Software Requirements Specification

Online Banking System

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Introduction

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

Purpose

The purpose of this document is to give a detailed description of the requirements for the "Online Banking System" (OBS) software. It will illustrate the purpose and complete declaration for the development of system. It will also explain system constraints and interactions with other external applications.

Scope

The "Online Banking System" is a financial security-based PC application which makes people to share the services from the bank without walking out home. The software needs both Internet and valid bank account to normally functioned. All personal information and upload documents during operation are only for verification and recognition, which is absolutely save and were not leak outside. However, the application could not be download now, due to it is not exist.

Terms and abbreviation

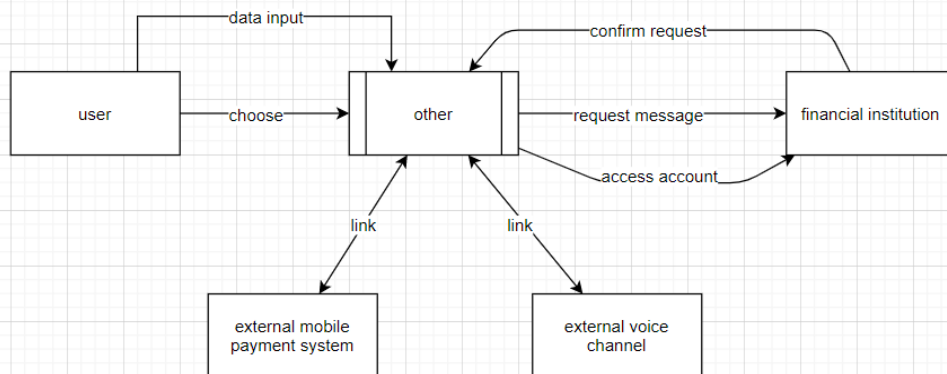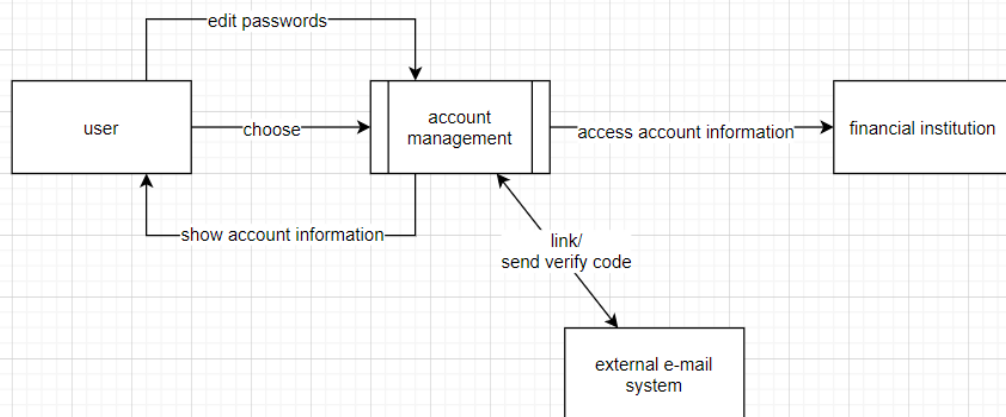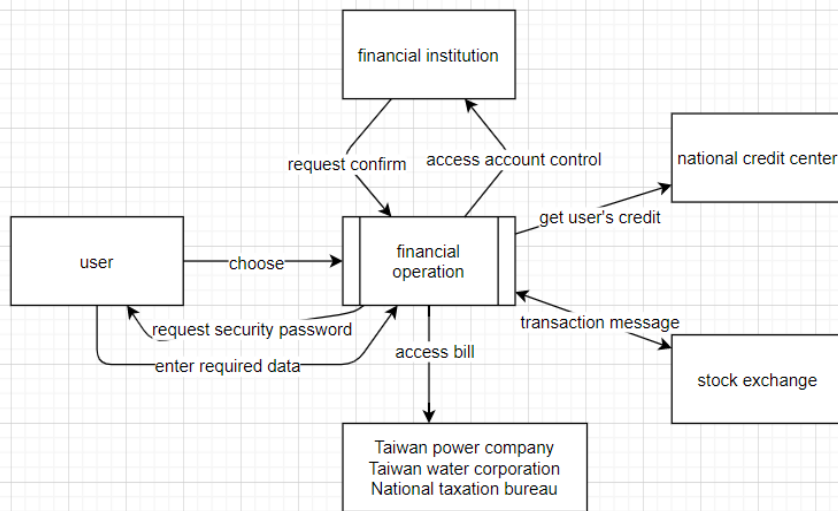| OBS	Online banking system
FO	Financial operation
AM	Account management
Invoice device	Use phone to store invoice (means business log)
Stock exchange	A place to invest (means all investments)
Voice channel	A platform provides help by instant voice
Sub-system	Independent from OBS, which is small and easy
Credit center	An institution records a person's credit
Bank No.	A number represents different bank
PMs	Person months

