SUDAN UNIVERSITY OF SCIENCE & TECHNOLOGY

FACULTY OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DEPARTURTMENT OF COMPUTER SCIENCE

Online mobile recharge portal System

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PREPARED BY

STUDENT: Mohamed Luai Osman

STUDENT: Osman Ali Widaa

SUPERVISOR:

A.alshareef hago

SUPERVISOR SIGNATURE: **DATE:**

…… **19 October/2017**

October 2017

الآيـة

قال الله تعالى:

{هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاء وَالْقَمَرَ نُورًا وَقَدَّرَهُ مَنَازِلَ لِتَعْلَمُواْ عَدَدَ السِّنِينَ وَالْحِسَابَ مَا خَلَقَ اللّهُ ذَلِكَ إِلاَّ بِالْحَقِّ يُفَصِّلُ الآيَاتِ لِقَوْمٍ يَعْلَمُونَ}

صدق الله العظيم

سورة يونس- الآية (5)

الإهداء

إلى من علمونا حروفا من ذهب وكلمات من درر وعبارات من

أسمي واجلي عبارات في العلم إلى من صاغوا لنا عملهم حروفا

ومن فكرهم منارة تنير لنا سيرة العلم والنجاح إلى

أساتذتنا الكرام ...

إلى من سرنا سويا ونحن نشق الطريق معا نحو النجاح والابداع إلى

من تكاتفنا يدا بيد ونحن نقطف زهرة وتلعمنا إلى
اصدقائي وزملائي

الشكر و العرفان

الشكر أولاً وأخيراً لله العزيز القدير الذي بمشيئته تتم الأعمال ومن ثم نتقدم بأسمى آيات الشكر والتقدير.

ولكل من قدم لنا يد العون لإتمام هذا البحث وكل الذين وقفوا إلى جانبنا بالنصح والإرشاد والتشجيع لإكمال هذا العمل و لهم منا كل إمتنان، ونخص بالشكر أولئك الذين كان لهم الفضل الأكبر بعد الله وهم:

كل من لم يبخل علينا بنصائحه وتوجيهاتهاوأفكاره النيره التي أفادتنا كثيراً فكان نبراسا يضيئ لنا الطريق والتي تعجز الكلمات عن إيفائهم الشكر والتقدير.

الشكر لكل الأساتذة الأعزاء بجامعة السودان للعلوم والتكنولوجيا لما بذلوه من جهد لتحصيلنا للعلم والمعرفة.

الشكر موصول للذين ساعدونا في إكمال وإخراج هذا الجهد المتواضع.

نسأل الله أن يعيننا على مكافأتهم بأحسن مما قدموا لنا وجزاهم الله عنا كل خير.

المستخلص

مشروع Online Mobile Recharge صمم لتمكين الناس من اعادة شحن هواتفهم حيثما كانو خلال دقيقة واحدة.

المشروع يساعد كل من المستخدم و شركات الاتصال وكذلك البنوك,فبالنسبة للمستخدم سيوفر له الوقت والجهد فبدلا من ان يذهب الى اماكن شراء الرصيد يمكن ان يشحن الهاتف عن طريق هذا النظام بسهولة وفي اي وقت كان .

اما بالنسبة لشبكات الاتصال فهو يساعد في زيادة نسبة بيع الرصيد .

وفي البنوك تكمن الفائدة في اخذ عمولة محدودة من قيمة الرصيد الذي تم شحنه من حساب المستخدم.

وقد تم تصميم المشروع بواسطة مجموعة من البرامج منها Android Studio لبناء التطبيق باستخدام لغة الجافا و Xml .

اما صفحة الويب تم تصميمها باستخدام عدة لغات منها PHP,HTML , Java Script بالاضافة الى استخدام Framework Laravel 5.4

و من حيث التحليل إستخدمنا لغة النمذجة الموحدة.

ABSTRACT

Online Mobile Recharge Project designed to enable people refill their phone wherever you are within 1 minute.

The project will help each user and Telecommunication companies and also banks, for users its can help them saving their effort and time; they can recharge their phones balance using this system anytime anywhere in easy way.

For Telecommunication companies help them to increase their sailing percentage.

The system is also helpful for banks by taking a commission in any successful recharge transaction from user account.

The system designed by group of program like android studio using java language and XML.

The web page designed by many languages like PHP, HTML, java script and laravel 5.4 as a framework.

In terms of analysis of where we used the Unified Modeling Language.

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CHAPTER ONE
Introduction

1.1 Introduction:

Now a days the world is living a fast and easy a of evolution of technique and economic revelation that makes the world like a small village with different kind of technologies that connect the each part of the world with through picture, voice, videos, programs, and systems with all its aspects.

The e-commerce has digitized the payment process, the payment details are sent over open networks with no physical contact between the buyer and the seller.

The process of online mobile recharge plays a vital role in the economy of telecommunication companies of the system.

The mobile is the one of very common devices that people have with them, with passing of years, mobile has become a necessity against luxury. As of today scenarios, almost everyone does have a mobile.

With the increase in popularity of mobile phones, many new mobile handset manufactures and mobile operators have come

up and introduced many attractive schemes and offers. With the easy availability of mobile recharge, most of the people are tracked against them as the technology grows at a rapid pace, where we switch from traditional commerce to e-commerce, so our requirements. To save the valuable time of subscribers.

Online Mobile Recharge is a web-based application developed in PHP to recharge mobile phones. The project focuses on providing an easy and reliable platform to recharge mobile of any telecommunication company through online without buying recharge card.

The users of the system can recharge their prepaid mobile phones from anywhere at any time.

The proposed project for recharging mobiles developed to automate the mobile recharging process. It roots out the manual card system of recharge and introduces a new and genuine online recharge process.

1.2 Problem Statement: -

The existing manual recharge system has many drawbacks, it is time consuming and Unavailability of recharge cards, etc.

These drawbacks are creating a trouble in using mobile phones.

One of solution to these problems is to facilitate online mobile recharge service.

1.3 Research Objective:

The goal of the project is to design and develop a web-based application for charging online in an easy and fast way and without going anywhere and whenever you want.

1.4 Research Question:

Is it easy to use?

Is it confidential?

Does is it cost any extra money?

1.5 Expected Contribution:

After the execution of the application and Procedure tests to verify the functions required of it has been reached:

- help people recharge their phones easily
- help the telecommunication selling their credit
- help banks getting commotion
- Online mobile recharge system

1.6 Research Importance:

The proposed project for recharging mobile developed to automate the mobile recharging process.

To improve the services provided in telecommunication in Sudan and try to catch up with the development in this area.

It roots out the manual card system of recharge and introduces a new and genuine online recharge process.

1.7 Research Scope:

The system can adapt with android and web browser, and also recharge all the three telecommunication company in Sudan Zain, Mtn and Sudani from three different banks Khartoum bank, Faisal and Omdurman bank.

CHAPTER TWO
Related studies

2.1 Introduction:

This Chapter is about the Payment Method, the steps of Payment Method, about Regulations Old, about the current and proposed system.

2.2 Payment Method :

One of the most important problems facing the electronic transaction systems is the payment method that will be used, and so That is far from the customer service center, therefore there must be a reliable way to deliver the service cost to the company and this Method entails having a party intermediary between the company and the client to help ease delivery of the money and that party must To be trusted by the parties above, and globally there are providers of the service such as (master card, visa) but These cards are not available to the Sudanese, we found a way to help in the payment process mediated by the bank.

2.3 Steps of Payment Method

The payment method start with entering the serial number and it will automatically connect you with your bank account, the payment will happen.

