SMART MONEY CHANGE SOLUTION

BY

MD. RAZU AHMED SHAGIB
ID: 152-15-5583

CLARA CHANDRA GOMES
ID: 152-15-5743

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

Supervised By

DR. SHEAK RASHED HAIDER NOORI
Associate Professor and Associate Head
Department of CSE
Daffodil International University

Co-Supervised By

MR. ABDUS SATTAR
Assistant Professor
Department of CSE
Daffodil International University

DAFFODIL INTERNATIONAL UNIVERSITY

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APPROVAL

This Project/internship titled "**Smart Money Change Solution**", submitted by MD.Razu Ahmed Shagib, ID No: 152-15-5583 and Clara Chandra Gomes, ID No: 152-15-5743 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 November 2019.

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

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Department of Computer Science and Engineering
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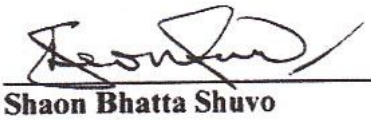

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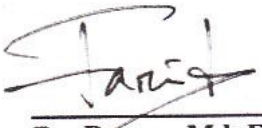

Dr. Dewan Md. Farid — **External Examiner**
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Department of Computer Science and Engineering
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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **DR. SHEAK RASHED HAIDER NOORI, Associate Professor and Associate Head, 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:

DR. SHEAK RASHED HAIDER NOORI
Associate Professor and Associate Head
Department of CSE
Daffodil International University

Co-Supervised by:

MR. ABDUS SATTAR
Assistant professor
Department of CSE
Daffodil International University

Submitted by:

MD. Razu Ahmed Shagib
ID: 152-15-5583
Department of CSE

Clara Chandra Gomes
ID: 152-15-5743
Department of CSE

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ABSTRACT

In recent times, we have found that getting money change has become very difficult for us. We often admit that we are reticulated, especially when we have to change notes of 500/1000 Taka's. We do not get change of 500/1000 Taka's notes when we have to get change for emergency. For which we often have to face embarrassing situations. To solve this problem we have tried to find a smart solution. With which we can easily redeem change of money at an urgent moment. Our system is completely smart phone based and very easy to use. For anyone, through an app, can easily get change of 500/1000 Taka's notes at the emergency moment.

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CHAPTER 1

Introduction

1.1 Introduction

The goal of our project is to solve the problem of people's change money. Particularly 500/1000 Taka's notes can be get change very easily. Our project is totally android based. Basically there are two users in our project, customer/user and agent/provider. Here the customer/user means that who have been using this app for change notes and the agent/provider means that who have been providing the service. Customer/user will provide 1% charge for change which will make the service beautiful, time-efficient and accessible. With a simple registration process anyone can open a customer/user ID.

1.2 Motivation

Now a day's often we facing problems to change 500/100 Taka's notes. Sometimes it's very taught to get any change. Sometimes we are also facing an embarrassing situation. So we have to get a smart solution to overcome the problem.

1.3 Objective

- Easy solution for notes change.
- Avoid embarrassing situation.
- Time saving.
- Easy to use.

1.4 Expected Output

Our goal is to develop automatic system where we can fulfillment exchange domestics' notes. It will be more preferable, we do not have face any problem for change notes.

1.5 Report Layout

This report comprises of five parts, and this area gives knowledge of every one of the five sections.

Chapter 1: Chapter one provides introduction, motivation and expected outcome of the study.

Chapter 2: Related research work is talked about on section two. It likewise gives issue extents of the examination.

Chapter 3: In section three, necessities of the proposed framework, framework design and framework stream chart is given.

Chapter 4: Chapter four of this document describe our proposed system design, implementation and testing.

Chapter 5: Lastly chapter five is on conclusion, limitations, comparisons and future studies.

CHAPTER 2

Background

2.1 Introduction

Our system is an Android App. Now-a-days we have so many useful apps to make our daily life easier, like-FoodPanda for ordering food, Pathao, Uber for riding quickly and so on. Now we are thinking about such an app which will help us to exchange money instantly. For this user has to download the app and register. Then he/she will can exchange money on emergency.