Overall description

This section will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. At last, the constraints and assumptions for the system will be presented.

Product perspective

This system is an ATM like system. We add most of existing functions into our system and a few special functions. First, users have to login the system with bank account and password. And then, the system will connect to the bank background database to access the user's account control right. Second, users choose the function they need and follow the next stage indications.
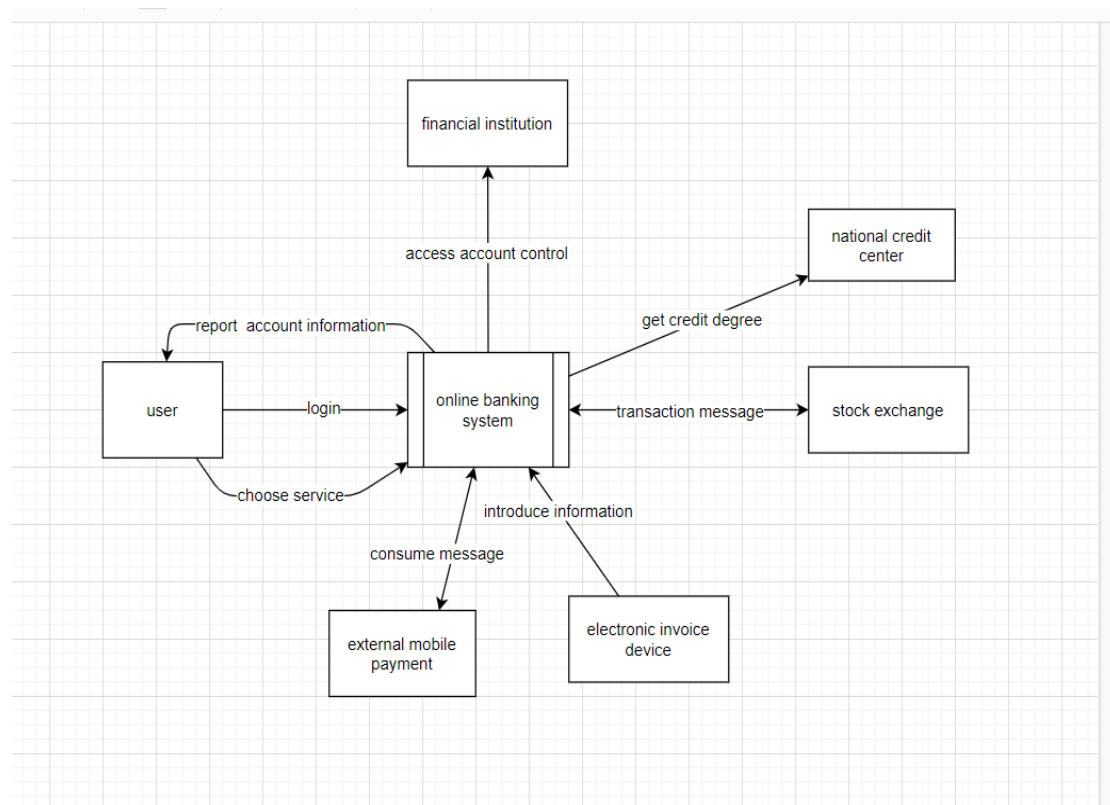
We divide all functions into three parts, that is Financial Operation, Account Management, and Other.

