Design? Is that even a thing? – Prototype", Prototype, 2018. [Online]. Available: <https://blog.prototypr.io/what-is-frontend-design-is-that-even-athing-3bafbf6c716e>. [Accessed: 22- Nov- 2018].

[6]Software Test Life Cycle. Available: <https://pflb.us/blog/software-test-life-cycle-stlc-importance/>

Turnitin Originality Report

Processed on: 27-Nov-2022 12:08 +06

ID: 1963922821

Word Count: 6374

Submitted: 1

183-16-359 By Mojés Sagor

Similarity Index	Similarity by Source
25%	Internet Sources: 23% Publications: 0% Student Papers: 18%

5% match (student papers from 28-Mar-2018)

Class: Article 2018

Assignment: Journal Article

Paper ID: [937594737](#)

3% match (Internet from 21-Nov-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/8657/181-15-10932.pdf?isAllowed=y&sequence=1>

3% match (Internet from 20-Nov-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/5399/181-16-277%20%2819%25%29.pdf?isAllowed=y&sequence=1>

3% match (student papers from 23-Jun-2020)

[Submitted to Daffodil International University on 2020-06-23](#)

2% match (student papers from 13-Nov-2020)

[Submitted to Victorian Institute of Technology on 2020-11-13](#)

1% match (Internet from 26-Oct-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/8436/181-16-255.pdf?isAllowed=y&sequence=1>

1% match (Internet from 26-Oct-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/7718/181-16-282%2c%2010%25.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 26-Oct-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/8435/181-16-310.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 20-Nov-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/4999/P15202%20%2812%29.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 20-Nov-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/4912/P15199%20%2812%29.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 20-Nov-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/5391/181-16-284%20%2811%25%29.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 01-Oct-2021)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/5264/161-15-7104%20%2819%29.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 21-Nov-2022)

<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/8748/181-15-10892.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 26-Oct-2022)
<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/8465/181-16-240.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 01-Oct-2021)
<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/5446/192-25-788%20%2821%25%29.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 26-Oct-2022)
<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/8459/181-16-254.pdf?isAllowed=y&sequence=1>

< 1% match (Internet from 25-Oct-2022)
<http://dspace.daffodilvarsity.edu.bd:8080/bitstream/handle/123456789/5793/191-16-426%20%2818%25%29.pdf?isAllowed=y&sequence=1>

< 1% match (student papers from 25-Jun-2020)
[Submitted to Daffodil International University on 2020-06-25](#)

< 1% match (student papers from 28-Apr-2016)
[Submitted to University of Greenwich on 2016-04-28](#)

< 1% match (student papers from 28-Apr-2016)
[Submitted to University of Greenwich on 2016-04-28](#)

< 1% match (student papers from 13-Jan-2020)
[Submitted to University of Greenwich on 2020-01-13](#)

< 1% match (student papers from 10-Jan-2013)
[Submitted to University of Greenwich on 2013-01-10](#)

< 1% match (student papers from 18-Dec-2017)
[Submitted to University of Greenwich on 2017-12-18](#)

< 1% match (student papers from 18-Dec-2017)
[Submitted to University of Greenwich on 2017-12-18](#)

< 1% match (student papers from 19-Aug-2020)
[Submitted to NCC Education on 2020-08-19](#)

< 1% match (student papers from 19-Aug-2020)
[Submitted to NCC Education on 2020-08-19](#)

< 1% match (student papers from 17-Apr-2017)
[Submitted to Universiti Tunku Abdul Rahman on 2017-04-17](#)

< 1% match (student papers from 24-Jun-2022)
[Submitted to University of Colombo on 2022-06-24](#)

< 1% match (student papers from 13-Nov-2016)
[Submitted to CSU, San Jose State University on 2016-11-13](#)

< 1% match (student papers from 19-Aug-2020) Submitted to NCC Education on 2020-08-19
< 1% match (student papers from 19-Aug-2020) Submitted to NCC Education on 2020-08-19
< 1% match (student papers from 17-Apr-2017) Submitted to Universiti Tunku Abdul Rahman on 2017-04-17
< 1% match (student papers from 24-Jun-2022) Submitted to University of Colombo on 2022-06-24
< 1% match (student papers from 13-Nov-2016) Submitted to CSU, San Jose State University on 2016-11-13
< 1% match (Internet from 09-Dec-2020) https://performancelabus.com/software-test-life-cycle-stlc-importance/
< 1% match (student papers from 25-Sep-2018) Submitted to Southern Cross University on 2018-09-25
< 1% match (student papers from 02-Dec-2021) Submitted to The Maldives National University on 2021-12-02
< 1% match (student papers from 13-Nov-2020) Submitted to University of New South Wales on 2020-11-13
< 1% match (Internet from 10-Dec-2020)

http://docplayer.net/51169586-Carnelian-marine-st-croix-watershed-district-multi-lakes-trmdl.html
< 1% match (Internet from 21-Nov-2020) https://minorityrights.org/minorities/adviasis/
< 1% match (student papers from 06-Nov-2022) Submitted to Aspen University on 2022-11-06
< 1% match (M. Shimizu, J. Oizumi, R. Matsuoka, H. Takeda, H. Okukura, A. Ooya, A. Koike. "DEVELOPMENT OF A NOVEL SYSTEM TO MEASURE A CLEARANCE OF A PASSENGER PLATFORM", ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 2016) M. Shimizu, J. Oizumi, R. Matsuoka, H. Takeda, H. Okukura, A. Ooya, A. Koike. "DEVELOPMENT OF A NOVEL SYSTEM TO MEASURE A CLEARANCE OF A PASSENGER PLATFORM", ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 2016