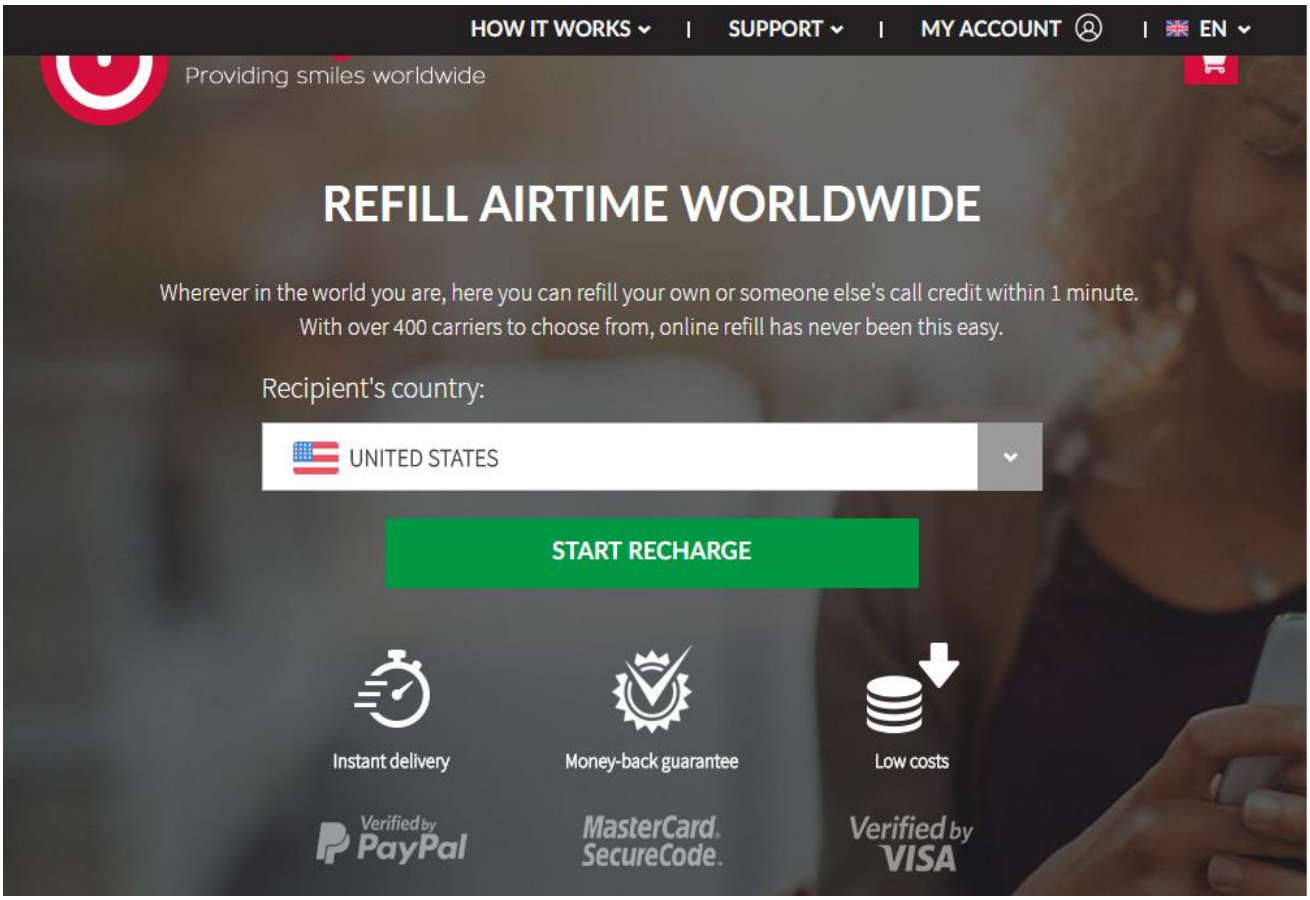
If you have enough money in your account if not it won't do the transaction and it will cost you 10% commission from any successful transaction.

2.4 Related studies

2.4.1 www.recharge.com

Recharge.com is website that recharges your phone credit using credit card you can refill call credit of 400 carriers in more than 140 countries around the world and Sudan not of them.

Firstly you choose the country and write your phone number then choose a carrier and choose the desired product after that will appear order summary you will pay by Fill in your email address and choosing a payment card such as visa or other and Fill in the payment details also Sudan doesn't support cards. After you enter a successful detail credit will appear on the phone immediately.

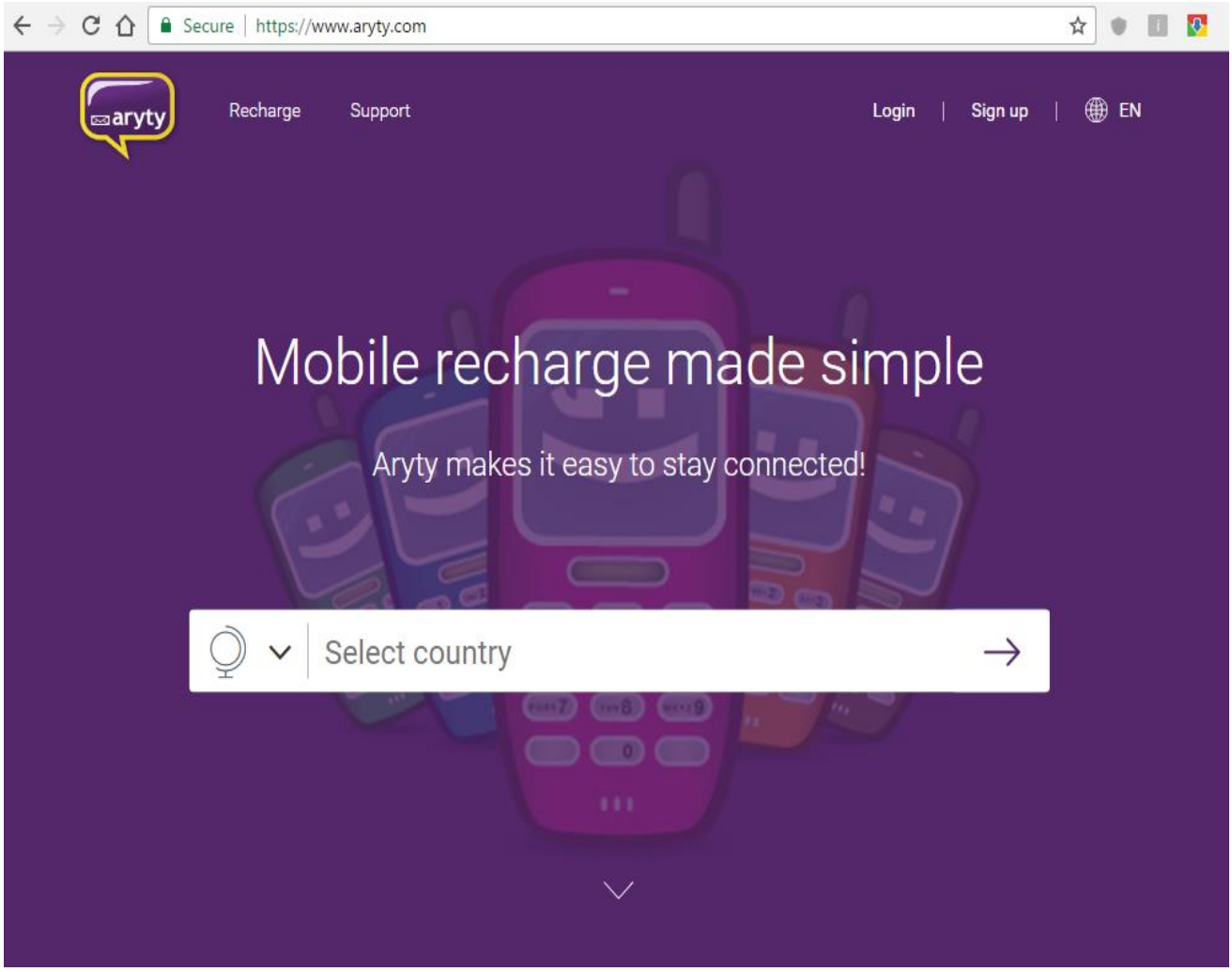


Figure(2. 1) Recharge.com

2.4.2 www.aryty.com

Based in dublin Ireland offer a service mobile recharge to prepaid phones in over 130 countries across 400 operators.

Same as recharge.com but in this site you don't choose your carrier the site will choose it automatically by the phone number and the country and you should have an account to complete the recharge operation.



2.4.3 mBok :-

Mobile payment service is the electronic payment process using electronic funds and does not require a bank account.
Designed to help bank customers accessing their bank accounts or mobile number accounts easily.
mBOK? What is the mobile payment service?

Mobile payment service it's a new service from bank of Khartoum its allows customers to open mobile account by a correct phone number, now available without going anywhere just download the app for android or apple.

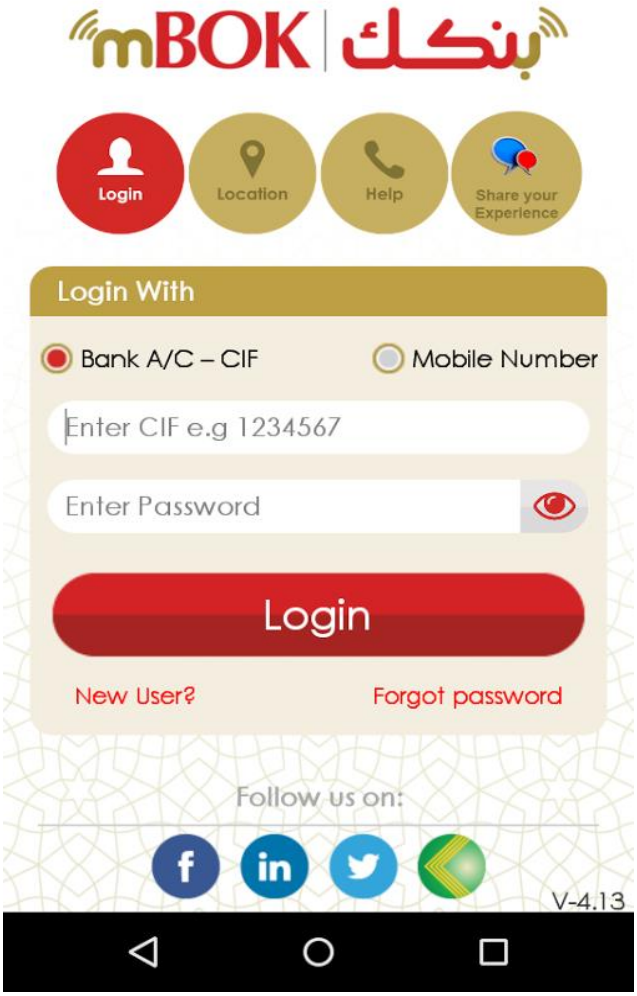
The mobile account work as any other bank account.