Diagram 1: Financial Operation

financial institution

- request confirm → financial operation
- financial operation → access account control → financial institution
- user → choose → financial operation
- financial operation → get user's credit → national credit center
- financial operation → request security password → user
- user → enter required data → financial operation
- financial operation → access bill → Taiwan power company / Taiwan water corporation / National taxation bureau
- stock exchange → transaction message → financial operation

Diagram 2: Account Management

- user → edit passwords → account management
- user → choose → account management
- account management → access account information → financial institution
- account management → show account information → user
- account management → link/send verify code → external e-mail system

Diagram 3: Other

- user → data input → other
- user → choose → other
- other → request message → financial institution
- financial institution → confirm request → other
- financial institution → access account → other
- other → link → external mobile payment system
- other → link → external voice channel

Product functions

What would users want:

1. Move money from account to account → Money transference

2. Borrow money from bank → Loan

3. Apply credit card → Credit card application

4. Check account owner/remainder → View account information

5. Trace money-flow → Check transaction log (sub-function in view account)

6. Change account password/security password/link with e-mail address → Security

7. Stock market → Investment

8. Pay national bill at home → Bill payment

9. Convenience → Support mobile payment

Analysis:

➢ Money transference, loan, bill payment, investment → Financial operation

➢ View account information, security → Account management

➢ Credit card application → Online application system

➢ Support mobile payment → sub-system link with external mobile pay devices

➢ Online customer service → other help

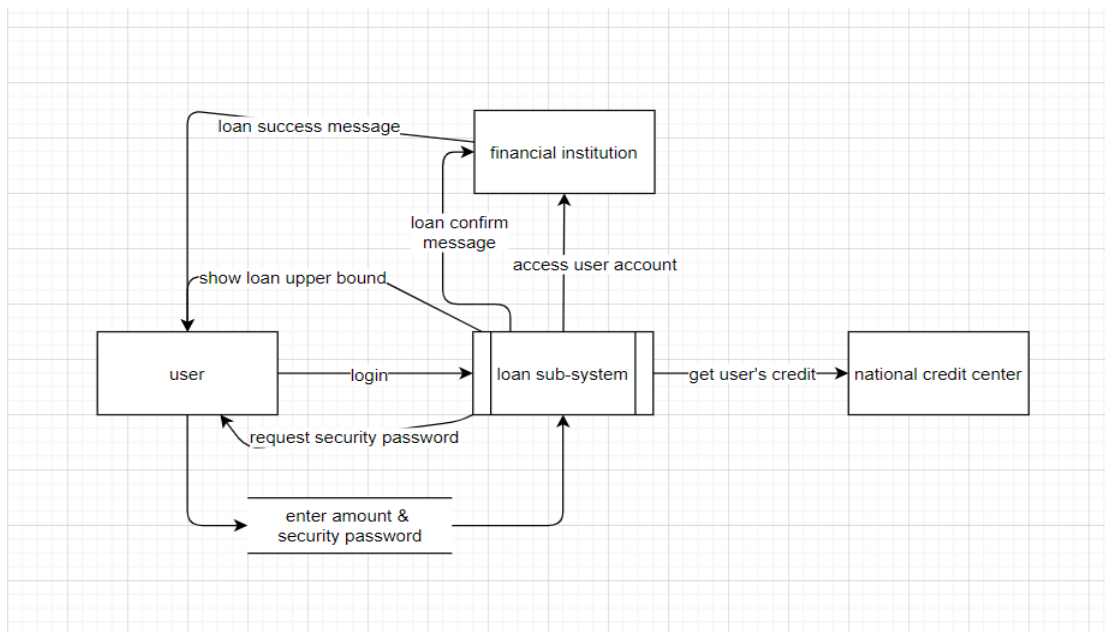(handle the problems from users about the system)

