Business Requirements Document

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TABLE OF CONTENTS

1 Version Control

1.1 Revision History

This section allows the development team and project manager to implement change control. It enables participants to keep track of changes in the project, who made them and when they were made.

Version #	Date	Authorization	Responsibility(author)	Description
1.0	04/09	Courtney Yon	Project Manager	Initial Draft

1.2 RACI Chart

This chart pinpoints the team members who need to be consulted whenever there are specific alterations to be made. The chart allows for the organization and assignment of roles and responsibilities to the project members.

The team consists of 4 members with interlinking roles. Courtney Yon is the project manager and the team participates in constant collaboration and keeps communications clear with all members involved in the project.

1.3 RACI Chart Codes

R	Responsible	This individual is responsible for creating this document.
A	Accountable	This individual is accountable for the accuracy of this document.
S	Supports	This individual provides supporting services in the production of this document.
C	Consulted	This individual provides input (interviewee, etc.)
I	Informed	This individual must be informed of any changes.

Task	Courtney Yon	Malibakiso Mpeke	Vincent Ndyafi	Zviko Chitiyo	CEO
Gathering requirements	R	R	R	R	I
Changing requirements	R	S	S	S	I
Managing team	R				I
Designing system	R	R	R	R	I
Testing system	S	R	S	S	I
Analysing market	C	C	R	C	I
Implementation planning	R	R	R	R	I
Final approval	C	C	C	C	R
Post -implementation procedure	R	R	R	R	I

2 Executive Summary

2.1 Overview

A small local bank, The Bank of the Sun, has realised that its personal online banking offering is no longer appropriate for banking in 2018. The bank has contracted our group. The aim being to develop a new online banking system that works with existing bank end services. To achieve this, the group will create a new intuitive banking system that is more user friendly. The Bank of the Sun realises that the current internet banking process is becoming cumbersome and not the ideal user-friendly system. Ctrl Alt Elite's purpose is to create the internet banking system for the bank which can have an immeasurable amount on the current internet banking system. Ctrl Alt Elite will create a web application which aims to create creative and user-friendly environment for clients with its unique functionalities and beautiful elegant look.

2.2 Background

The Bank of the Sun is a very small bank in Stellenbosch. It has a number of tellers and consultants. Many students and local residents bank with them. It offers a variety of different types of accounts, a savings accounts, current accounts, credit accounts and more specialist investment accounts. Ctrl Alt Elite will enable an easy and efficient online banking system look and feel. The application will make sure that all users can feel up to date with any issues with the Bank or issues with the application itself.

2.3 Objectives

As discussed with the CEO of The Bank of the Sun, the minimal viable product expected from the new online banking service is the ability for their clients to use the internet banking platform in order for them to make transactions, to make inter account transactions and lastly transactions to external accounts in either the same bank or other banks. Another objective hoping to be obtained is implementing the internet banking platform to have a modernized sponsor type. This implying, that it is useful and efficient enough to run on different types of browsers albeit on a cell phone or desktop computer.

2.4 Requirements

The requirements expected to be covered from the interview had with the CIO of The Bank of the Sun are mainly, a required two factor authentication component. This is incorporated in order to add an extra layer of security requiring not only a username and password but also something that the user has on them. Furthermore, additional requirements required is a fully functional API which firstly allows a linkage between the internet banking application and banking itself, and secondly for the API to inhabit a coauth for authentication hence another linkage needed with OAuth for this to be implemented. Lastly a significant requirement that must be addressed is the aspect of how guarded the API is from a potential SQL injection, this is expected to be handle through input sanitization which handles misinformed input by checking the user input before it is stored on a database.

2.5 Proposed Strategy

Being that novice developers are being used to develop a functional banking platform for The Bank of the Sun, a focal focus is placed on understanding the set objectives and requirements stated by the bank's CEO and CIO. By doing so, the team will work concurrently with the two above mentioned individuals so that they do not delve away from their expectations. This in hindsight will eliminate the knowledge gap between the Ctrl Alt Elite team and the Officers of the bank. As a result of this, the team will look to primarily develop a banking platform with the specified features made and make them undergo a user testing stage to ensure that it works as intended and users are satisfied. Lastly after the conduction of user testing, a stage for beta testing will commence in order for all parties to validate that the features of the internet banking platform are well-integrated.

3 Project Scope

Ctrl Alt Elite wants to make sure that The Bank of the Sun walks away with a perfectly crafted and designed web page which incorporates elite programming, planning and execution. With the end in mind, Ctrl Alt Elite wants the client to have the best online banking system on the market. The business processes and areas which are excluded and included regarding the scope of the project can be seen below.

3.1 Included in Scope

Ctrl Alt Elite will aid The Bank of the Sun with a clear, clean and aesthetic looks and feel to their online banking platform. This will allow for users to use the application with more ease and allow for a better and more comfortable user experience that what they are experiencing at this moment. Users will be able to make transactions and contribute to The Bank of the Sun via a platform in the application whereby they can critique and comment on the user experience, ultimately improving every aspect of the online banking platform. The users who use the online banking application will be able to register and create accounts on the home screen of the application. It should be able to offer savings accounts, current accounts, credit accounts and more specialist investment accounts by in large, like a savings account.

Clients should be able to use the internet banking platform to make transactions and inter account transactions as well transactions to external accounts in either the same bank or other banks.

Clients should be able to have more than one account and the application should be able to work on different kinds of browsers and on cell and the web. The web application will have a more modern feel and will have factor authentication which will be good quality. The application should be fast, and users should be able to buy data and electricity etc.

3.2 Excluded from Scope

Instead of email notifications, pop up and SMS notifications will be possible. What is not is the business aspect is the changing of passwords. Usually, a user cannot change his/her password. Ctrl Alt Elite should make this possible and make sure that there is an ability to create recurring payments and maintain a list of beneficiaries. A survey/questionnaire will be created in order to figure out what users would like to see and what they dislike. In the application itself, users will be able to able to rate and make comments on the applications design and interface.

3.3 Constraints

There are some constraints that could limit the progress and the success of the project. Firstly. Time is a big constraint due to the deadline for the project. The project needs to be completed by the 22 October 2018 at 12pm. This deadline cannot be adjusted and therefore the planning process as well as communications between project team needs to be thorough and clear. When it comes to the implementation phase, the team needs to meet up regularly to make sure that all ties are sorted and all problems are met.

The development team consists of 4 students who have limited programming experience. They do not have any other funding to improve their development, therefore again, planning and helping to source information together needs to be thorough and clear. Since, there is no other funding involved the team members need to make the best of the restricted versions of some of the software used.

3.4 Functional Requirements

The application must:

Allow users to register and create accounts.

- Allow users to manage their accounts.
- Allow users to make a range of transactions.
- Allow user to edit their profile information which includes their security settings.
- Allow users to contribute to the application via comments.

4 TIMETABLE

In this section of the BRD, a timeline is used to make sure all start dates and completed dates are indicated. The advantage of this is to make sure the project has direction which helps with the achievement of the aims set out.

Section	**Start date**	**Completion date**
JAD sessions	24 August 2018	24 August 2018
Documentation and html mock ups	25 August 2018	1 October 2018
System implementation	1 October 2018	22 October 2018

5 MEASURES OF PROJECT SUCCESS

The success of the project will be assessed according to how the web application satisfies the user requirements and whether it manages and processes the system use cases accordingly. Therefore, the measured of project success include:

- The client's satisfaction of the application.
- The project's completion date which has to be completed before the deadline.
- The budget used during development that should not be exceeded
- The user friendliness of the application.
- How well the aesthetics of the application measures up to modern standards and design.
- How unique the application is.
- The safety of the application.

6 Risk Analysis

Risk ID	Type of Risk	Description	Level of Occurrence	Strategy
Heavy design	SR	This is obtained from the UI and UX design. Designers given freedom to create on how the system will look and how users will interact with it.	High	Developers should look to focus mainly on functionality of all considered objectives and requirements of specified features.
Online storage	SR	Storing of data and information on trusted online data storage providers.	High	Selection of a well rated company that is aligned with secure policies in order for the data stored with them is secure on their servers.
Competition	PR	Presence of other organizations with somewhat similar systems who look to target the same users of our system. Their main objective is to steal existing clients by rendering our own system is inefficient and useless.	High	Ensuring other systems are monitored constantly and maintained properly. In addition to that, regular updates to our own systems for necessary improvements.
System Bugs	RR	An error in the program which causes the system to produce an incorrect or unexpected result or leads it to behave in an unintended way.	High	Testing at each development level for any present bugs. Another method would be to undergo system tests, to make sure all functions run and operate as intended.

Server crashes	RR	Crashes occur when the server stops functioning as expected.	Low	Presence of backup or recovery systems in place in order for them to hold data in case of any crashes.
Data loss	BR	Error condition in information systems in which the held information is destroyed leading to major failures in the system which results in system crashes.	Low	Ensuring that backups are made regularly and that the integrity of the database is efficient enough to handle the data stored within it.
Data breaches	OR	An incident whereby sensitive, protected or confidential data gets accessed by unauthorized hackers	Low	Creation of safety protocols and encryption barriers in order to encourage users to follow safe user information protection procedures.
System breaches	SR	The intrusion into a system through hackers.	Low	Placing of security measures to avoid hacking attempts and avoid system and data breaches.

7 Cost Benefit Analysis

Action	**Description**	**Anticipated savings (-)**
Creation of online banking platform	This is the initial investment for The Bank of the Sun	R550 000
Software installation	This is the cost incurred for installing the necessary software	R100 000
System maintenance	This is the cost incurred in maintaining the software against viruses, or a potential crash as a result of user traffic	R100 000

Trade-off savings from current system	The movement towards a more modern and efficient system for The Bank of the Sun will save them a substantial amount of money	(R450 000)
Security controls	Safeguarding of customer's personal information is a vital component that The Bank of the Sun is looking to address.	(R50 000)
Risk management	E-banking activities will enhance the level of transactions or operations risk that might incur; a lot of emphasis must be placed in limiting the complexities of the modified e-banking infrastructures	R600 000
Net savings (1st Year)		R850 000

8 Business Case

The aim of this project is to create an internet banking system that is of a modern sponsor type, fast and can operate on different kinds of browsers. The business rationale for the project is described below.

8.1 Problem

A small local bank in Stellenbosch, The Bank of the Sun, has realised that its personal online banking offering is out of date and slow. Majority of students and residents bank with them and are dissatisfied with the current online banking system.

8.2 Proposed Solution

Ctrl Alt Elite provides a solution to the problem stated above, by developing an up to date online banking system that works with the bank's existing bank end service. The online banking system will allow clients to make inter account transactions and transactions to external accounts in either the same bank or other banks. It will also allow clients to apply for accounts, make external payments, statements and have the ability to create recurring payments and maintain a list of beneficiaries.

The online banking system will be reliable, user friendly and fast. Clients will be able to use it on different platforms. It will provide some security and privacy to customers, by using “state of the art encryption and security technology.” Therefore, Ctrl Alt Elite will through the use of surveys figure out what people want out of an online banking application and use this data to create an application that controls the complexity of the information into a clean, aesthetic, pleasing and simplistic feel.

8.3 Justification

In today’s society people rely on their mobile phones and the internet for everything, e.g. paying for electricity, paying for daily expenses etc. People no longer want to spend hours and hours on the que, it is therefore appropriate that we create an up-to-date online banking system that can be used on a range of devices such as smart phones, iPads, laptops and desktop computers.

Online banking is becoming more and more popular in South Africa. People can now pay their bills online and check their accounting transactions online. Online banking makes “everything you do with finances a bit easier.” (UKEssays, 2013). It saves time spent in banks and provides 24/7 account and service access as long as one has internet connection.

8.4 Organizational Factors

Ctrl Alt Elite is an IT company that specialises in developing web applications. Employees include the development team which consists of 4 members. Our group has been contracted by the bank to develop a new online banking system to work with the existing bank end services.

8.5 Market Share Benefits

According to Angus Brown, co-founder of eBuck.com and MD of Banking Acumen, South Africa may have reached the peak of internet banking, the number of customers using desktop computers to do their banking is declining (Writer, 2017). Based on 2014 estimates, 14 million banking South African adults have internet access but only 2.3 million use online banking services. The use of online banking in South Africa is low compared with that in other countries.

Internet access is not a significant barrier to online adoption in South Africa, there are other factors that play a role in this (Mujinga, et al., 2018).

SA's top internet provider, First National Bank (FNB), presents some competition. They offer quality service, ease of use and communication to name a few examples. However, they struggle to differentiate their internet offering from other banks, their online banking system are very similar.

Ctrl Alt Elite plans to create an online banking system that is both easy to use and unique. In addition to that, one that offers communication, information and functional quality and most importantly innovation and device flexibility. Due to lack of competitiveness from other online banking systems, our online banking system will have an opportunity to gain a significant market share.