The benefits of mBOK:

- Online Recharge (Zain,Mtn and Sudani)for both postpaid and prepaid.
- Other bank services.

Only for bank of Khartoum customers they can recharge their phone and other services.

In our application you can use more than one bank.



Figure(2. 2) mBOK

2.5 Similarities and differences:

All the related studies can charge the mobile phones anytime from anywhere with online payment methods.

Recharge.com and aryty.com covers more than 120 countries around the world using payment methods that unavailable in Sudan such as (visa cards, paypal, master cards etc.)

mBok is available only in Sudan for bank Khartoum customers only, but our project charge phone with three different banks in Sudan.

CHAPTER THREE

System

TECHNIQUES & ANALYSIS

3 Introduction:

This chapter is divided into two sections, the first section describe the tools and technique that we using in online mobile recharge system, the second section we analysis the system by using UML modeling language.

3.2 HTML (Hypertext Markup Language):

HTML is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page. The markup tells the Web browser how to display a Web page's words and images for the user.

3.2.1 Advantages:

- HTML is easy to use and understand.
- All browser support HTML
- HTML is free
- Most development tools support HTML.
- HTML is most search engine friendly.

3.3 Cascading Style Sheets (CSS):

CSS is a style sheet language used for describing the presentation of a document written in a markup language.

3.3.1 Advantages:

1- Easier to maintain and update.

2- Greater consistency in design.

3- More formatting options.

4- Greater accessibility.

3.4 MYSQL Server:

MySQL is an open relational database management system (RDBMS), it was the world's second most widely used RDBMS, and the most widely used open-source client–server mode RDBMS.

3.4.1 Advantage:

1- Scalability and Flexibility.

2- High Performance.

3- High Availability.

4- Robust Transactional Support.

5- Web and Data Warehouse Strengths.

3.5 PHP (Hypertext Preprocessor):

PHP is a script language and interpreter that is freely available and used primarily on Linux Web servers. PHP, originally derived from Personal Home Page Tools, PHP is free and offered under an open source license.

3.5.1 Advantages:

1- FREE OF COST:

PHP is open source.

2- PLATFORM INDEPENDENT:

It can be run on all major operating systems like Linux, UNIX, Mac OS and Windows.

3- SUPPORTS ALL MAJOR WEB SERVERS:

It supports all major web servers like Apache, Microsoft IIS, Netscape, personal webserver, I Planet server, etc.

4- SECURE.

5- PROVEN AND TRUSTED.

3.6 JavaScript

The language was first implemented by Netscape Communications Corp. in Netscape Navigator 2 beta (1995). JavaScript is different from the Java language (developed in the 1990s at Sun Microsystems). However, the two languages can interoperate well. Client-side JavaScript programs, or scripts, can be embedded directly in HTML source of Web pages.

It is a programming language used to make web pages interactive. It is what gives a page life, the interactive elements and animation that engage a user. If you've ever used a search box on a home page, checked a live baseball score on a news site or watched a video, JavaScript is probably running through it.

3.7 Laravel:

Laravel is a web application framework of PHP, developed by Taylor Otwell. It's an open source framework that will allow you to build large & complex web applications easily, is based on MVC Architecture.

Laravel provides facility for Unit Testing and it runs many tests to ensure stability of application.

3.8 Android:

Android is One of the most widely used mobile OS these days it's an open source operating system with a Linux-based, It can be developed by any one.

3.8.1 Advantages:

The biggest advantage of Android is that it is an open source Multitasking, Widget and Easy to Integrate.

3.9 Unified Modeling Language (UML):

The Unified Modeling Language (UML) is a general-purpose visual modeling language, consisting of an integrated set of diagrams that is used to specify, visualize, construct, and document the artifacts of a software system. It captures decisions and understanding about systems that must be constructed. It is used to understand, design, browse, configure, maintain, and control information about such systems.