Requirements

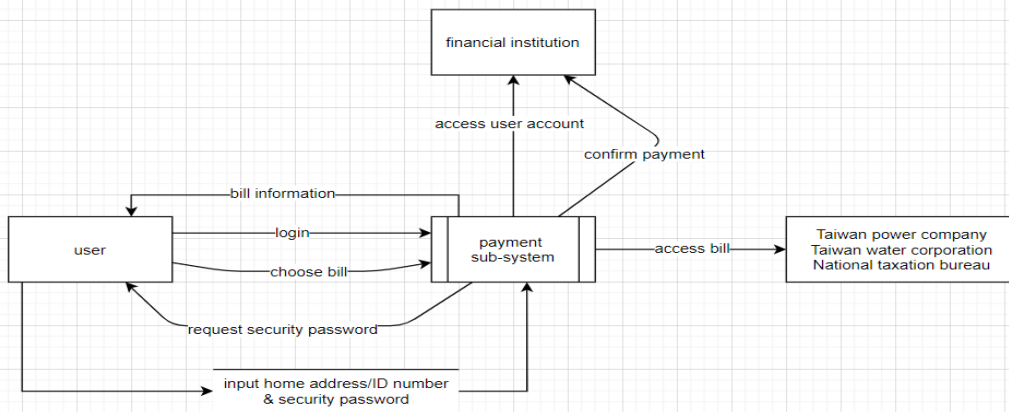Implement the functions includes

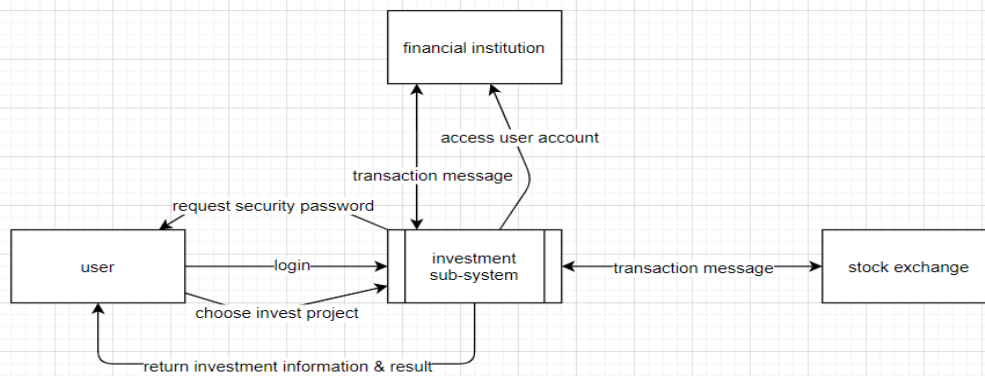1. Financial operation