2.2 Related Works

Right now are so many apps for money transaction. Most of them are for money sending, receiving, withdrawing and saving, but no one offers exchange of money. Using others app like bKash, Rocket,Pathao,Uber etc. we can transact money instantly, but we face problem when need the change of 500/1000 tk on time. Even we face this problem when we pay any bill. We have searched if there is any app which can give the solution of this problem, but we couldn’t find any of them can.

2.3 Research Summary

In this investigation, we are trying to solve this problem of changing money of 500/1000 tk.. When we have to give fare at early morning or we have to pay bill in shops we need change of money, but many times we don’t have any change. That time we immediately need changes. So, we are trying make an app by which people can solve this problem. Using this app we can change money with other person who has change of 500/1000 tk and near of us.

2.4 Scope of the Problem

This money change solution focuses on finding a way to help people on emergency.

Management

A major part of our system is depend on management. To managing this system properly management must be carefully and follow every rule and instruction of the system properly.

Cost

We have tried our best to make this app as cheap as possible so it would be easy to use every people who are using smart phones.

Area select

Selecting area is one of the tough problem because finding the change of 500/1000 tk we must select an area that where the person should be nearest and can make the deal within shortest time.

2.5 Challenges

When we considering this undertaking a lot more challenge is fetching, there have some problem here

Process of sending notification:

Sending notification to the smart phone is one of the hard challenge. Because notification send via firebase to the smart phone.

Area select

Selecting area is a big problem, because whenever anyone need the change on emergency he/she should select such an area from where she/he can get the money in shortest time and from nearest area.

Time set

Time setting is a problem. Because on emergency time every one wants to get the solution in hurry. So the user should select such a person who can give him/her the change of money so quickly.

CHAPTER 3

Requirement Specification for the Proposed System

3.1 Introduction

Requirement Specification is consist in this project, who is using this project they can be said this is user friendly. So requirement is android studio, Android mobile, Database. Which combination with hardware and software

3.2 Block Diagram of Proposed System

Smart money change solution is working in this system customer/user and agent/provider. Customer/user is sending request to agent/provider with exchange amount. After accept the request by agent/provider, customer will get a notification of confirmation.

Figure 3.1 describes the block diagram in attendance system

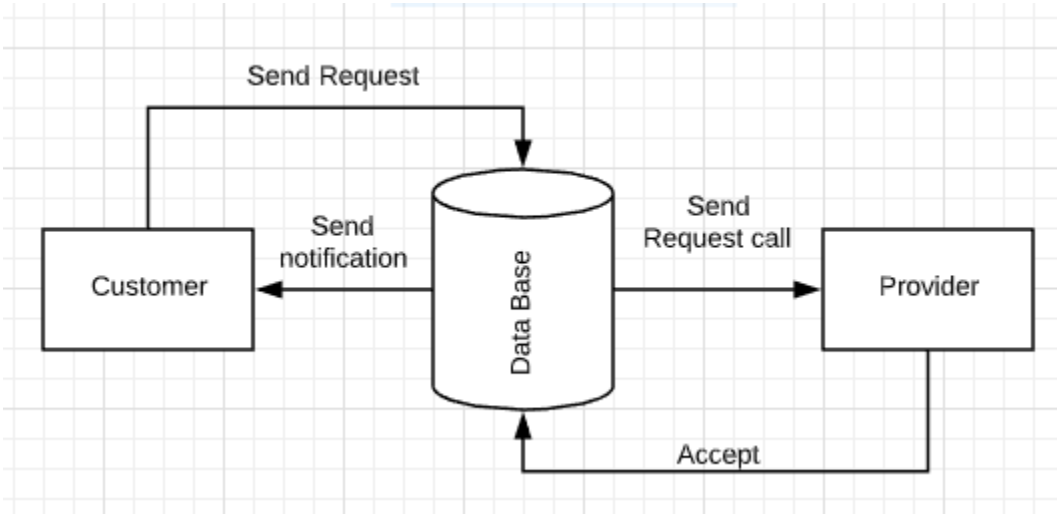

Figure 3.1: Proposed block diagram for smart money change solution

3.3 Program Flow Diagram for The Proposed System

Figure 3.2 in the flow chart of the proposed system. Firstly Customer/User and Agent/Provider will login the apps. Customer/User will send request for exchange and then server will find the nearest (not more than 100m) Agent/Provider. This circle will remind 1mins. And if there no agent/provider is not available then the circle will round again. After accept the request customer will notify and done their transaction. Click on end button transition will complete successfully. Then the system will stop.