3.9.1 Use Case Diagrams

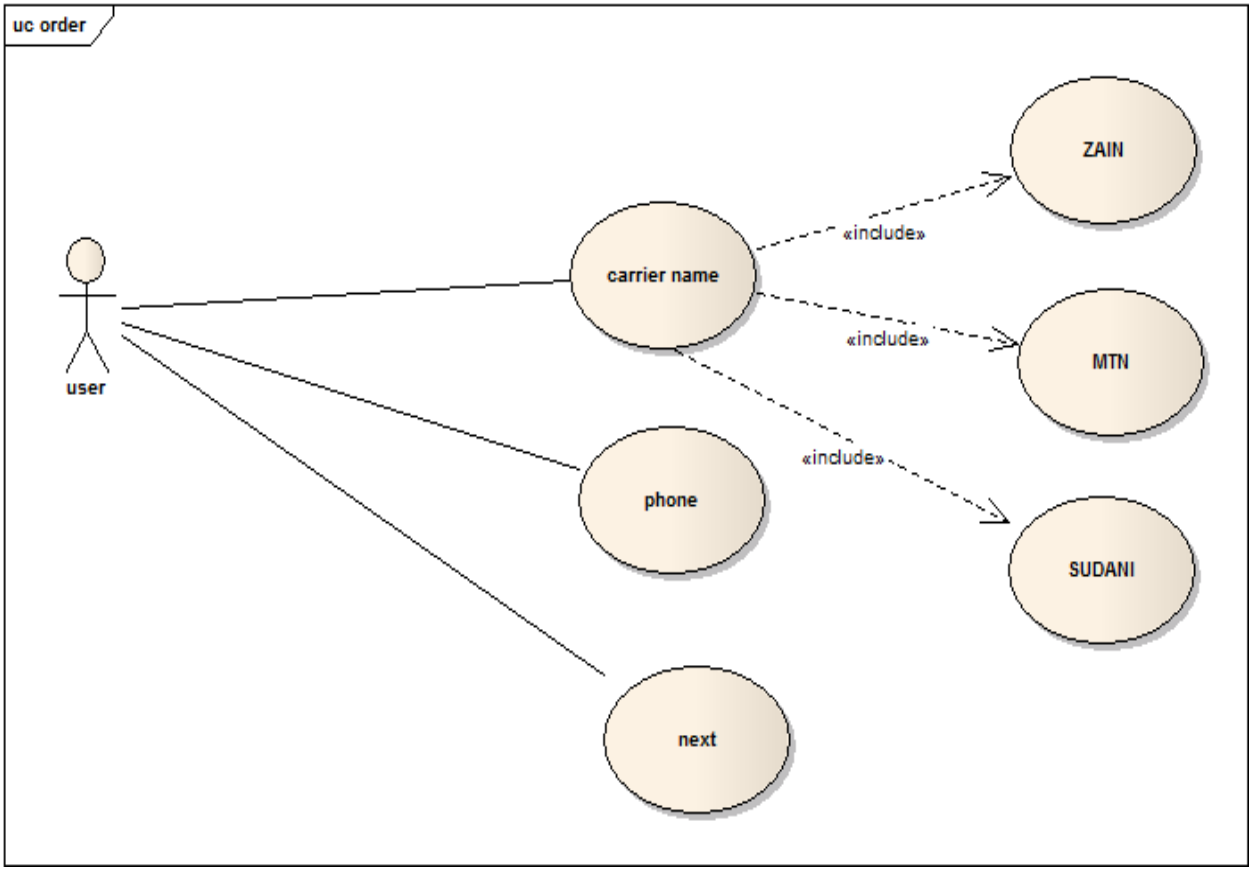
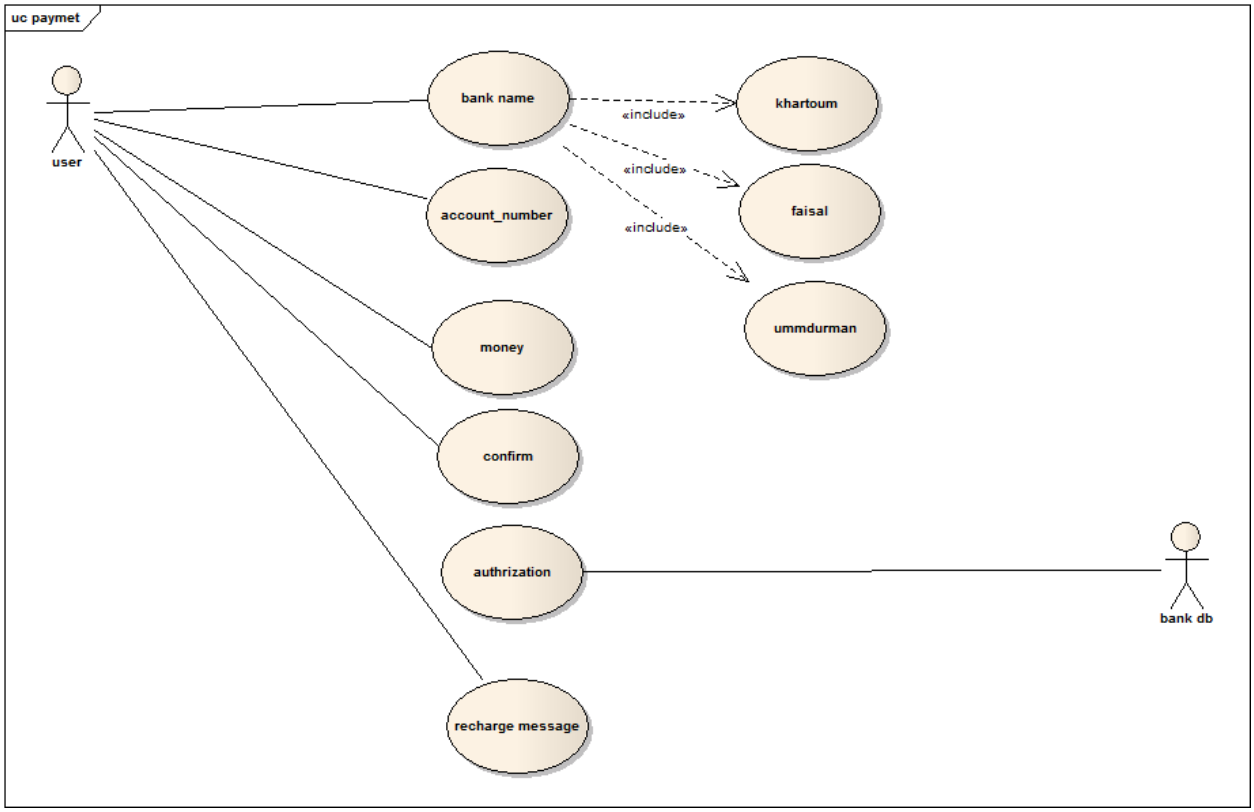
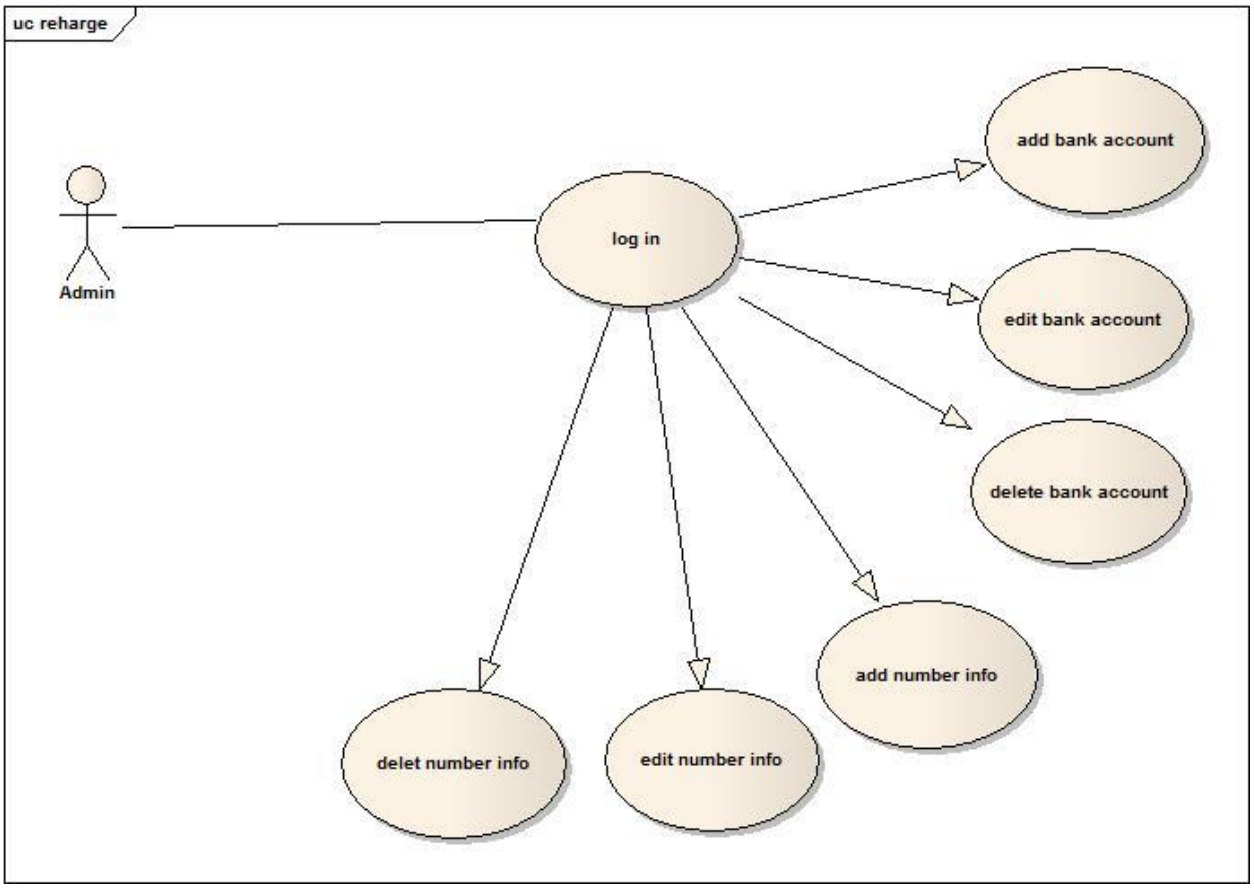


Figure (3. 1)(Choosing carrier and entering number for user)