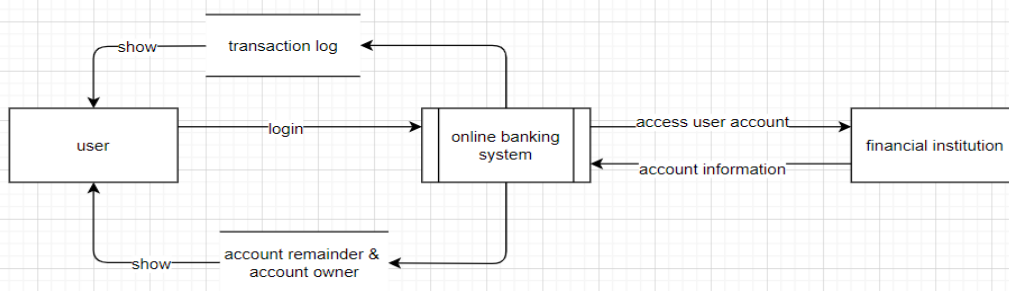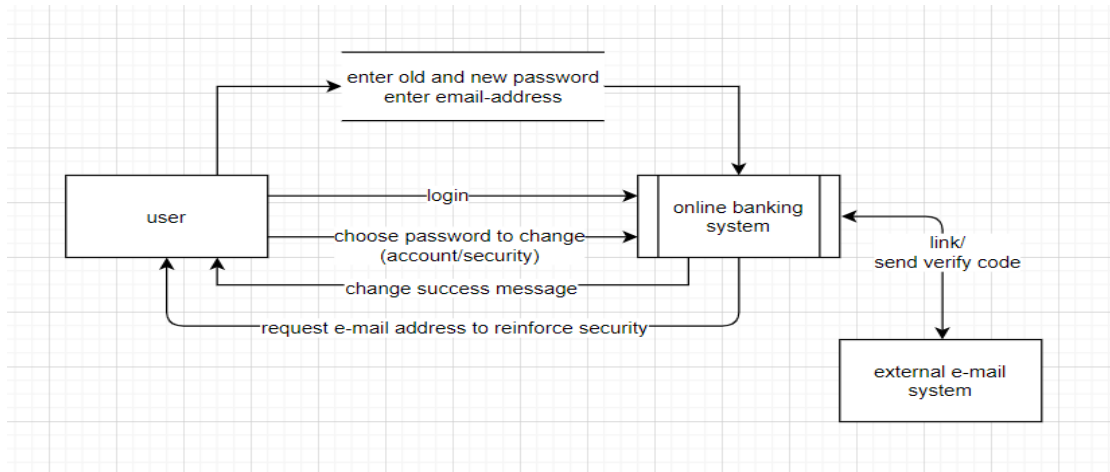Money transference
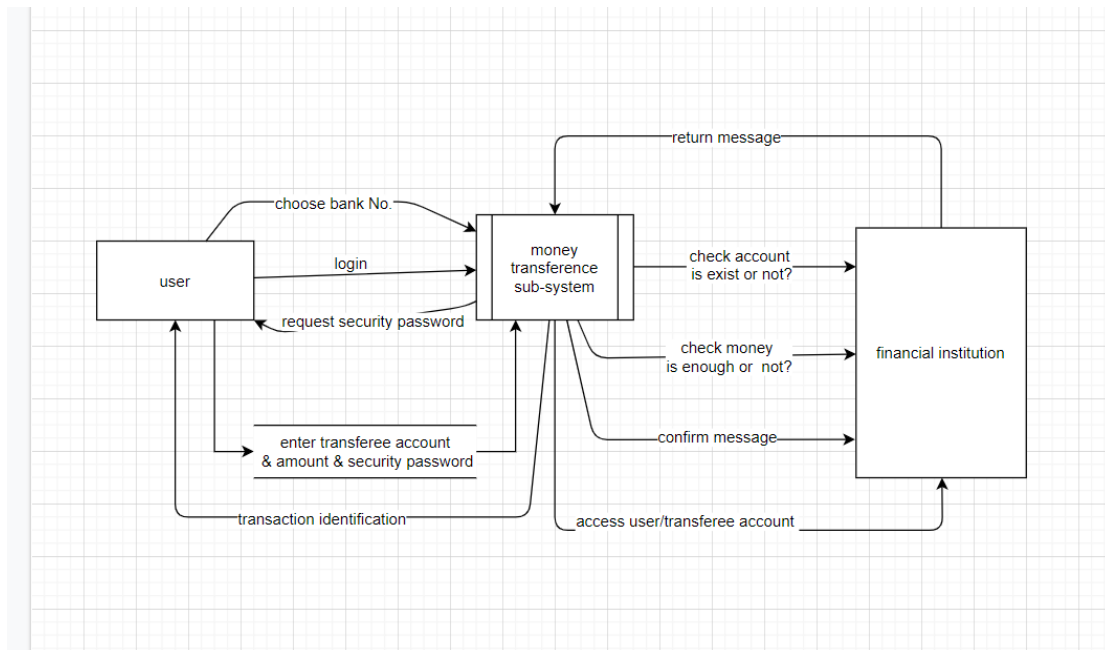
Loan