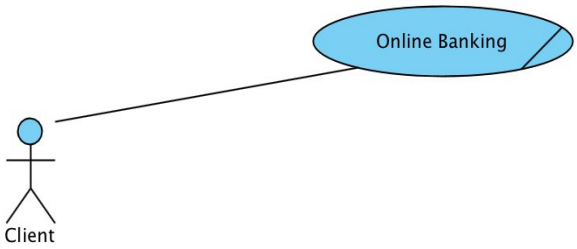
8.6 Project Assumptions

The following assumptions apply to our online banking system:

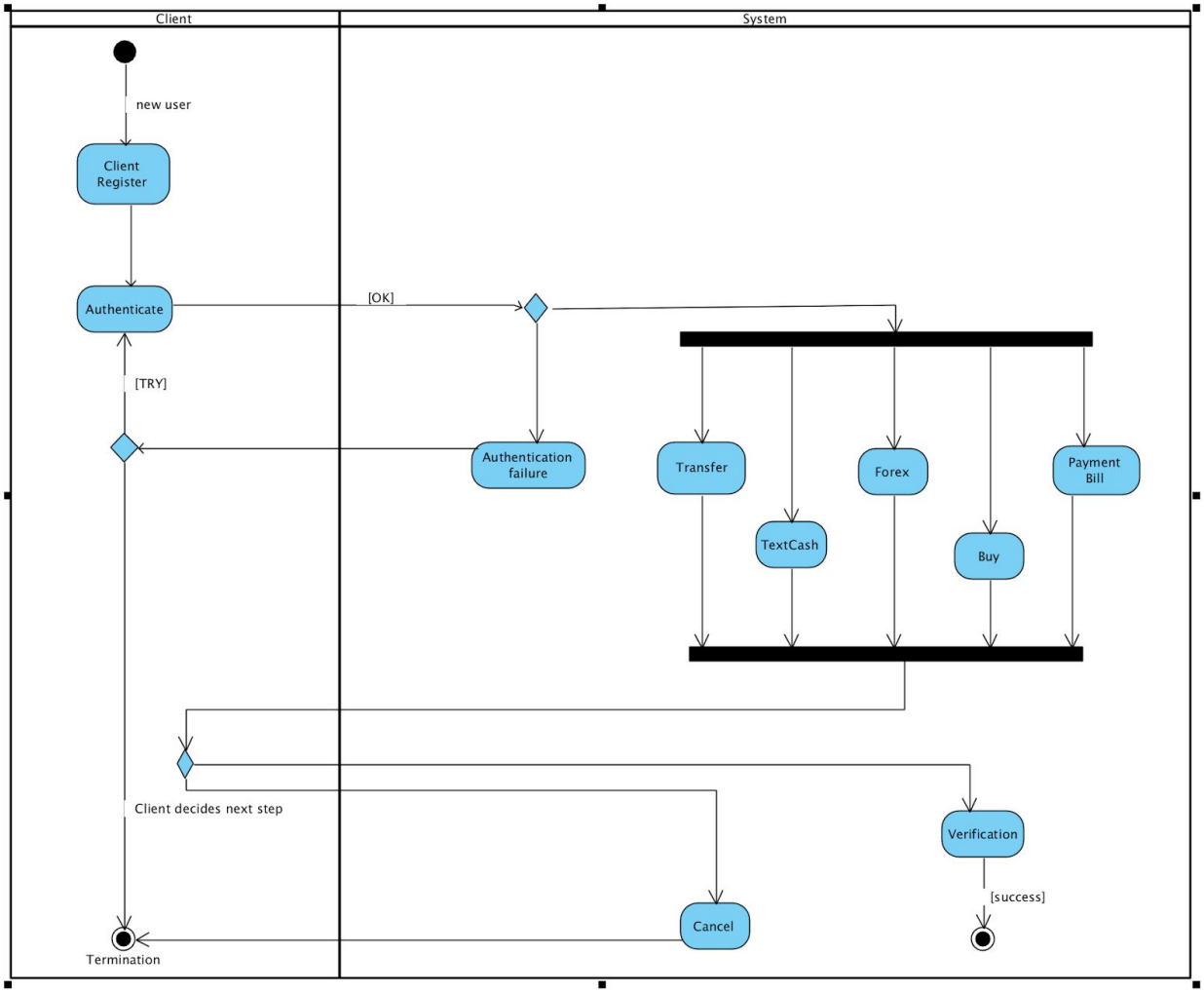
- The software and technology used by the development team is suitable for building an online internet banking system.
- Stellenbosch residents and students make use of online banking.
- The development team has enough funding to develop an online banking system.
- The backend system already exists.
- The application will have the appropriate security to ensure the user's safety.