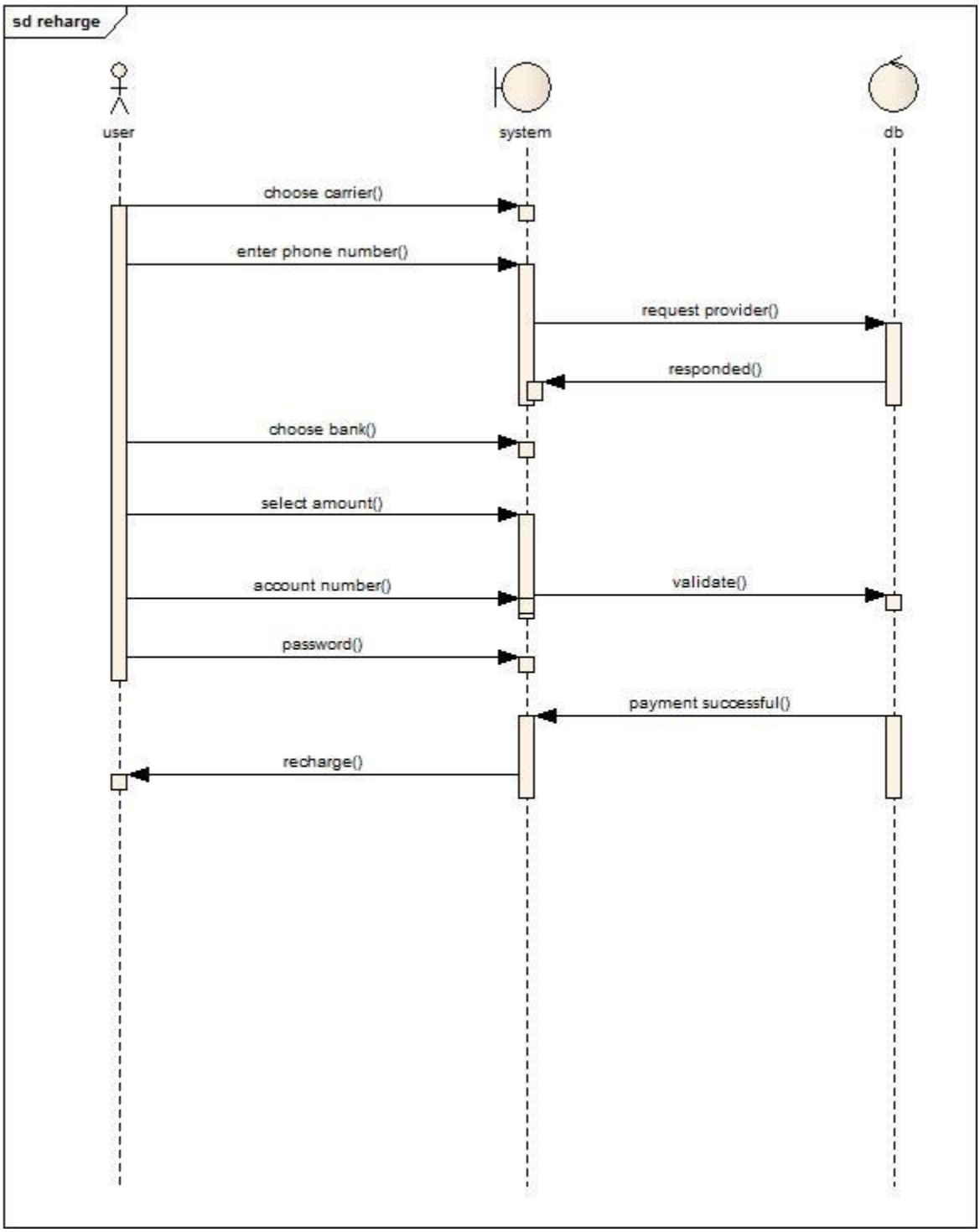


Figure(3. 2) (choosing bank)



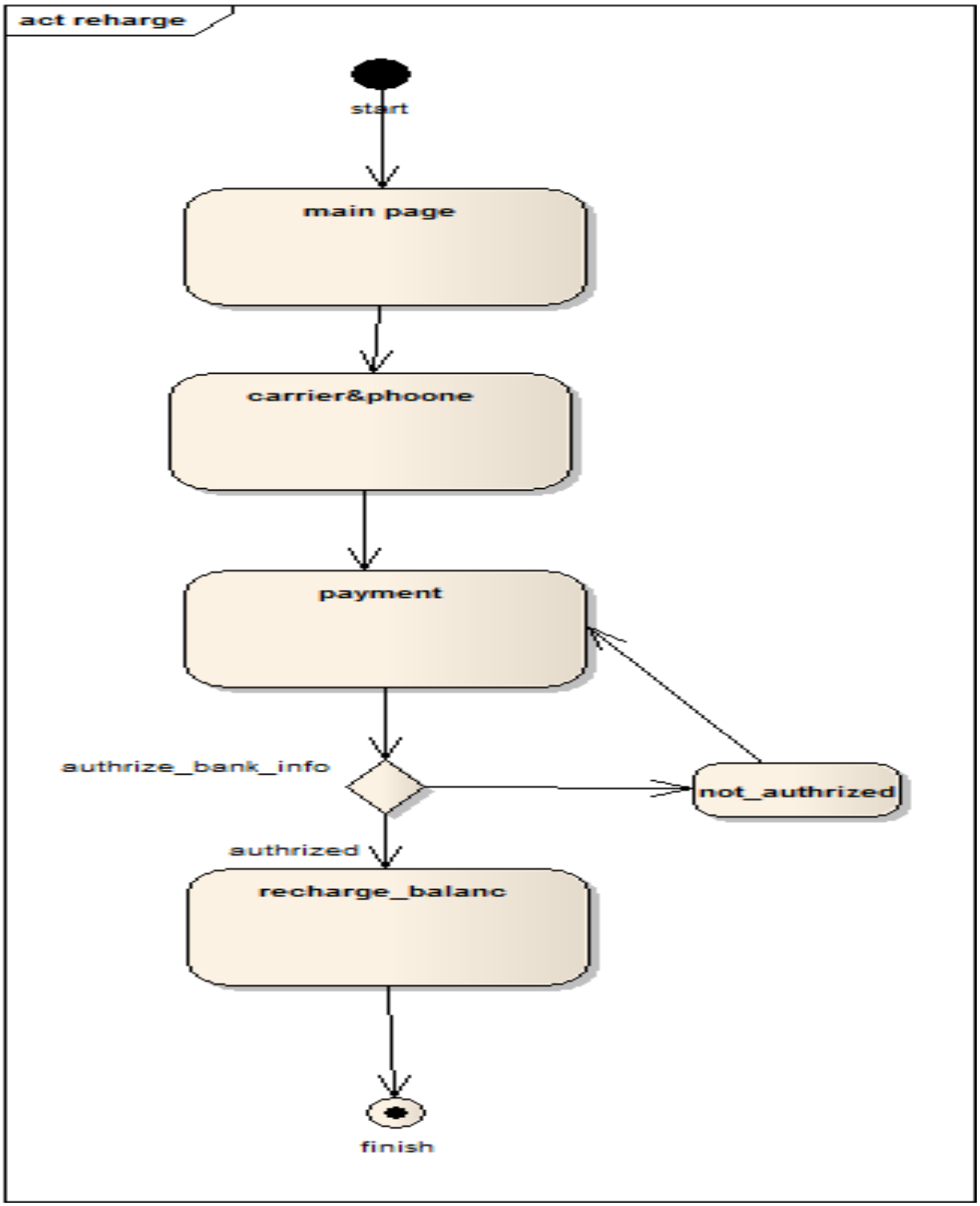
Figure(3. 3) (admin)

3.9.2 Sequence Diagram



Figure(3. 4) (all transactions)

3.9.3 Activity Diagram



Figure(3. 5) (all transaction)

CHAPTER FOUR

Implementation

4.1 Introduction:

These chapter contents of full description of the proposed system which is easy to use and confidential.

4.2 Security:

Any bank account has security password.
We use SSL and md5 algorithms for password encryption and between banks transaction
And we also use E-mail to notifying wrong password more than 3 times

4.3 Interfaces:

4.3.1 Administrator:

The admin is able to make the following actions:

- Show all accounts information's
- Show all carriers information's.
- Add, delete and modify account.
- Add, delete and modify carriers.