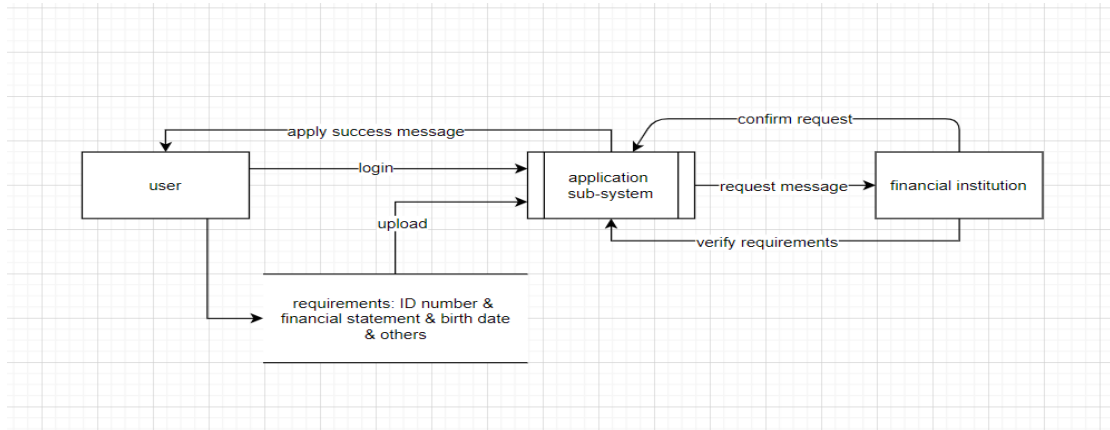# Bill payment

Investment

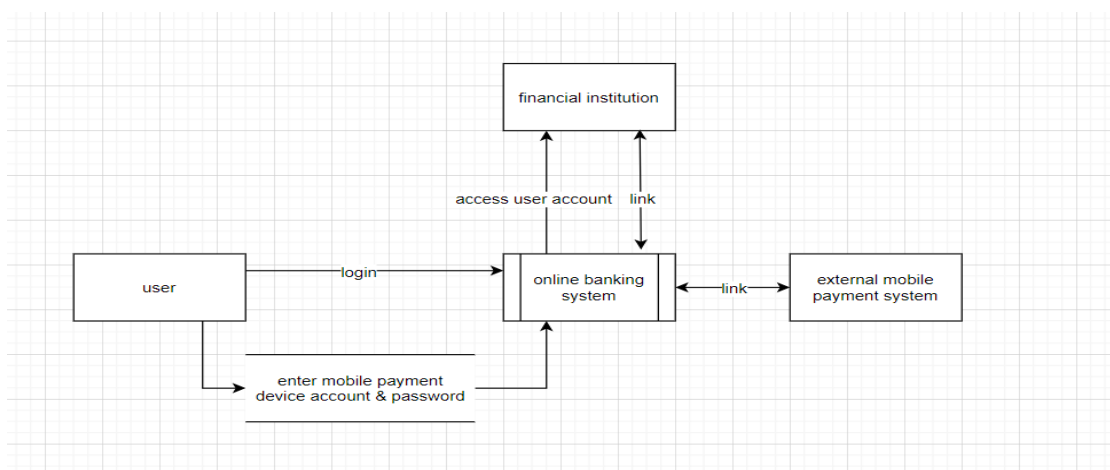
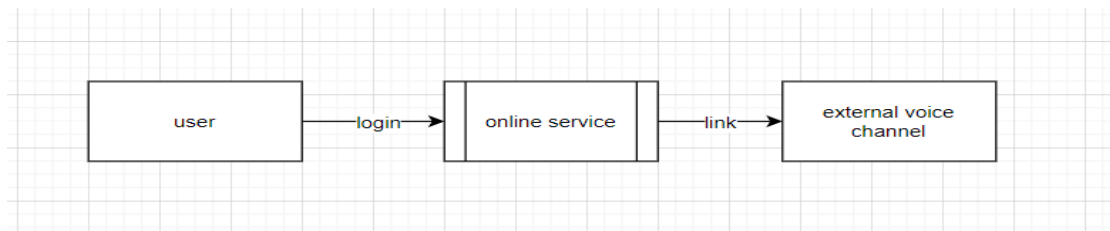## 2. Account management