9 Business Use Cases

9.1 Business Use Case Diagrams

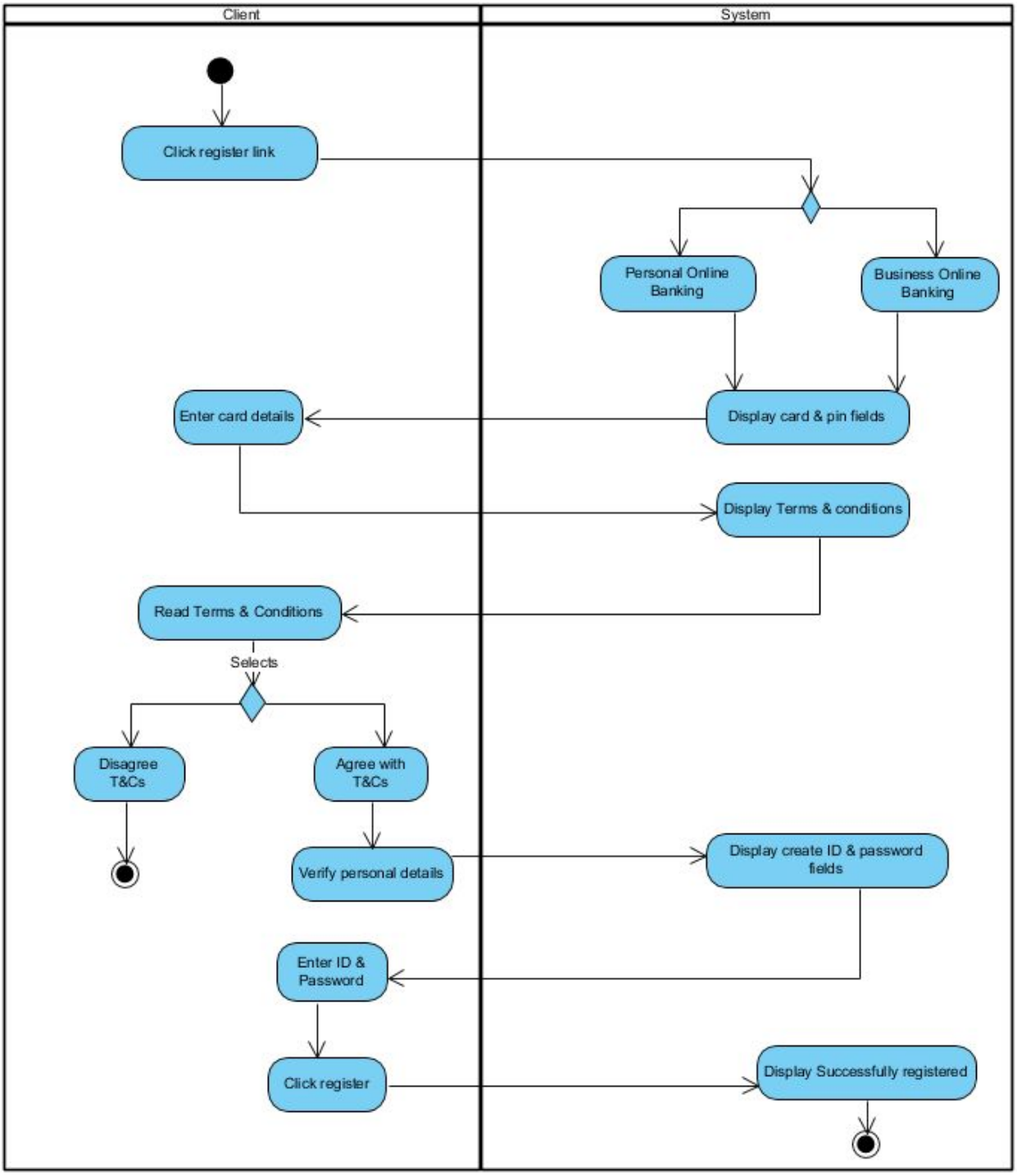


9.2 Business Use Case Descriptions

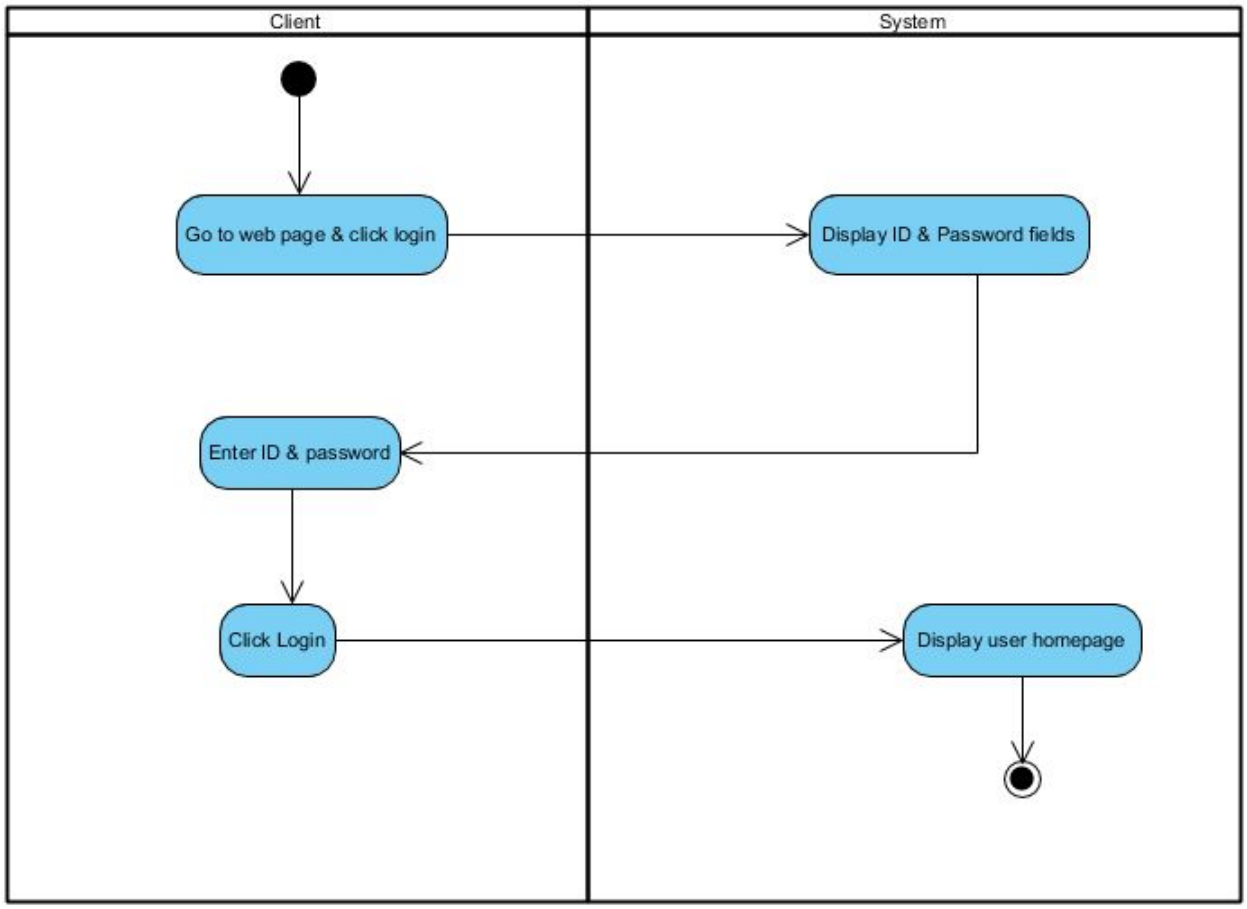


10 System use case descriptions

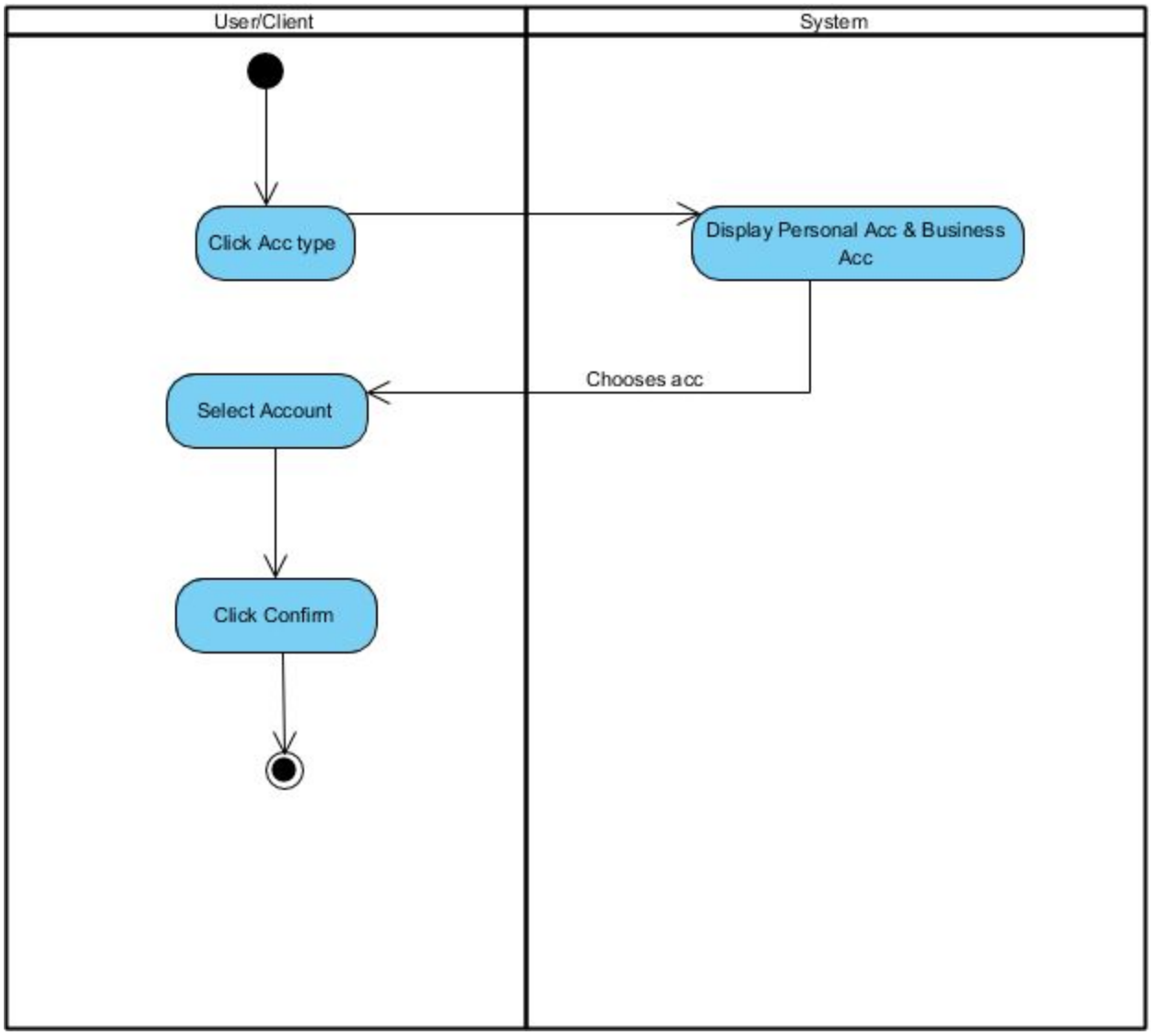
10.1.1 Registration


Client
System
Click register link
Personal Online Banking
Business Online Banking
Enter card details
Display card & pin fields
Display Terms & conditions
Read Terms & Conditions
Selects
Disagree T&Cs
Agree with T&Cs
Verify personal details
Display create ID & password fields
Enter ID & Password
Click register
Display Successfully registered

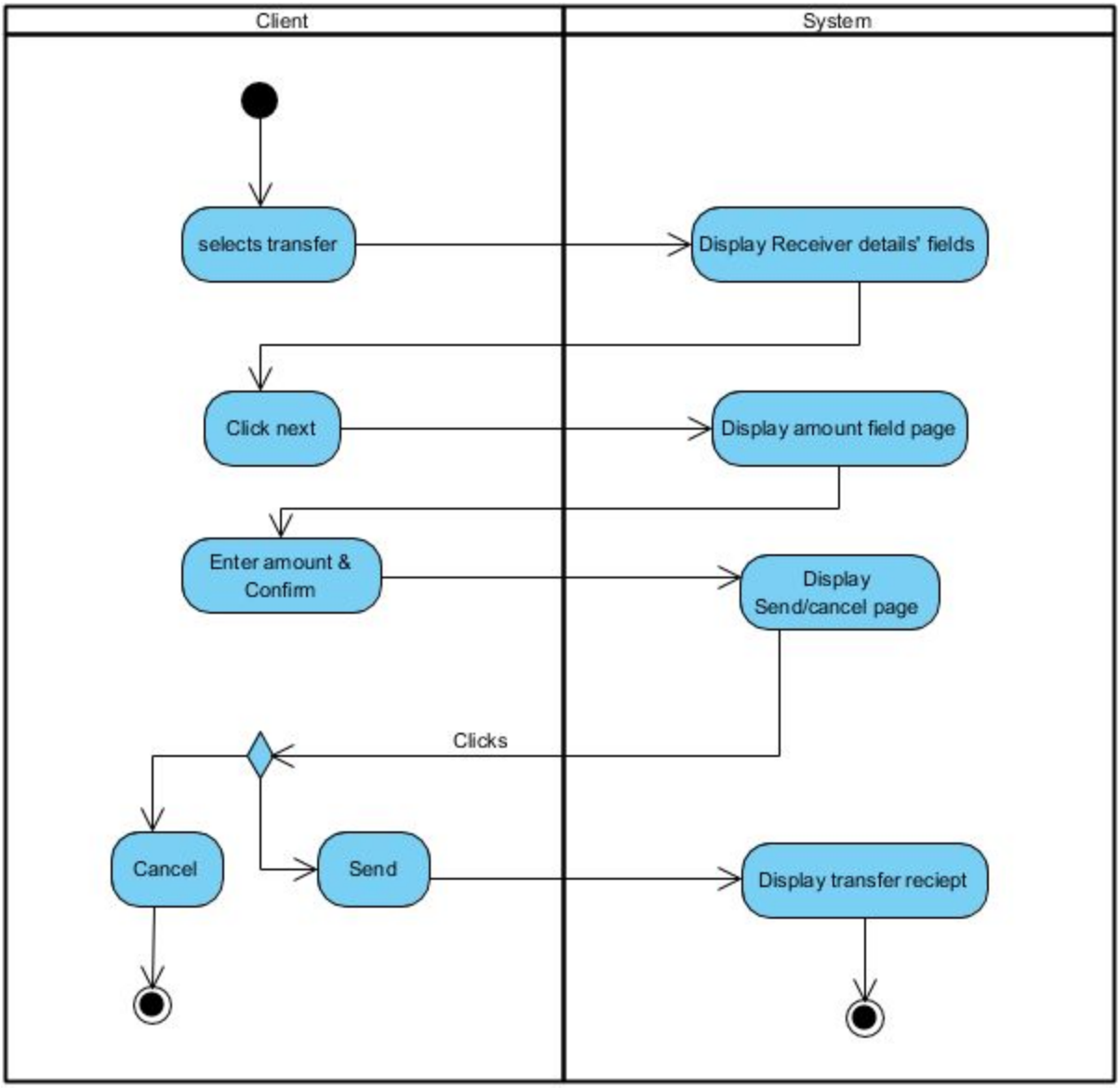
10.1.2 Login


Client
System
Go to web page & click login
Display ID & Password fields
Enter ID & password
Click Login
Display user homepage