4.3.1.1 Admin login:

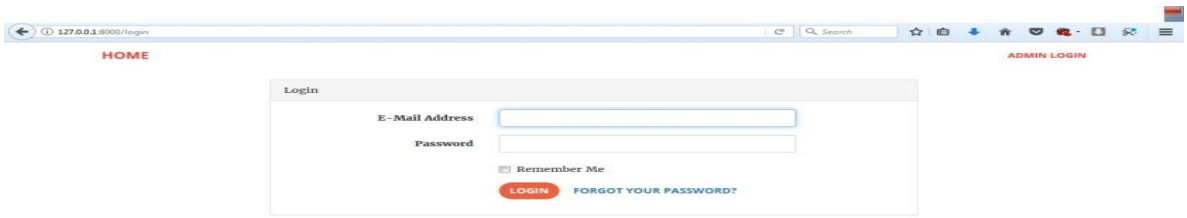


Figure (4. 1) Admin login

4.3.1.2 Admin accounts:

All Accounts' information in different banks

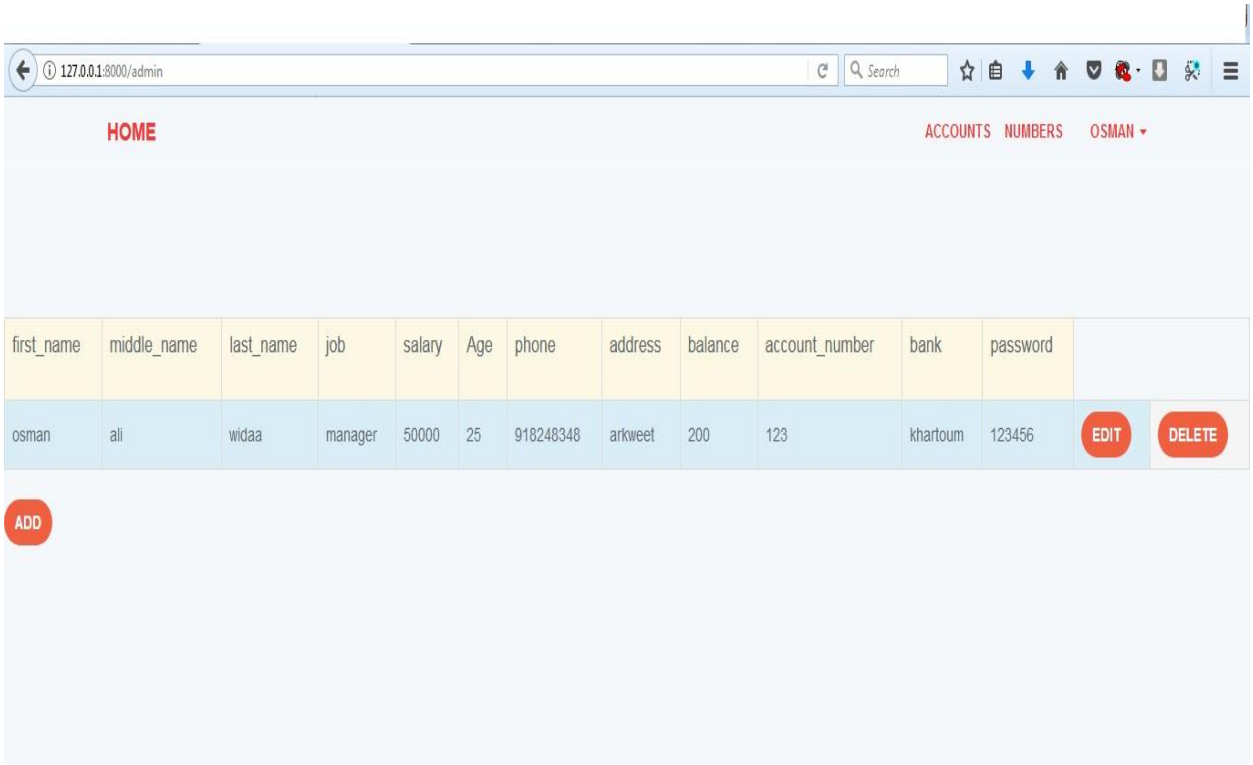


Figure (4. 2) Bank accounts

4.3.1.3 Numbers:

All Carriers' information of customers in each telecommunication company

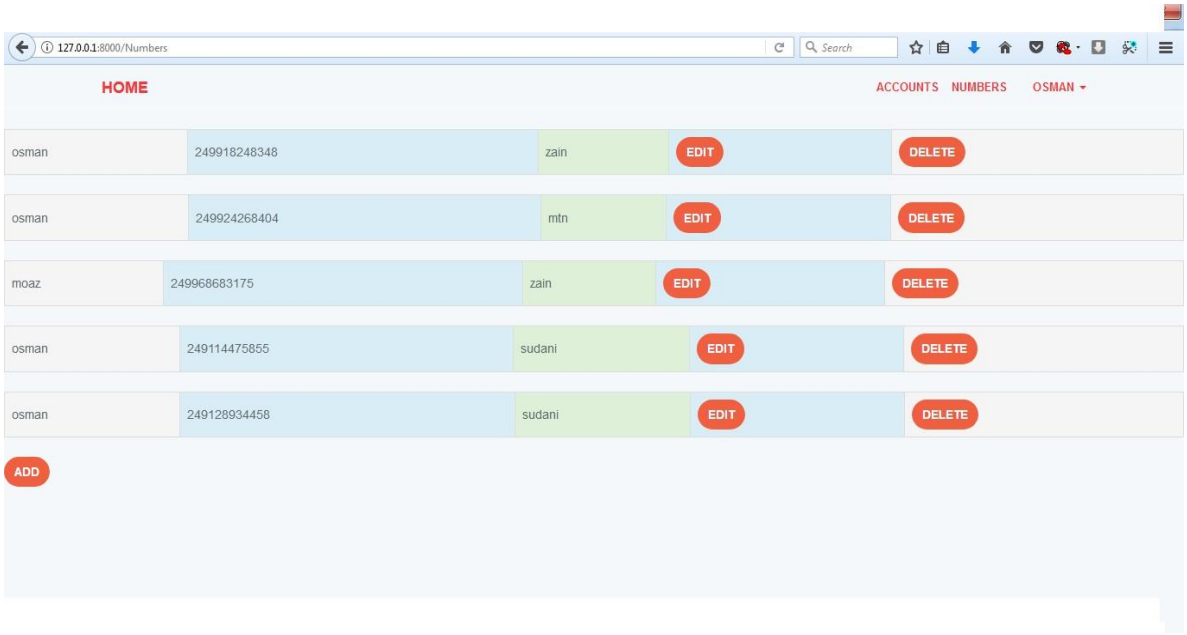


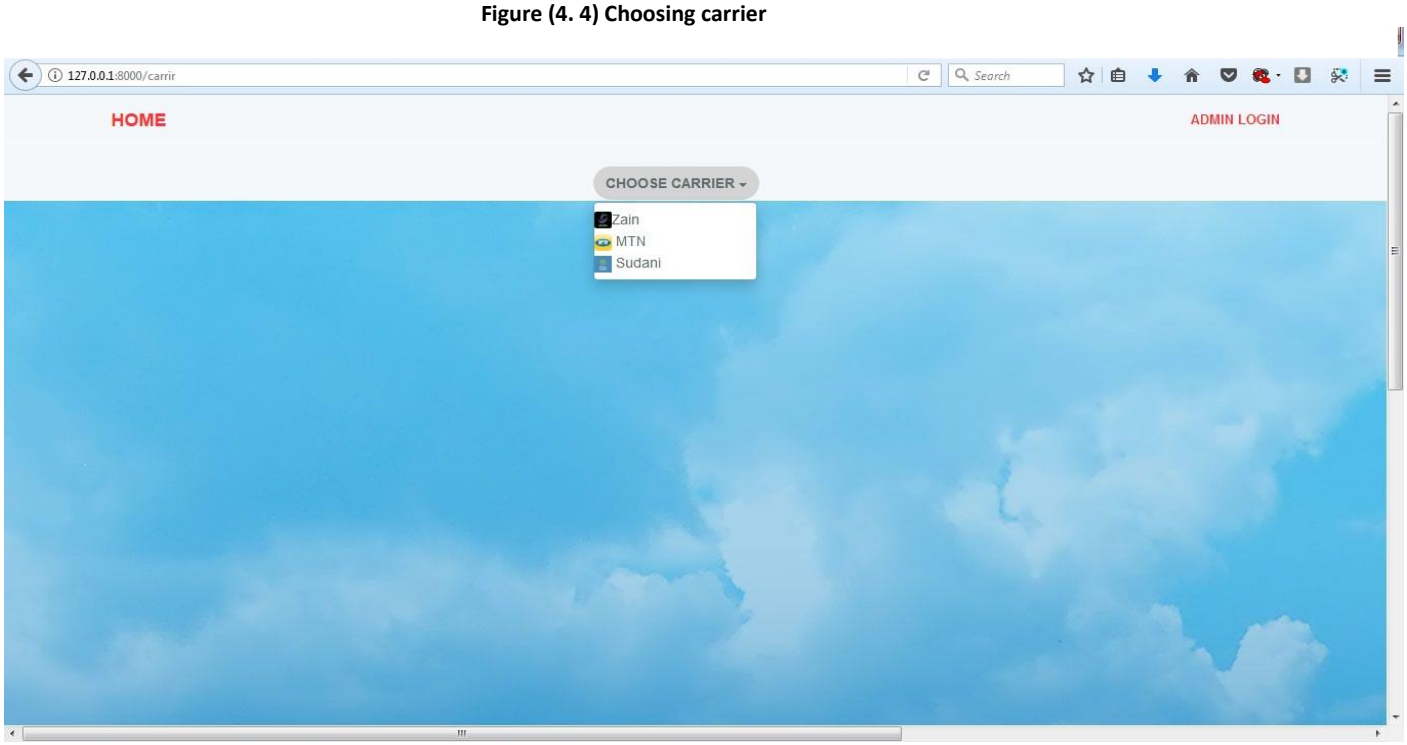
Figure (4. 3) Numbers

4.3.2 Customers

4.3.2.1 Choosing Carrier:

Choosing Telecommunication Company and write the number you want to recharge and check if exist in Telecommunication Company.