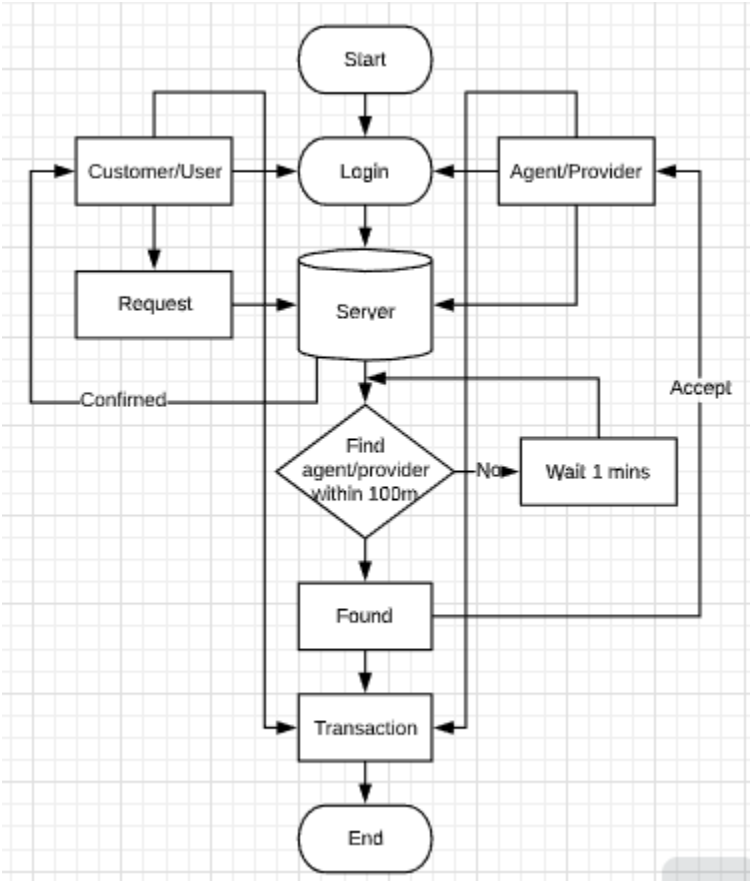

Figure 3.2: Flow chart is working in smart money change solution

3.4 ER Diagram For The Proposed System

Figure 3.3 shows ER diagram of our designed system

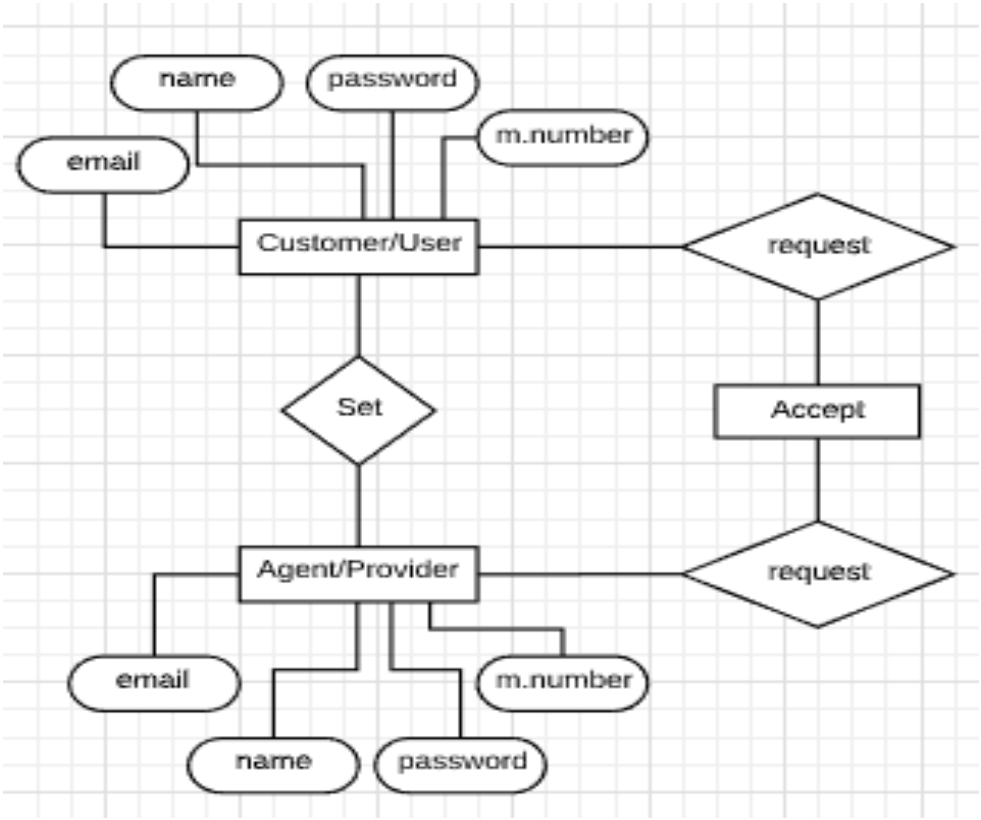

Figure 3.3: ER diagram of our proposed system

3.5 Use Case Diagram