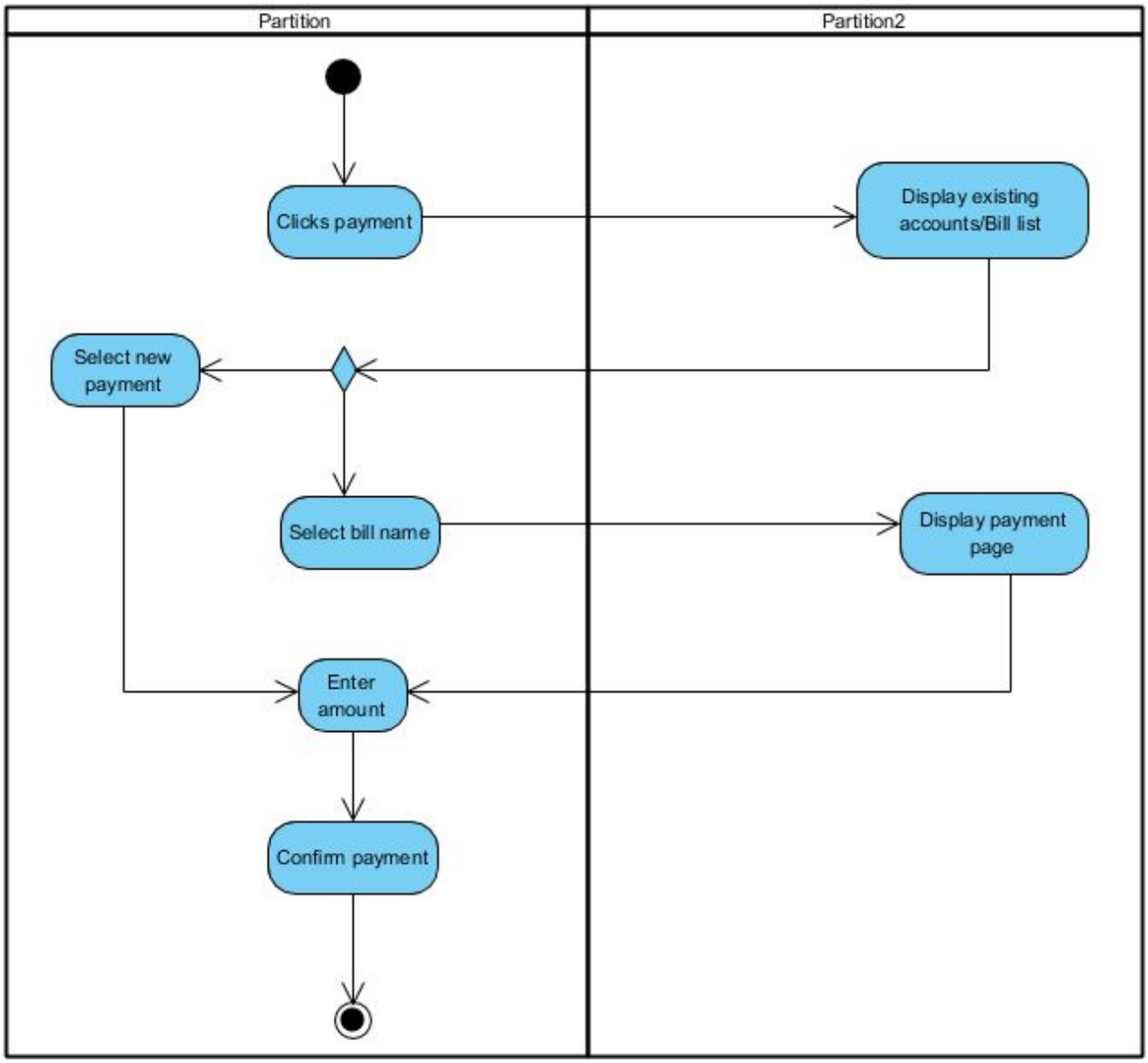
10.1.3 Select Account type



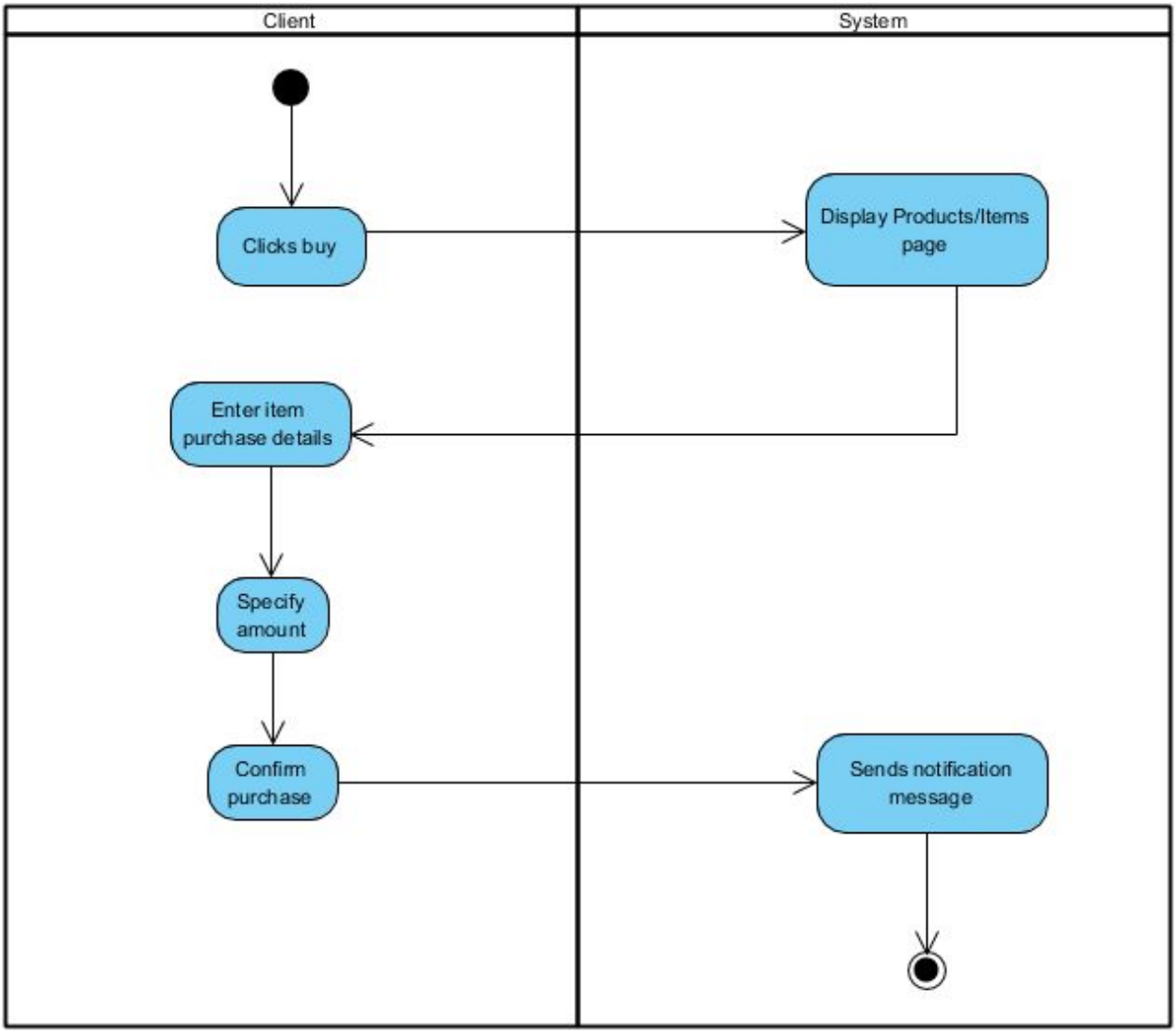
10.1.4 Transfer



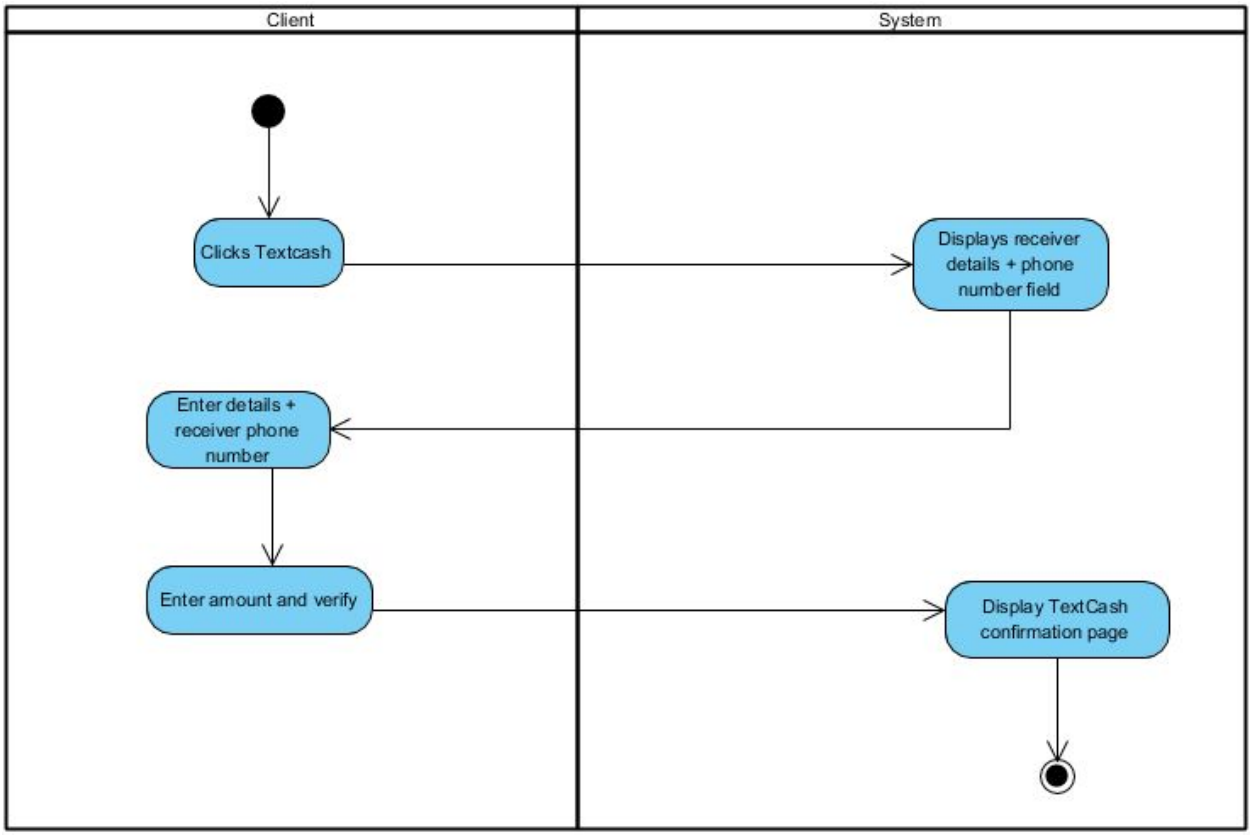
10.1.5 Payment



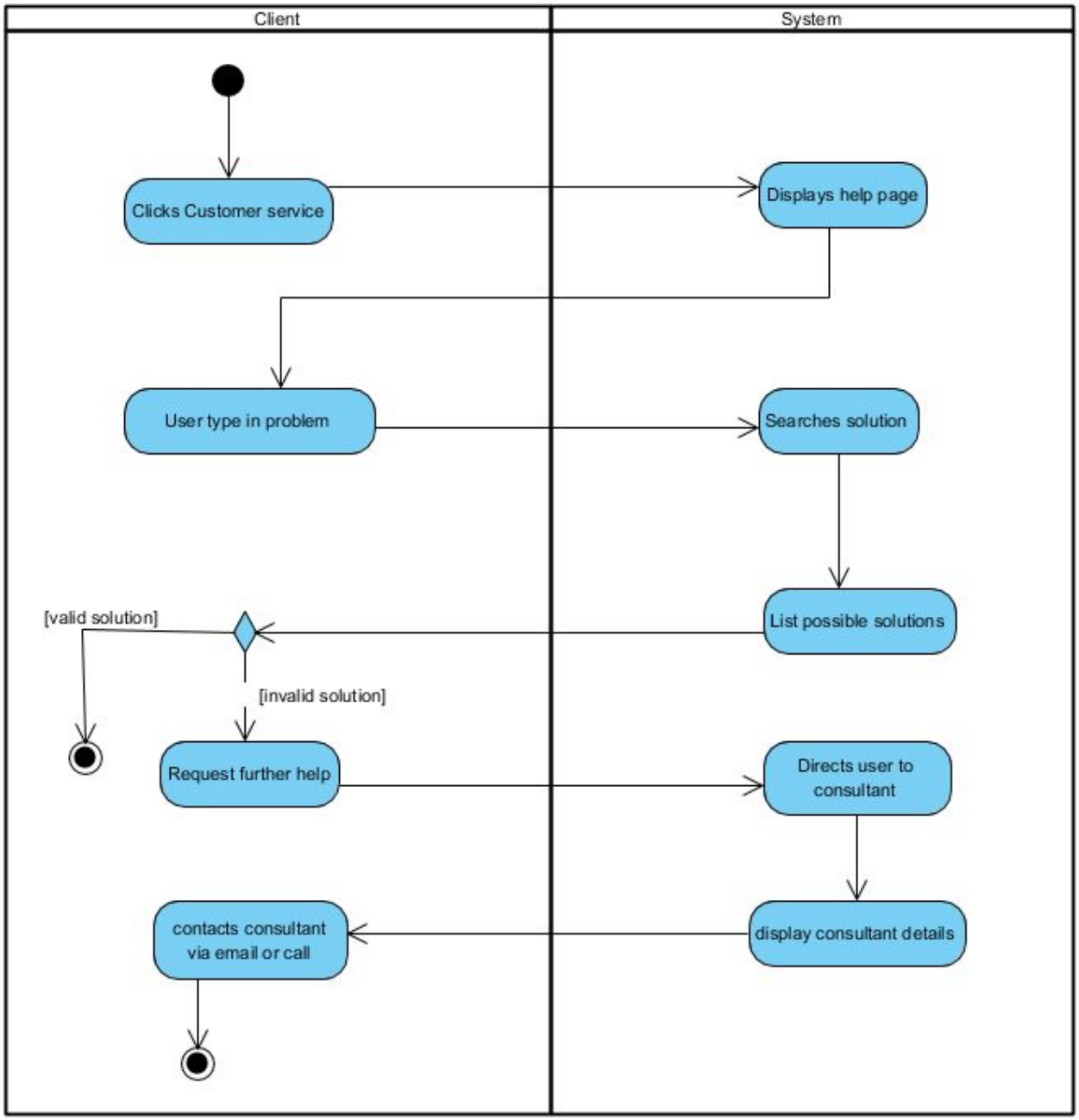
10.1.6 Buy/Shop



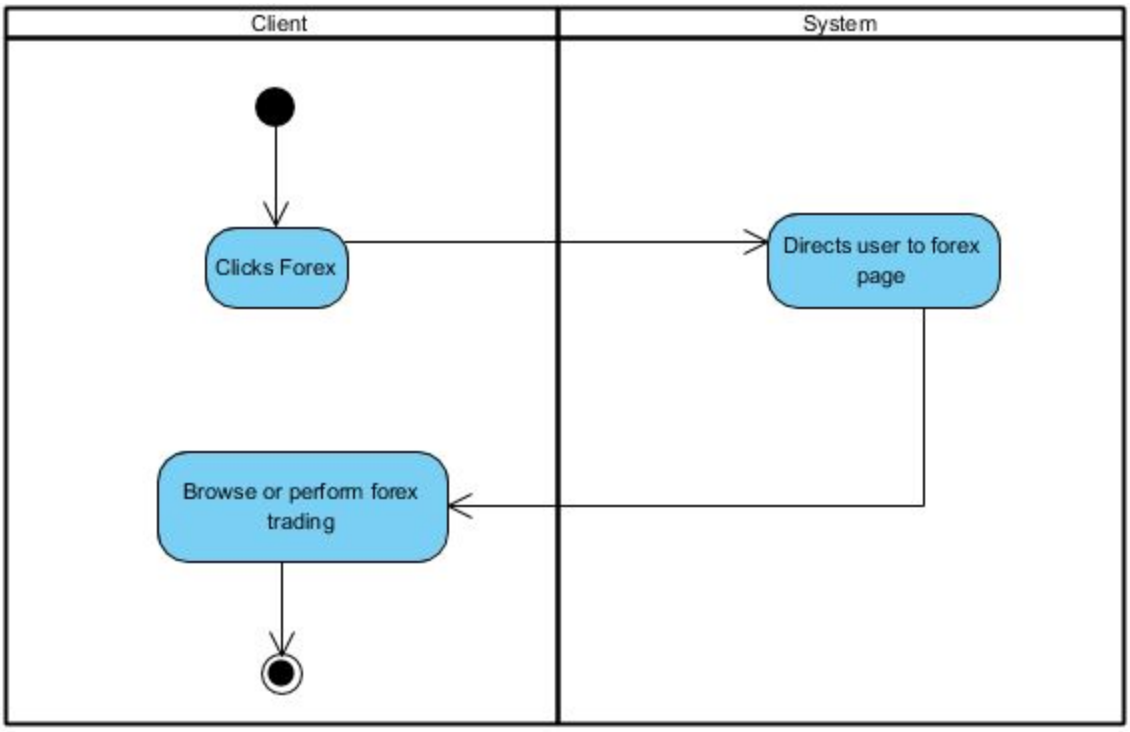
10.1.7 TextCash



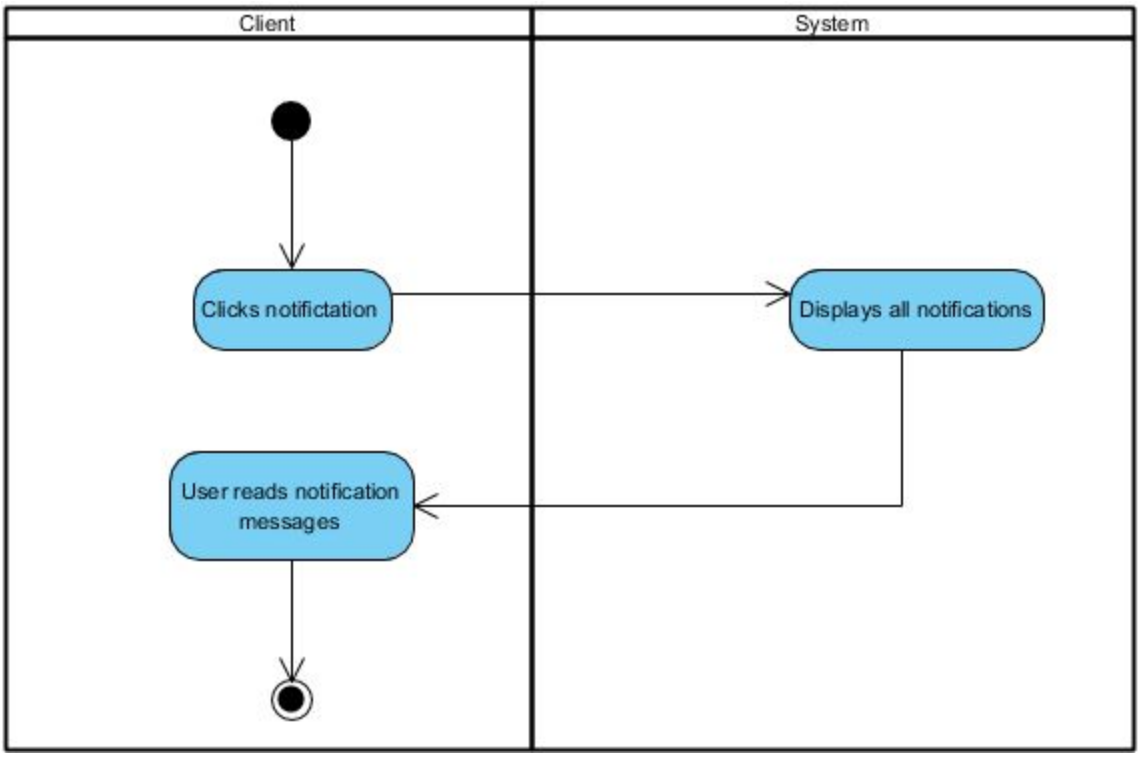
10.1.8 Customer service



10.1.9 Forex


Client
System
Clicks Forex
Directs user to forex page
Browse or perform forex trading