Figure (4. 4) Choosing carrier



4.3.2.2 Enter number

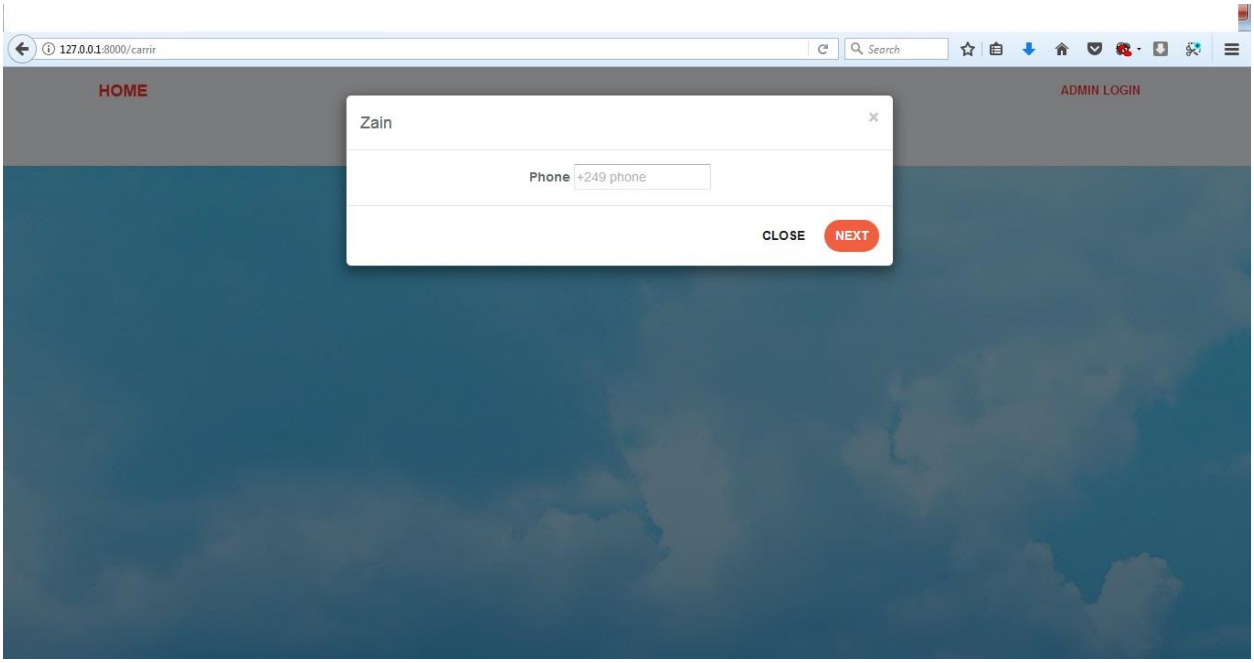
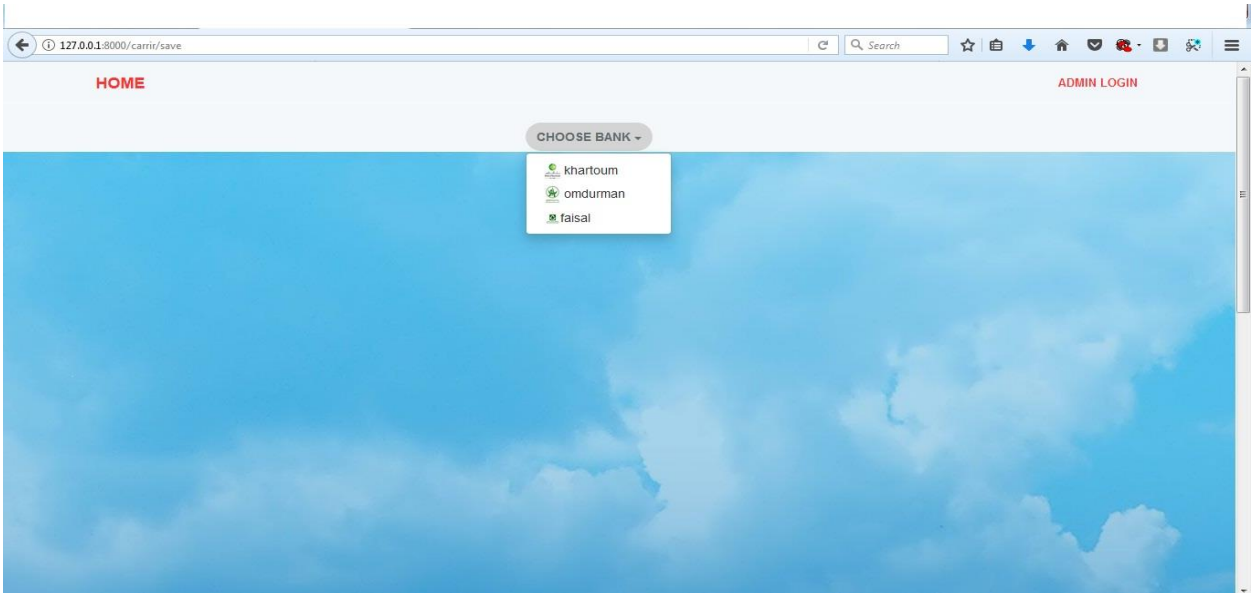


Figure (4. 5) Enter number

4.3.2.3 Choosing bank:

The customer choose bank to payment transaction



Figure(6.3) choose a bank

4.3.2.4 The payment transaction:

The customer chooses the amount of balance and confirm bank authentication to complete transaction

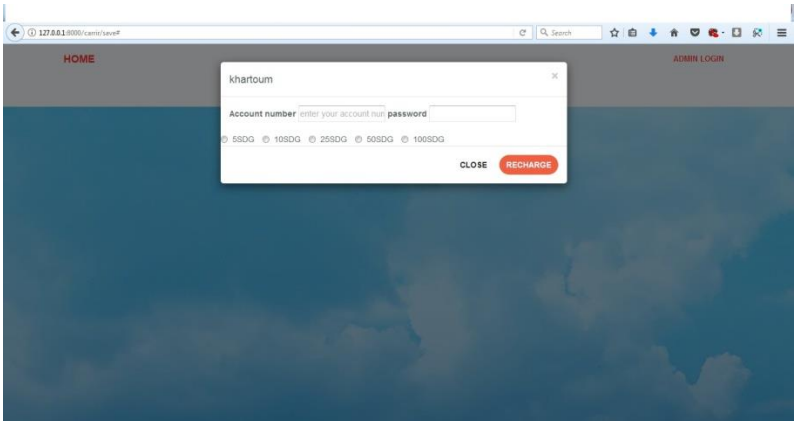


Figure (4. 6) Payment information

4.3.2.5 Carrier and number for android

Choosing Telecommunication Company and entering the number you want to recharge.