Figure 3.4 shows Use Case diagram of our designed system

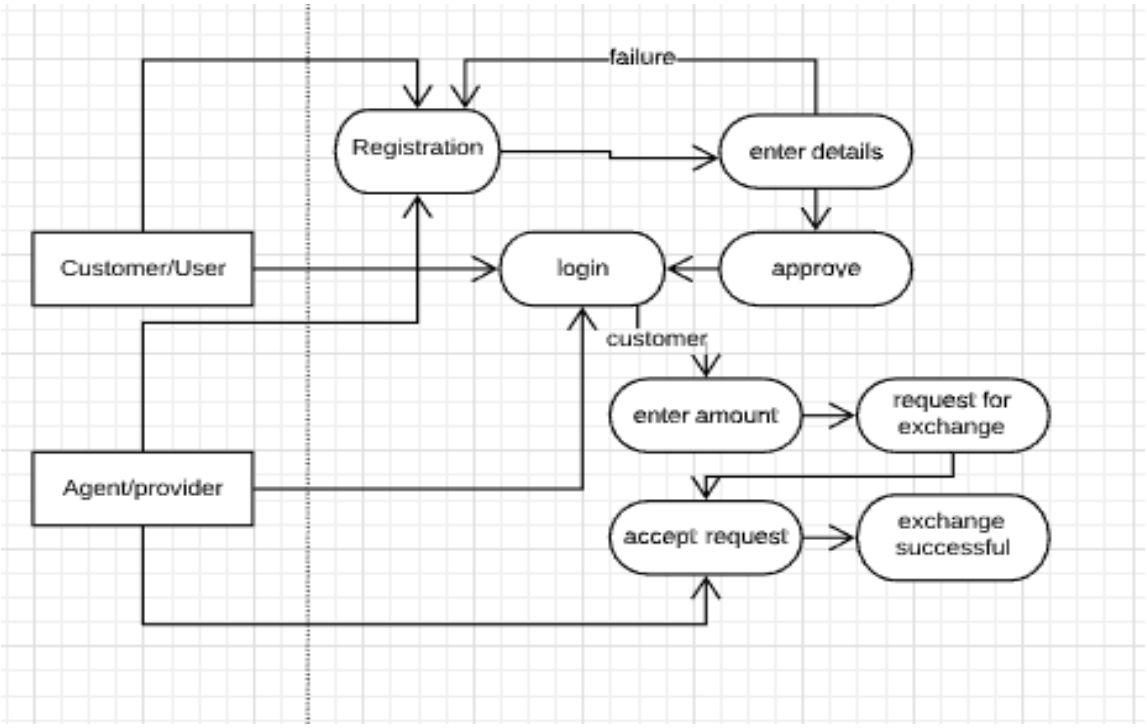

Figure 3.4: Use Case diagram of our proposed system

3.6 Use Case Description

For Registration

Table 3.1 shows use case description for data collection. If every person is register then all data are store in database. That data only use by admin.