10.1.10 Notifications



11

Actors

In this section of the BRD, all particular actors are described. These include that of all people, organizations and other entities. An actor is someone that interacts with the business and the IT system.

11.1 Workers

Workers are stakeholders who act within the business and carry out all business use cases.

Department/Position	General Impact on Project
Manager (CEO, CIO)	The manager does not have a major impact on how the system will be built. The manager is only involved in gaining requirements from the business actors and running the application after it is complete.
Developer	The developer has the largest impact because they will decide how the system will be built. The developers are in charge of creating the whole system from the specified BRD and will have little interaction with the manager of the system before the system is complete

11.2 Business Actors

Business actors are parties that are external to the business but still interact with it.

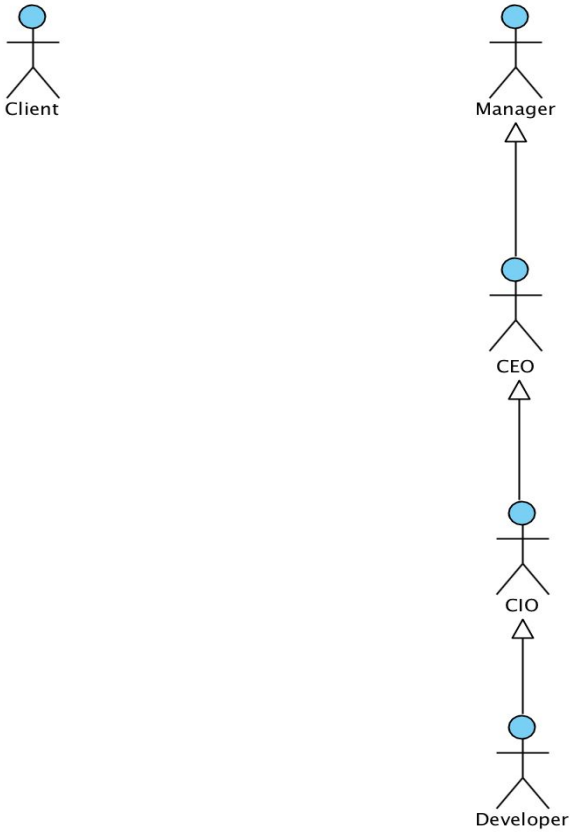
Actor	General Impact on Project
Clients	The users of the system have little impact on the project. They will only be asked about requirements and some features they would like to have in the system

11.3 Other Systems

Other systems are any systems that are affected by the project or that are linked to the proposed system.

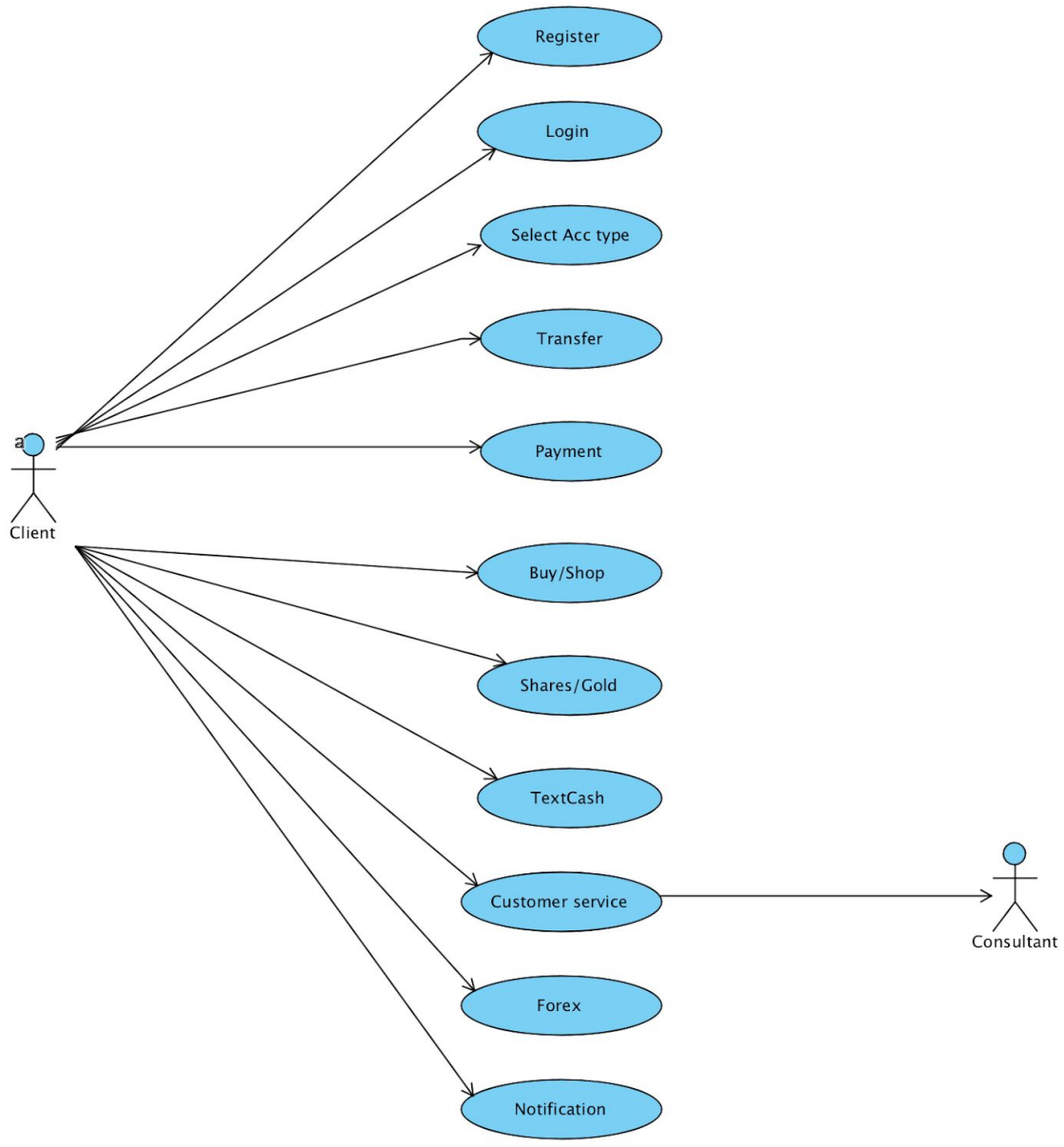
System	General Impact on Project
Other Online Banking System	Other applications play a major role in how the system will be designed as the system will need to gain a competitive advantage over the other systems.
Operating System	Operating systems need to be able to run the application. This requires the application to be designed in a manner which allows different platforms and web browsers to run the application.

11.4 Role Map



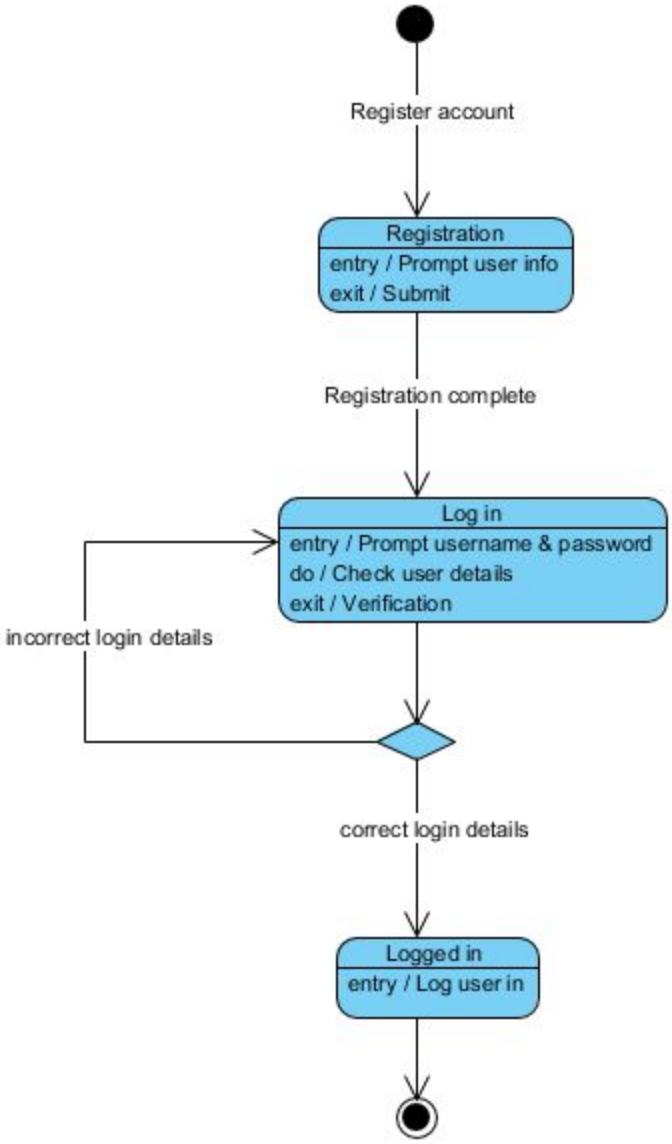
12 User Requirements

Systems Use Case Diagrams

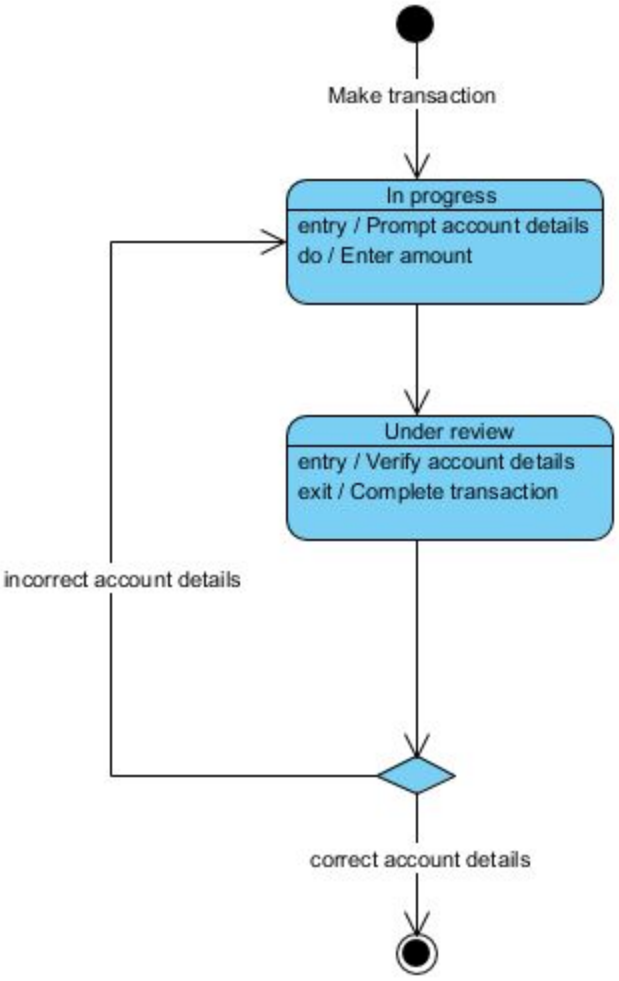


13 State Machine Diagrams

13.1 Client state



13.2 Transaction state



14 Nonfunctional Requirements

14.1 Performance Requirements

- **Stress Requirements**

The system must be able to be used by multiple users simultaneously.