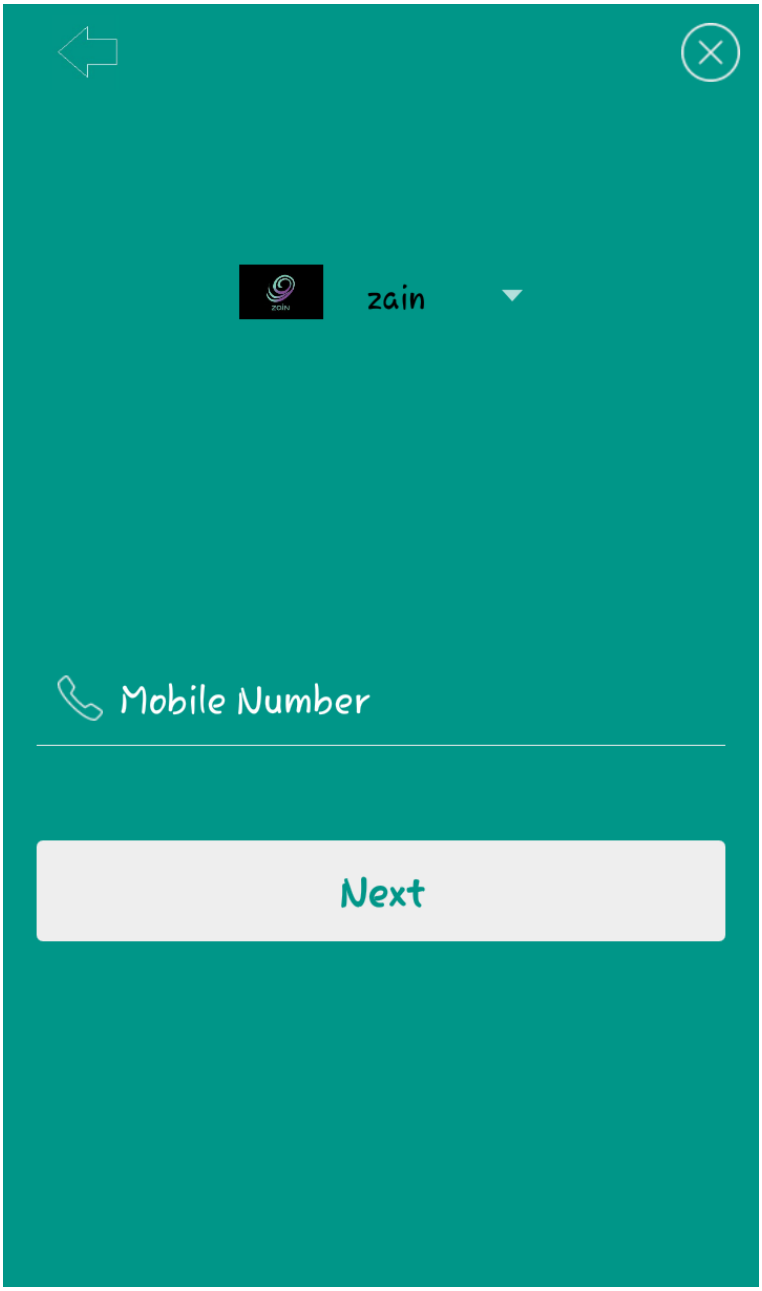


Figure (4. 7) Choose carrier and enter a number

4.3.2.6 Choosing amount in android:

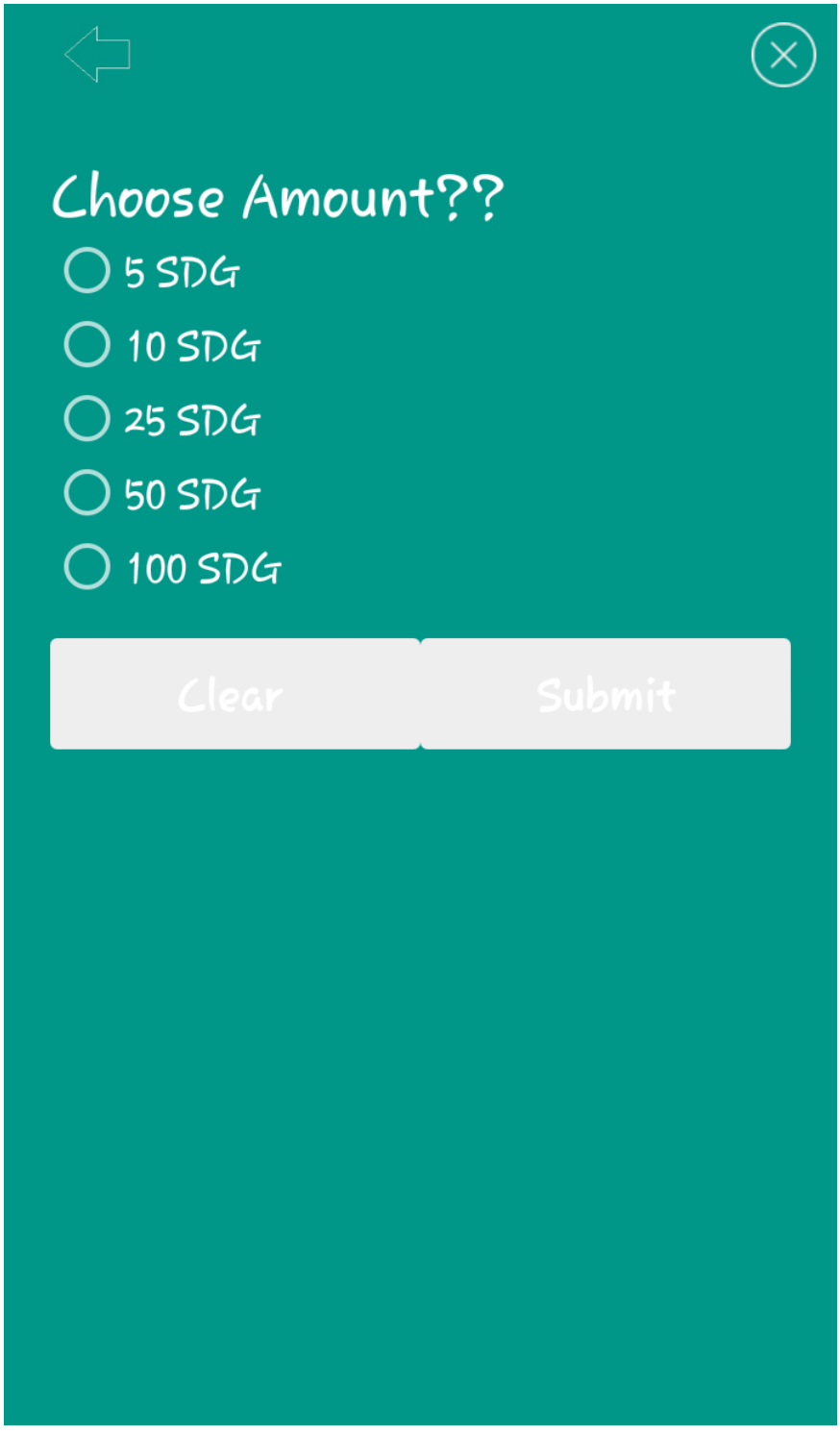


Figure (4. 8) Choose a mount

4.3.2.7 Payment Page:

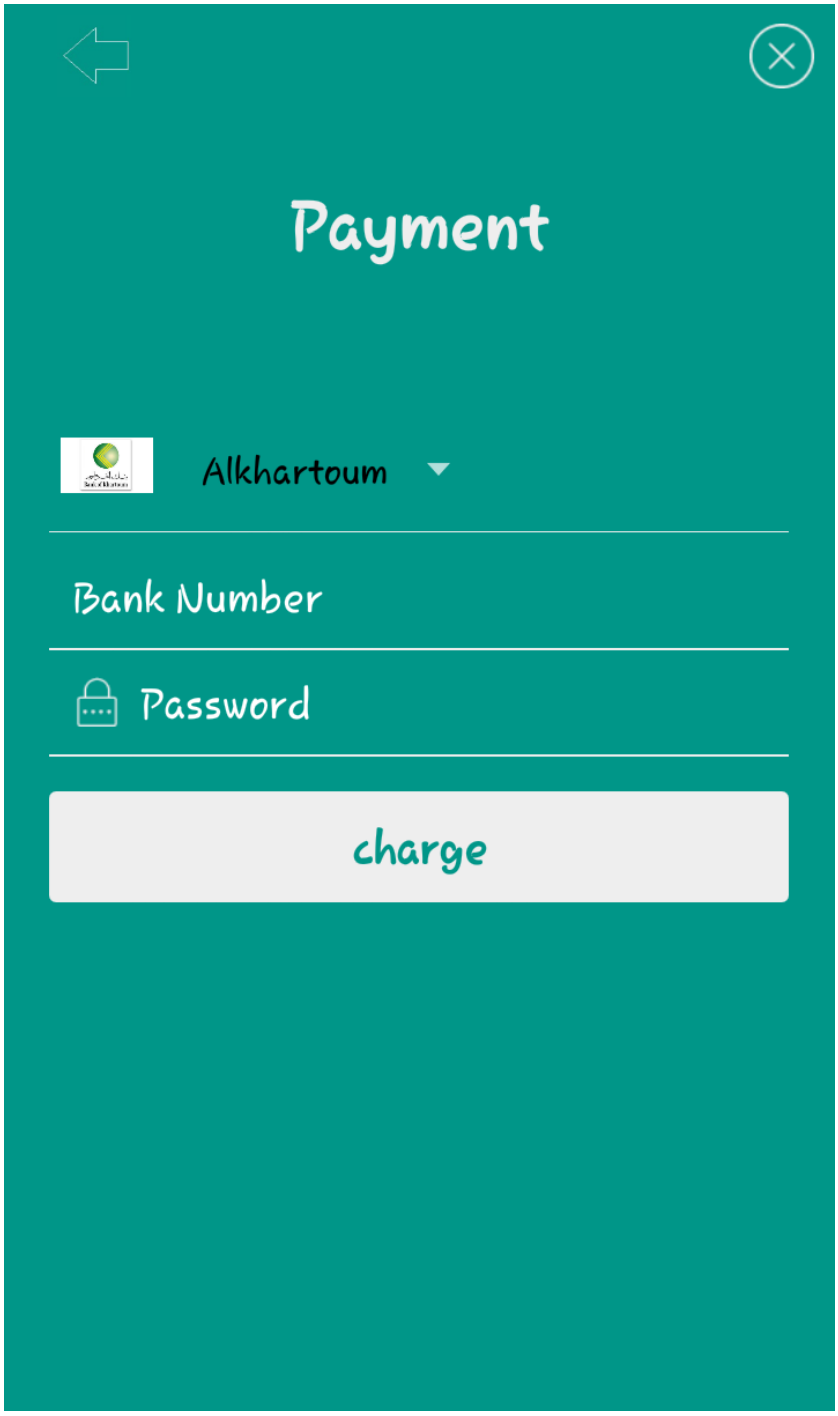


Figure (4. 9) Payment information

CHAPTER FIVE

RESULT AND RECOMMENDATIONS

5.1 Introduction

This section discusses the most important results that we have achieved after the implementation of the system and the recommendations that we recommend to improve or add New properties can increase the effectiveness and efficiency of application.

5.2 Results

After the execution of the application and Procedure tests to verify the functions required of it has been reached, and recharge online system which is consist of the following steps.

5.3 Online mobile recharge

1. More than one telecommunication company
2. More than one bank to pay
3. Check the validity of the number

5.4 Payment & System

1- Easily the payment process performance and speed .
2- Multi banks to access
3- Provide secure method

5.5 Recommendations:

1- Linking the current system with all banks and all telecommunication companies.
2- Provide recharge using card like visa card.
3- Make the security more powerful

5.6 Conclusion

The system is completed and it can help users saving their effort and time, they can recharge their phones balance using this system instead of going to any place to recharge.

And we hope that system help users and people in general and we hope that we add new things to computer field

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