Table 3.1: Use Case Description for Registration

UCID	01M
Use Case Name	Registration
Actor	Customer/User, Agent/Provider
Pre-Condition	Null
Normal Flow	1) Customer/User Name, Email, Phone Number. 2) Agent/Provider Name, Email, Phone Number.
Post Condition	Successfully complete

For Login

Table 3.2 shows use case description every person need to be use the system, there have pre-condition must be register For security measure, If any user input invalid name or password that can't be use system. If all right then inter the system.

Table 3.2: Use Case Description for Login

UCID	02M
Use Case Name	Login
Actor	Customer/User, Agent/Provider
Pre-Condition	Complete Registration
Normal Flow	Enter their email and password and login the system
Alternative Flow	Enter an invalid name or password, system display error message
Post Condition	Successfully login.

For View customer/user profile

Table 3.3 shows use case description all the customer/user view of the profile.

Table 3.3: Use Case Description for customer/user profile

UCID	03M
Use Case Name	Customer/User Profile
Actor	Customer/User
Pre-Condition	Login
Normal Flow	1) Customer/User can view their profile. 2) Making request for exchange. 3) View transaction details. 4) Logout.
Alternative Flow	The actors enter an invalid amount.
Post Condition	Success

For View agent/provider profile

Table 3.4 shows use case description all the customer/user view of the profile.

Table 3.4: Use Case Description for Agent/provider profile

UCID	04M
Use Case Name	Agent/Provider Profile
Actor	Agent/Provider
Pre-Condition	Login
Normal Flow	1) Agent/Provider can view their profile. 2) Accept/Decline request. 3) View transaction details. 4) Logout.
Alternative Flow	Cannot accept more request at a time.
Post Condition	Successfully accepted.

For Set Password

Table 3.5 shows use case description for set password. Password needs to use only for customer/user and agent/provider. That time anyone downloads this app and install this that time want a security that can provide authority. Everyone have a specific password. If anyone uninstall this apps that time going to set a new password and open this apps.

Table 3.5: Use Case Description for Set password

UCID	05M
Use Case Name	Set password
Actor	Customer/User, Agent/Provider
Pre-Condition	Registration, Forget password, Uninstall.
Normal Flow	1) Select random number. 2) Provide the customer/user and agent/provider.
Post Condition	Successfully update the security code

3.7 Equipment's for Proposed System

1. Smart Mobile Phone

2. Data connection

Platform used for Android Application

Platform: Android

Language: Java, Xml

Tools: Android Studio, Java SDK, Emulator

Storage: Shared Preference, Firebase

Design: Adobe X

Component: Activity, Fragment

Android Studio

Our project is android based project. We use android studio to develop our application. Android studio in authority IDE (Integrated Development Environment) given by Google to its working framework Android. It is a substitution of Eclipse Android Development Tool (ADT) as essential IDE for Android Development.

CHAPTER 4

System Design Implementation and Testing

4.1 Introduction

Now we will discuss what kind of approach we have been taken to solve this kind of problem and situation. Here our proposed system gives result of expected output

We have been made one app. Where two task will occur simultaneously. One part is for customer/user and another part is for agent/provider. They will select their options as their act.

Customer/user will login as their act and can request for change. Customer will also able to see his all transaction history. Same as agent/provider will receive the request and provide the change. He also able to see his all transaction history.

If anyone uninstall the app, he need to install the app again and need to login. If anyone forgets his password, he needs to request for setup his new password.

For security purpose everyone need to provide their NID/any valid ID card's photo for registration.

4.2 System Design

The main target of this project is eliminating the problem of change notes.