- **Response-Time Requirements**

The system must send feedback within 60 seconds of a client registering or logging in.

- **Throughput Requirements**

The system must be able to process 1000 per minute.

14.2 Usability Requirements

A new user must be able to register and login effortlessly in less than 10 minutes. The client must be able to register within 2 minutes and get feedback within 30 seconds of submitting. The client must be able to login and in less than 30 seconds and must also be able to make transactions and payments within a short period of time.

14.3 Security Requirements

Personal information and account information is stored on the bank database and can only accessed by the user. No other user will have access to another user's information. A multi-factor authentication will be used to ensure that the user only has access to their account information after being authenticated using their username and password.

14.4 Volume and Storage Requirements

The system will be able to support the residents and students in Stellenbosch.

14.5 Configuration Requirements

Different platforms can be used, e.g. iPad, desktop, smartphone. It can be accessed using the following browsers: Chrome, Microsoft Explorer, Safari and Firefox.

14.6 Compatibility Requirements

Describe compatibility requirements with respect to the existing system and external systems with which the system under design must interact.

14.7 Availability Requirements

Clients will be able to access the online banking system 24 hours a day. The system will have a downtime of 2 hours a year between 2am and 5am.

14.8 Backup/Recovery Requirements

Personal information provided during registration by clients will be stored on the bank's database. This will ensure that when the server is down clients can still access their information.

14.9 Modifiability

The system will be able to be modified depending on the issues that could arise on the application. New functions can then be put in place which depends on the adaptability of the application and the changing of requirements.

14.10 Interface Requirements

The system must have a login/creation of account for users. They will be able to create them easily. The users then will be able to log on using a username and password to the interface and use its functions.

14.11 Assumptions/Constraints

The users will need to be connected to the internet in order to use the web application. Each user requires a device to use the application.

14.12 Compliance Requirements

The system must comply with the particular constraints in the business case.

15 State Requirements

Different users take on different states at different times. These states have rules that have to be followed when the specified user or property is in a specific state. The following states all have limitations that need should be followed.

15.1 Client

Client	Registration	Log in	Logged in
Prompt user info	x		
Prompt username and password		x	
Log user in			x

15.1.1 Registration

When the client is in the registration state, they have the ability to enter their information.

15.1.2 Log in

When the user is in the log in state, they can enter their username and password.

15.1.3 Logged in

When the user is logged in they can use the website and click on the buttons according to their preferences. They have the ability to use the system in this state.

15.2 Transaction

Trip	In progress	Under review
Prompt account details	X	
Verify account details		x

15.2.1 In progress

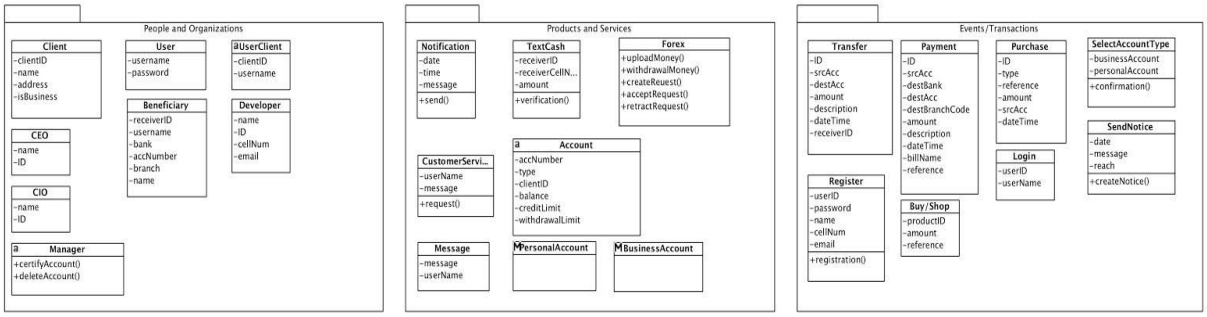
When the transaction is in progress state, the system prompts the user for account details, and the user can enter their account details and amount.

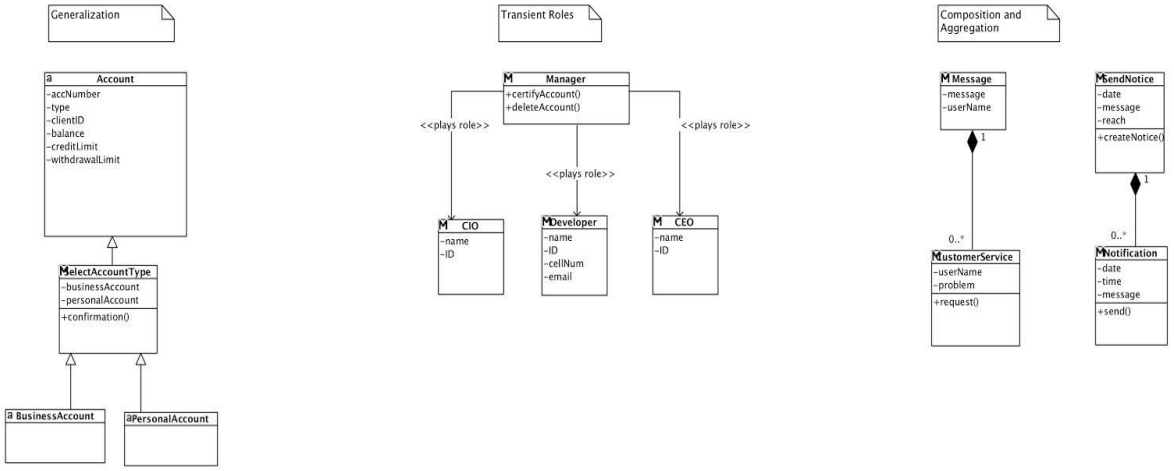
15.2.2 Under review

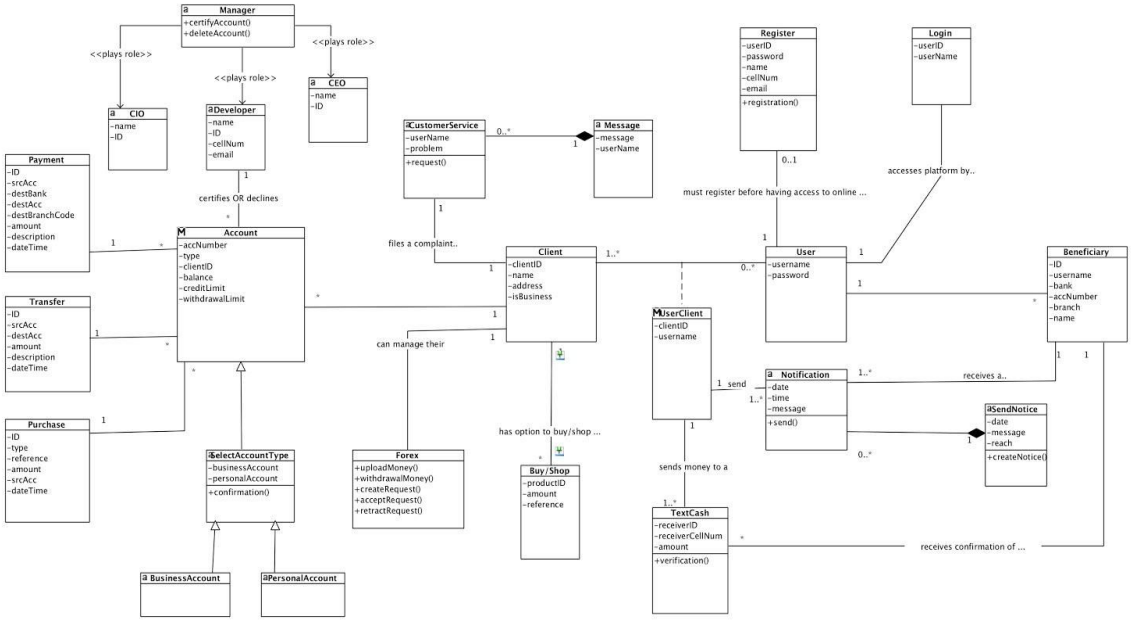
When the transaction is under review, the system verifies the account details. If banking details are correct then the client can complete transaction. If not, then the client cannot complete the transaction until the correct banking details are entered.

16 Structural Model

16.1 Class Diagrams: Entity Classes







ENDPOINTS

/apply: Apply for OR creation of new account; Requires account information and proof of salary for credit accounts
/clients: Get list of clients for current user
/accounts: Get list of accounts for given client
/transactions: Get all (or date specifics) transfers, payments and purchases for account

/transfer/new: Creation of a new N of a specified type; Requires fields per class diagram
/payment/new: Creation of a new N of a specified type; Requires fields per class diagram
/purchase/new: Creation of a new N of a specified type; Requires fields per class diagram

/N/search: Search transactions
/N/schedule:

/beneficiary: List
/new: Create
/edit: Edit
/remove: Delete

16.2 Assumptions

- A client can have more than one account.
- A user can have more than one beneficiary.
- The account of a client can undergo many purchases.
- The account of a client can undergo many payments.
- The account of a client can undergo many transfers.
- A client has the option to manage their forex trading.
- A client can send out a TextCash to one or many beneficiaries or individuals.
- A client can file one complaint at a time to the customer service consultants.
- A beneficiary has no restriction on the number of Text Cash's they receive from a client.
- A beneficiary also has no restrictions on the number of notifications for a TextCash they receive from a client. However, each notification request has a time span of 12 hours for the beneficiary or individual to withdraw the TextCash.
- A client can send out one or many notifications to a beneficiary.

17 TEST PLAN

Features within the project need to be tested in order to create quality products.

17.1 Requirements

- D1: Registration page
- D2: Login page
- D3: Account selection page
- R1: Transfers tab
- R2: Payment tab
- R3: Buy/Shop tab
- R4: TextCash tab
- D4: Customer service page
- D5: Forex tab

17.2 Testing

Testing will be carried out at each phase.

D1: Registration page

Testing of the registration page needs the inclusion of testing field requirements. The testing field requirements will test the email input to ensure the validity of the email addresses provided. In addition, the testing of phone numbers to validate their length and that they are only numbers inputted within that field.

D2: Login page

The login page needs testing with the use of incorrect usernames and passwords as well as one incorrect username and correct password and an incorrect password but correct username. This will validate the use of some SQL injection needing to be tested.

D3: Account selection page

When a user has successfully logged in, they are able to choose between having a personal account or a business account; or both. The test for this is done by the user clicking the option buttons of: Personal Account or Business Account.

R1: Transfers tab

The testing for the transfers between interconnected accounts begins by validating the amount requested to be sent. The authentication of this transfer request is then sent to a third party. If the authentication is positive, the cash is then transferred to the destination account, the user account should be updated with a positive amount according to what was requested. Test this by entering an amount that is greater than what the user has in their account as well as entering incorrect characters or values in the amount field.

R2: Payment tab

The testing for the payment from either personal or business accounts begins by validating the amount requested to be sent. The authentication of this payment request is then sent to a third party. If the authentication is positive, the payment is then deposited to the destination account with the designated branch code of the account. Lastly, a description of the payment must be specified and confirmed prior to the payment. Test this by entering amounts that is greater than what the user has in their account as well as entering incorrect characters or values in the amount field.

R3: Purchase tab

The testing for purchases from either personal or business accounts begins by validating the amount requested to be bought. The authentication of this purchase request is then sent to a third party. If the authentication is positive, the payment is then deposited to the destination account with a detailed reference of the items to be bought by the client. Lastly, a description of the source account of the purchase must be confirmed with a date and time stamp of the day of the transaction. Test this by entering amounts that are greater than what the user has in their account as well as entering incorrect characters or values in the amount field.

R4: TextCash tab

The TextCash element is whereby a client is allowed to send money to either a beneficiary or an alternative individual from their personal banking platform to the latter's mobile phone. The individual will then receive a notification with an OTP pin valid for 12 hours to withdraw the designated amount sent to them. The test for this begins by validating the amount requested for sending to the receiver. The system then contacts the third party to get authentication. If the authentication is successful, the specified amount is then sent to the receiver's cellphone number with a verification pin for them to withdraw from an ATM, only valid for 12 hours. The test for this will lastly be done through entering amounts that are greater than what the user has in their account as well as entering incorrect characters or values in the amount field.

D4: Customer service page

As mentioned before, clients can file a single complaint at a time to the customer service forum. This is tested by users writing comments and ensuring they appear on the correct users comment feeds with the necessary complaint they have with the running system.

D5: Forex tab

The testing of the forex tab which is optional for users is tested according to the amount requested. The test begins by a user creating a forex request, which will then redirect them to options of them either uploading or withdrawing their money. The authentication of this user request is then sent to a third party who validate the present request. After the authentication is deemed as successful, the user is asked whether or not he/she wants to accept the present request, or retract from it. Furthermore, after authentication for those users who accepted the request, the user's account is checked by the system if there are available funds for them to undergo their forex trading. The system is lastly tested on its usability by redirecting users with insufficient funds for forex trading to their personal profile.

18 Implementation Plan

The implementation plan involves construction of an Internet-Banking infrastructure on open sources environment and maintaining compatibility with existing system, establishing maintenance plan and security authentication system.

18.1 Training

Users of the product include all existing customers of The Bank of the Sun. It is the development team's responsibility to train the bank staff on how to use the online-banking system so that they are able to assist users. Training and registration for users will be offered at

any branch of The Bank of the Sun bank, clear guidelines are also provided on the official banking website of The Bank of the Sun.

18.2 Conversion

The Bank of the Sun knows that its current online banking applications are outdated and lacks a modern feel. Therefore, there is a conversion that will take place from the old system and old data will be loaded onto the system. All use of new data will also be loaded onto the system when user accounts are created. Other data that needs to be used will be tasked to the development team in the implementation phase.

18.3 Scheduling of Jobs

Users of the application include a wide range of people from students, young adults and elderly people in Stellenbosch.

It the CEO's responsibility to conduct administrative activities and ensure that the other staff members receive training on how the system works and how to handle customer queries.

Clients can refer to the help section on the website, for instructions on how to use it. If they have issues they can contact the bank or go to the bank for further assistance.

The development team manages and constantly updates the system. The CIO works closely with the development team and provides the communication channel between the development team, bank staff and the clients.

18.4 Rollout

Notifications via email will be sent to our client. This will be done two weeks before the application is set to release. They will be notified of all the ins and outs of the application and when it will be ready.

18.5 End-User Procedures

As previously mentioned, end users will be able to receive a notification when they are registered properly. They will be able to also receive a link to confirm their details and personal

information. If users have any issues there will be a section which acts as a help page where they can report anything. The team will then work together to solve the issues in that way.

Clients are also required to agree to terms and conditions stipulated in an end user agreement. This is to ensure that the users utilise the system in a legal and safe manner.

18.6Post Implementation Follow Up

After Ctrl Alt Elite's application has been in use for three months, the development team will check on its progress and operations of the system. They will then do so by setting up a meeting with The Bank of Sun and whether they are satisfied with their requirements and figure out whether any issues arose. The team will also check in the comments the users of the application and study their feedback. If need be, corrective action will take place to ensure the quality of the system is in working state.

19 Sign Off

This system conforms to agreed specifications of the systems requirements, aims and objectives.
Signature of Project Manager
(Date/ Signature)
Signature of Software Developer
(Date/ Signature)
Signature of Client
(Date/ Signature)

20 GLOSSARY

RACI

Is an acronym that stands for responsible, accountable, consulted and informed. A RACI chart is a matrix of all the activities or decision-making authorities undertaken in an organisation set against all the people or roles. (Morgan, 2008)

Login

A username and password that allows a person to access a mobile device, user account or computer system.

Constraint

A limitation or restriction

CSS

57Cascading Style Sheet. This is a programming language used to style pages developed in HTML.

HTML

Hypertext Mark-up Language. A standard language used for creating web pages.

BRD

Business Requirements Document. A document containing the details of the business solutions and requirements for the project.

JAD

Joint Application Development. A process used for developing computer-based systems that involves interaction between users of the system and the developers (Beal, 2017).

21 External References

Morgan, R. 2008. HOW TO DO RACI CHARTING AND ANALYSIS: A PRACTICAL GUIDE. [ONLINE] Available at: https://www.projectsmart.co.uk/how-to-do-raci-charting-and-analysis.php. [Accessed 6 September 2018].

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UKEssays. November 2013. Importance of and Benefits of E-Banking. [online]. Available from:https://www.ukessays.com/essays/information-technology/importance-of-e-banking.php?vref=1 [Accessed 14 September 2018].

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22 APPENDIX A

QUESTIONARE FOR ONLINE BANKING APPLICATION

1. How often do you Online Bank?

2. What do you like about it?

3. What do you dislike about it?

4. What modern features would you like to see?

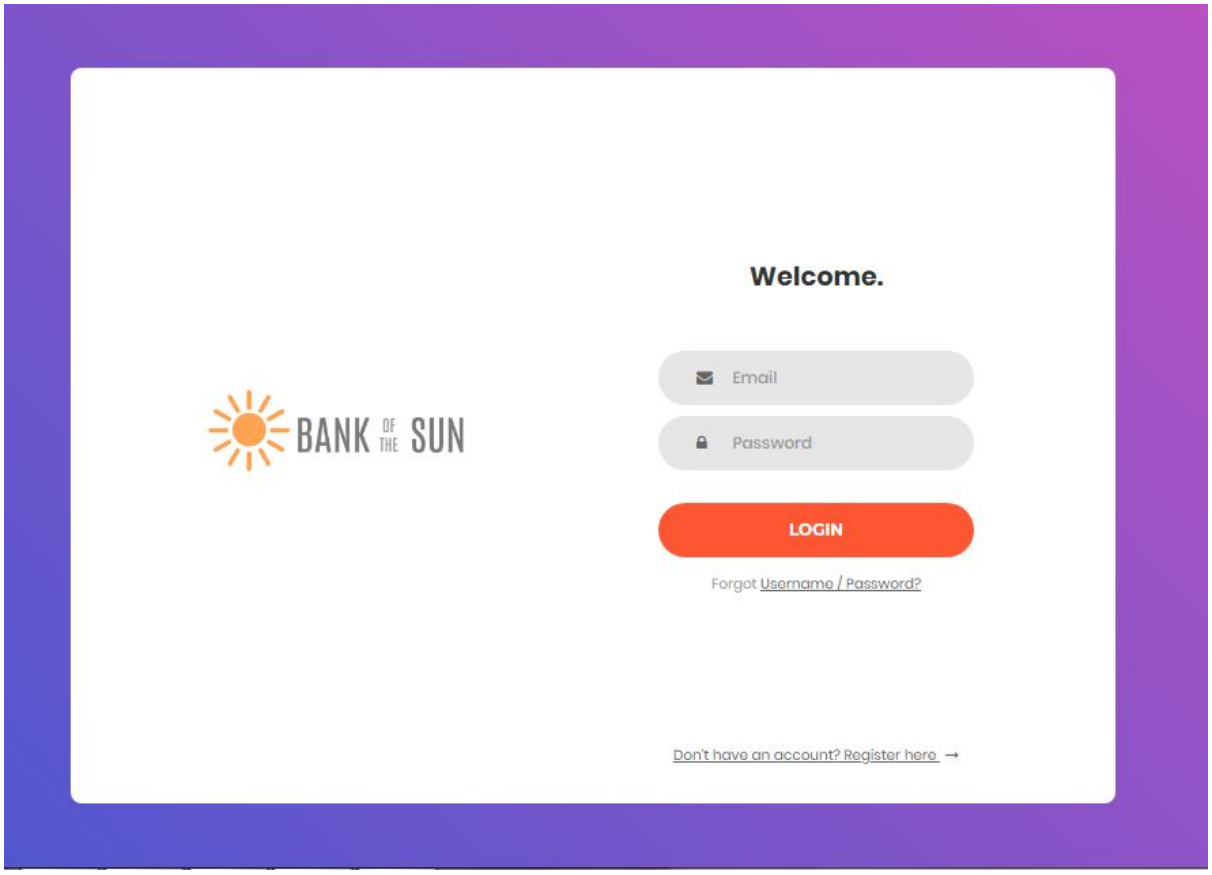
THANK YOU FOR YOUR TIME!

23 HTML MOCKUPS

24 HTML MOCK UP DESCRIPTIONS

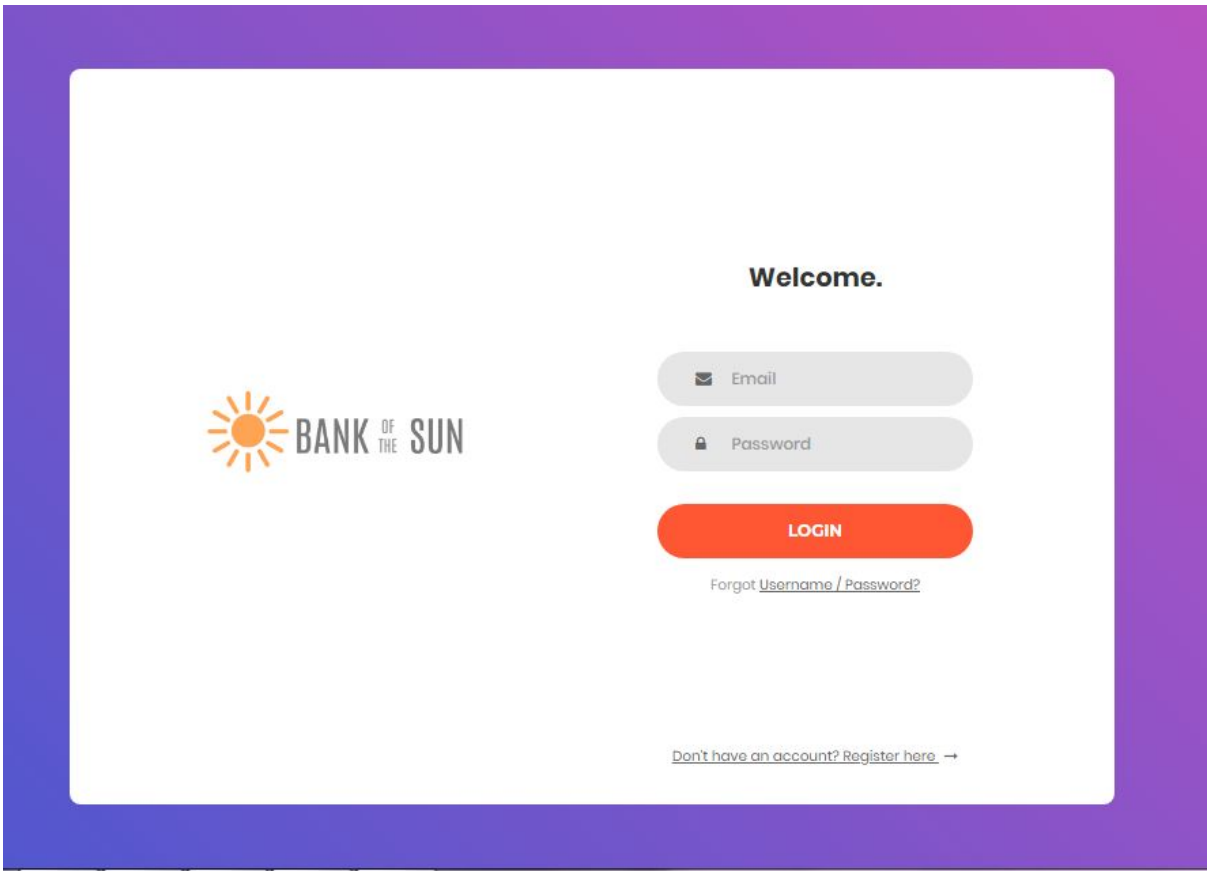
24.1 Sign in Page

This page appears on the page when user clicks onto the bank's online link. The details of the user will then be added into the bars. Thereafter, the user can proceed to the activation of the internet banking.



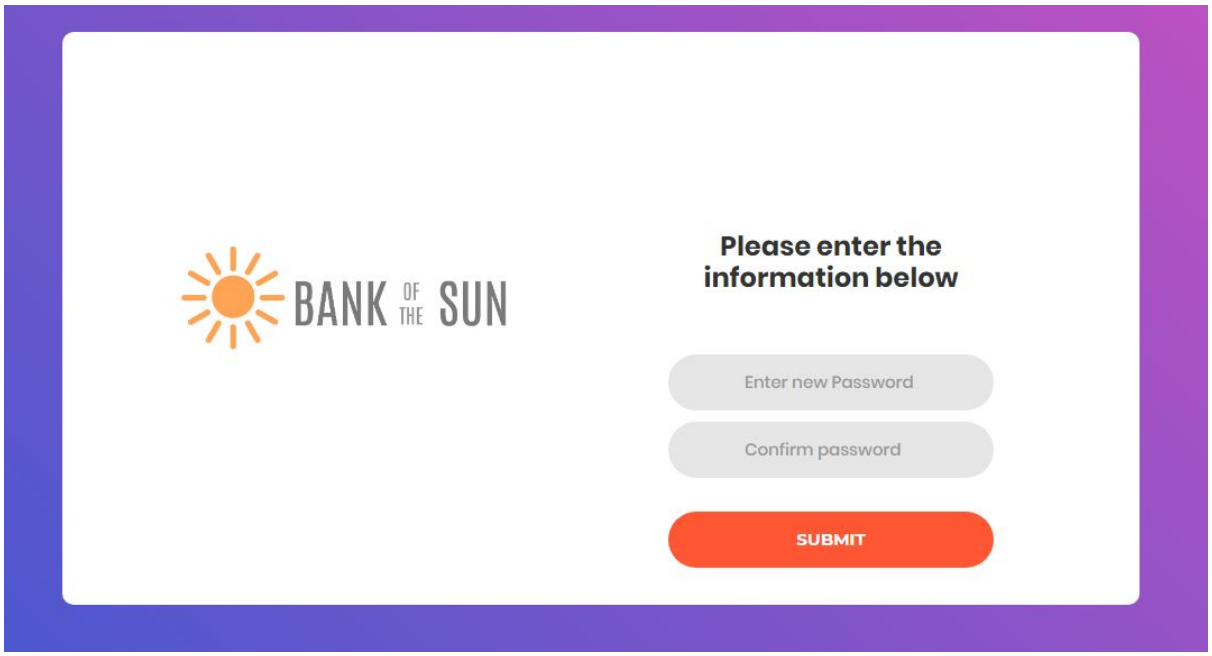
24.2 Create Account and register Page

If the user does not have an online account then the user can create one on the create account page where necessary details can be entered. This will allow the user to then sign in after and proceed to internet bank.