4.3 Implementation of the Proposed System

Figure 4.1 shows registration panel front page

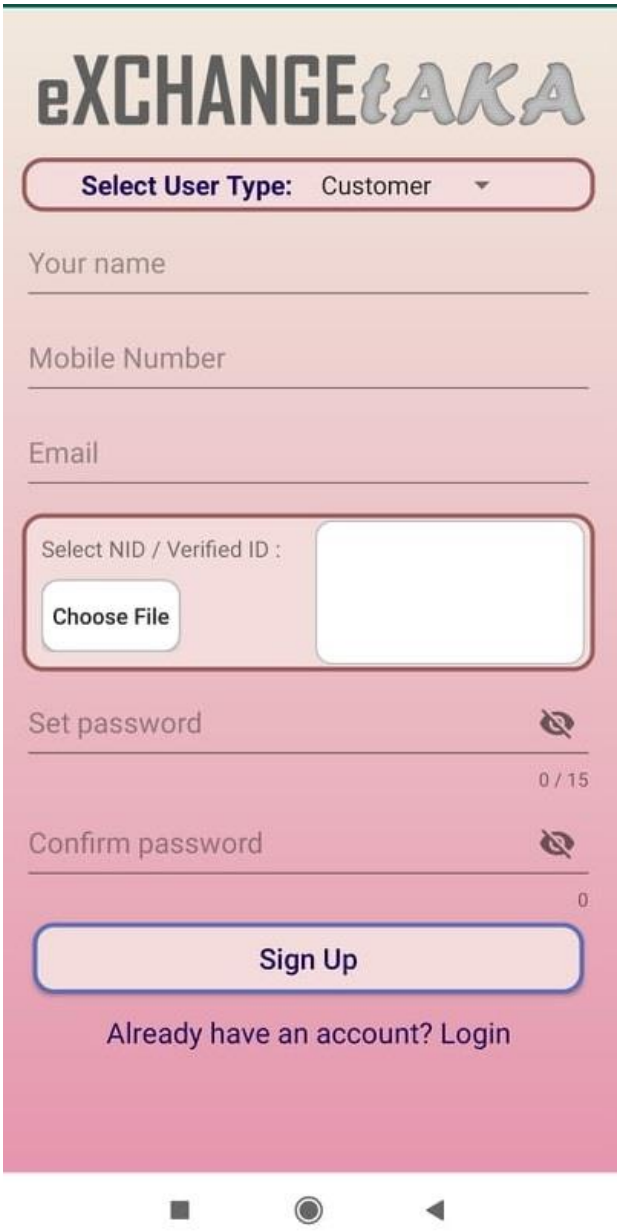

Figure 4.1: Registration panel home page

Figure 4.2 shows login panel front page

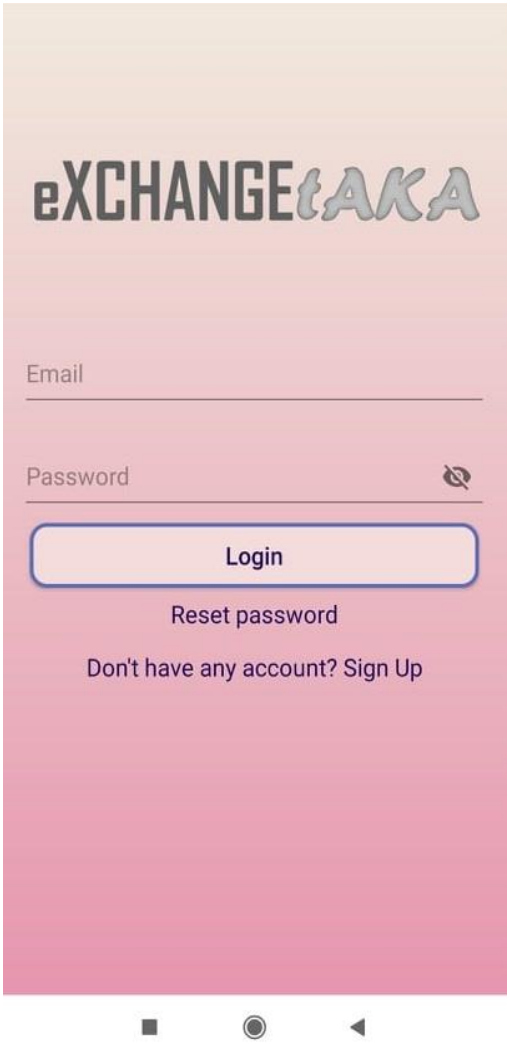

Figure 4.2: Login panel home page

Figure 4.3 shows customer/user front page

Figure 4.3: Customer/user panel

Figure 4.4 shows agent/provider front page

Figure 4.4: Agent/provider panel

Figure 4.5 shows customer/user request list

Figure 4.5: Customer/User request list

Figure 4.6 shows agent/provider request list

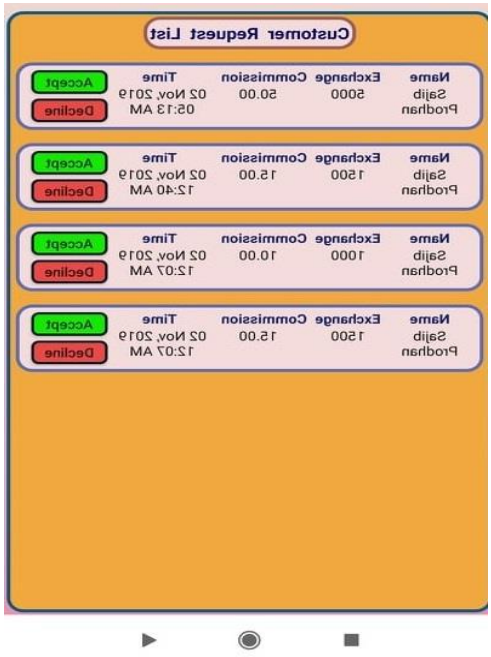

Figure 4.6: Agent/provider request list

4.4 Testing

Integration testing

Integration testing known as a methodology where individual modules are combined and tested as group. Usually it Coordination testing is a product testing strategy used to test singular programming parts or units of code to check connection between different programming segments and distinguish interface absconds. Parts are tried as a solitary gathering or composed in an iterative way. After the incorporation testing has been performed on the parts, they are readily available for system testing and it occurs after unit testing phase.

Table 4.1 shows test cases expected result and observe result for individual module of the system.

Table 4.1: Integration Test

Test Case	Expected Result	Observed Result	Test Result
Registration	Customer/user and agent/ provider get registered.	Get registered in proper time	Pass
Customer/user can send request	Customer can send request properly.	Customer's sent request added on his history.	Pass
Agent/Provider can accept request	Agent/provider can accept request properly.	Provider's accepted request added on his history.	Pass
Agent/Provider can decline request	Agent/provider can decline request properly.	Provider's declined request added on his history.	Pass
Actors can see their transaction history	Actors can see their transactions history on their panel.	When any actor makes any transaction that successfully added their panel.	Pass

System testing