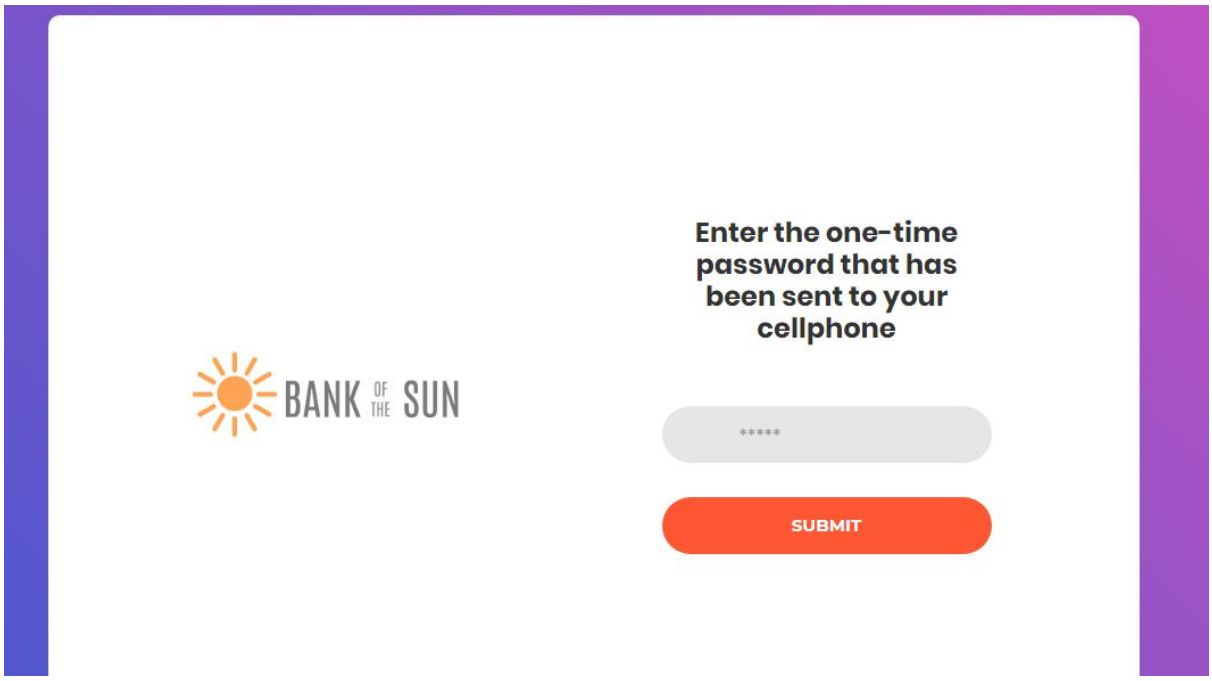
24.3 Forgot password page

If the user forgot his/her password then they will click onto the "Forgot password " link where they can enter their details and a request/confirmation link will be sent to them via SMS. Thereafter, they can change the password and sign in.



24.4 Activation of Internet Banking Page

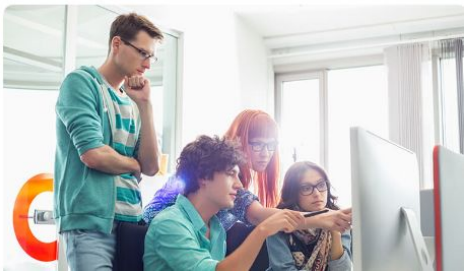
This page pops up after the user's details have been typed in. This allows the system to check it is in fact from the user. The activation of the internet banking will take place after the OTP (One Time Password) has been sent to their mobile cell phone. Thereafter, they gain access to the online application banking site.



24.5 Account Summary Page

This page shows the necessary details for the user. It shows what type of account they have, their available balance, their latest balance. This is where the user can change any of their personal details such as name, email address, contact number, password and profile picture. All updated information will be saved onto the system.

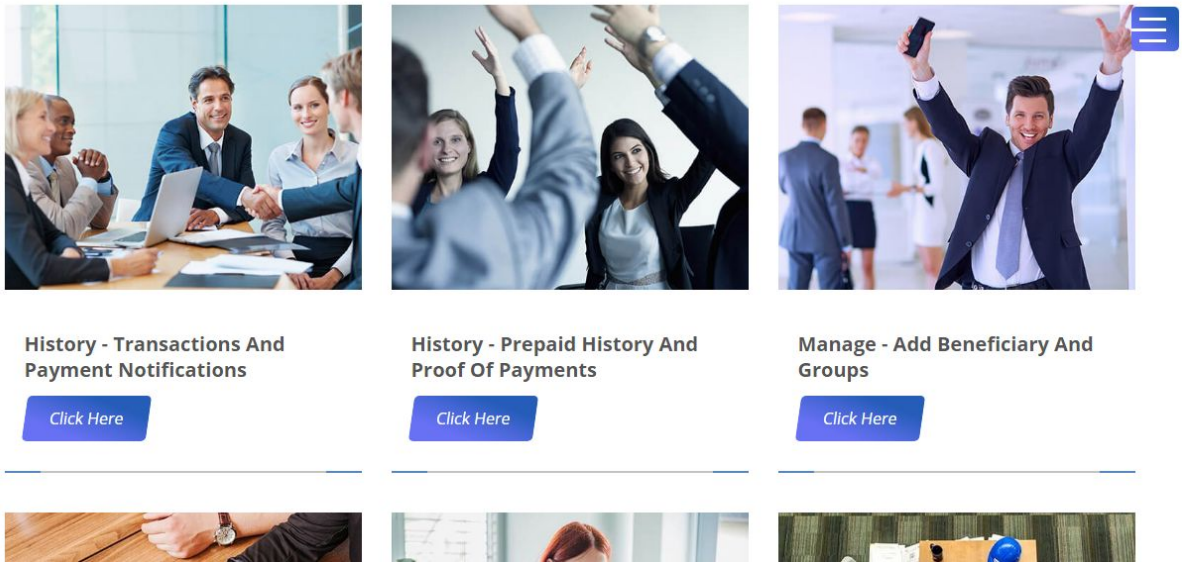
ACCOUNT BALANCE	
Available Amount	**Latest Balance**
R500,00	R500,00



24.6 Transaction Page

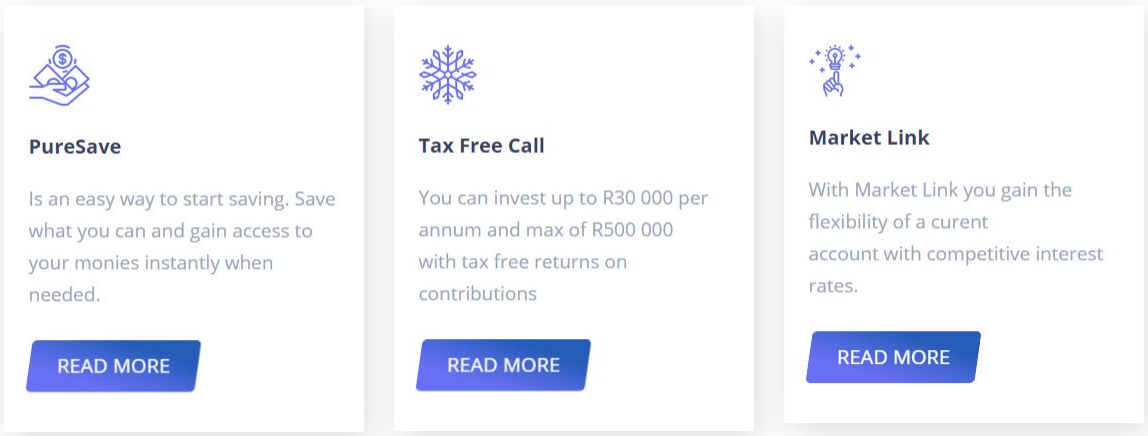
This page include main sections like "Pay and Transfer", "Manage" and "History". Pay and Transfer includes the "Pay beneficiary", "Pay multiple beneficiaries", "once-off payments", "send instant money", "Pay My Bills", "Pay beneficiary group", "Prepaid" options. The Manage sections includes

"Add beneficiary", "Add groups", "View Scheduled prepaid", "Change monthly payment limit", "Motor and Household Insurance". "Stop Debit Order", "Email transactions" History include sub sections like "Transactions", "Payment notifications, "Payment history", "Proof of payment".



24.7 Savings and Investments Page

This shows the heading "Access your money now" which gives the user options on how to save. They can Pure Save, Tax Free-Call and Market Link. When clicking "Learn more" they can access information which acts like an "About " page. This also includes the Money Market Call, Money Markey Select and Flexi Advantage. Users can also access their money layer like a fixed deposit, notice deposit and Shari'ah Fixed Deposit where everything is described in the information block.



24.8 Transactional Account Page

This includes the Business Account. Users can switch and use business settings. They can sign in via business details also. This page is the same for business and personal too as you can click on pay and make a transaction .

3 Months Summary

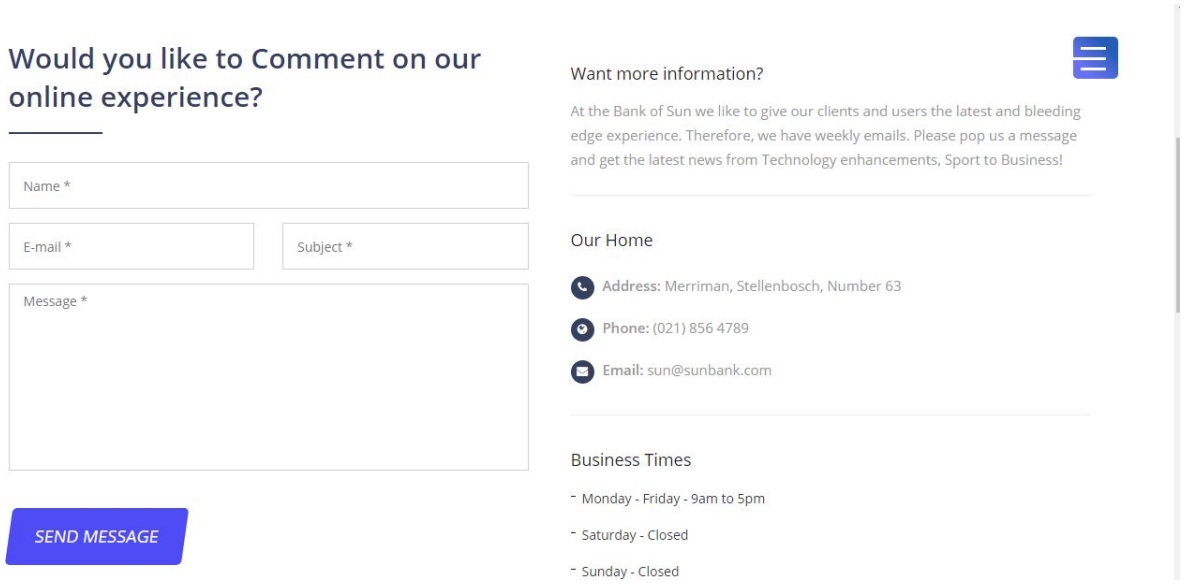
Date	Amount	Place
02/09/2018	-R100,95	CHECKERS - Stellenbosch
21/09/2018	-R300.00	CASH WITHDRAWAL - Neelsie - Spar
30/09/2018	+R500	PAYMENT - House Committee Salary
16/10/2018	+R900	MUM - Allowance
21/10/2018	-R150.75	BOHEMIA
22/10/2018	-R500	CASH WITHDRAWAL - Neelsie Spar
29/10/2018	-R150,05	LOVISA - EIKESTAD MALL

24.9 Quick Links

This is a drop menu that leads to user details page, change password page and sign out.

24.10 Online experience and information Page

This page includes important questions that the user might want to know. They can also enter reports or praises for the online application.



24.11 Activity Page

This page displays a summary of all the transactions that took place and how much money came in and out in the last 3 months. This page allows the user to decide to save more and will be directed to a "savings" page via a button at the bottom.

ACCOUNT BALANCE

Available Amount	Latest Balance
R500,00	R500,00

Make payment

Amount
R500,00 Pay