System testing of programming or equipment implies the testing of a total and coordinated system to quantify system's consistence with its predefined prerequisite. The fundamental intension of system testing is to discover principle immateriality between the units that are incorporated together.

Table 4.2 shows test cases, expected result and observe result of system testing

Table 4.2: System Test

Test Case	Expected Outcome	Observed Outcome	Test Result
Customer/user should login app with email and password	Customer/user can login the app	Can login	Pass
Customer/user should request for change	Student can request for change.	Can request	Pass
Customer/user should view their transaction	Customer/user can view their transaction.	Can view transaction	Pass
Agent/provider should login app with email and password	Agent/provider can login the app	Can login	Pass
Agent/provider should accept request	Agent/provider can accept request.	Can accept	Pass
Agent/provider should view their transaction	Agent/provider can view their transaction.	Can view transaction	Pass

CHAPTER 5

Conclusion, Implication and Future Research

5.1 Conclusion

In this study, we proposed and implemented a smart money changing system using app and data for general people. This system will save time and help people on their emergency. As people will use this app through their smart phones, they can easily access from anywhere. This app will not only help people by changing money but also safe them from any kind of harassment.

5.2 Limitations

There are some limitations.

- User only can use this app through his/her android mobiles.
- User can work with it only there Wi-Fi or Data connection with his/her mobiles.

5.3 Future work

We have planned to make this app easier and usable to everyone in the next stage. We are planning to develop the internal privacy and security system. We also have planned to add Google map and make call from app to app. Our present work has some limitations. We will fix the limitations. We have the thought about offline users.

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