View account information

Security

enter old and new password
enter email-address

user

login

choose password to change
(account/security)

change success message

request e-mail address to reinforce security

online banking
system

link/
send verify code

external e-mail
system

3. Online application system

apply success message

login

user

upload

confirm request

application
sub-system

request message

verify requirements

financial institution

requirements: ID number &
financial statement & birth date
& others

4. Support mobile payment

financial institution

access user account   link

user

login

online banking
system

link

external mobile
payment system

enter mobile payment
device account & password

5. Online customer service

user

login

online service

link

external voice
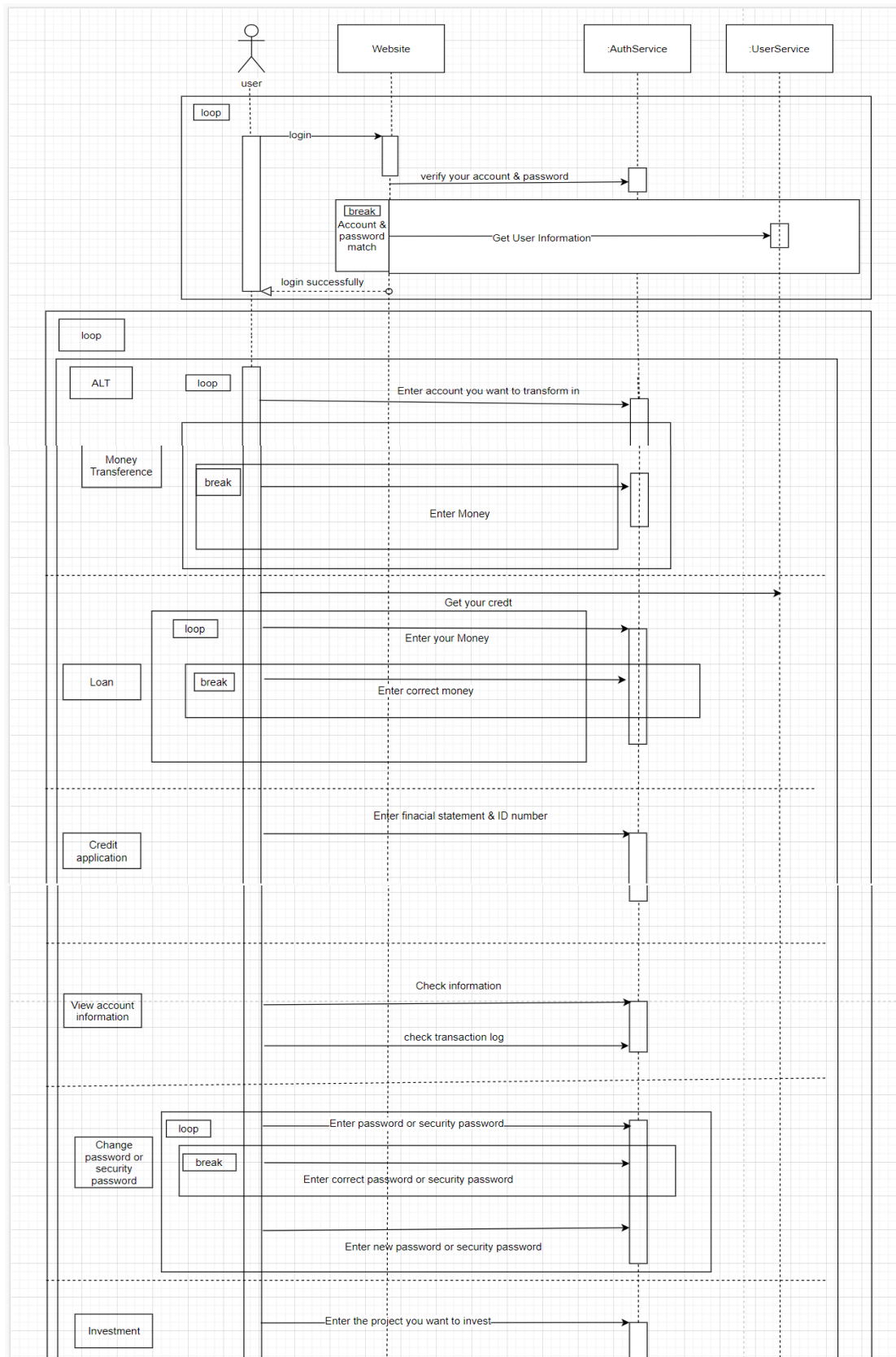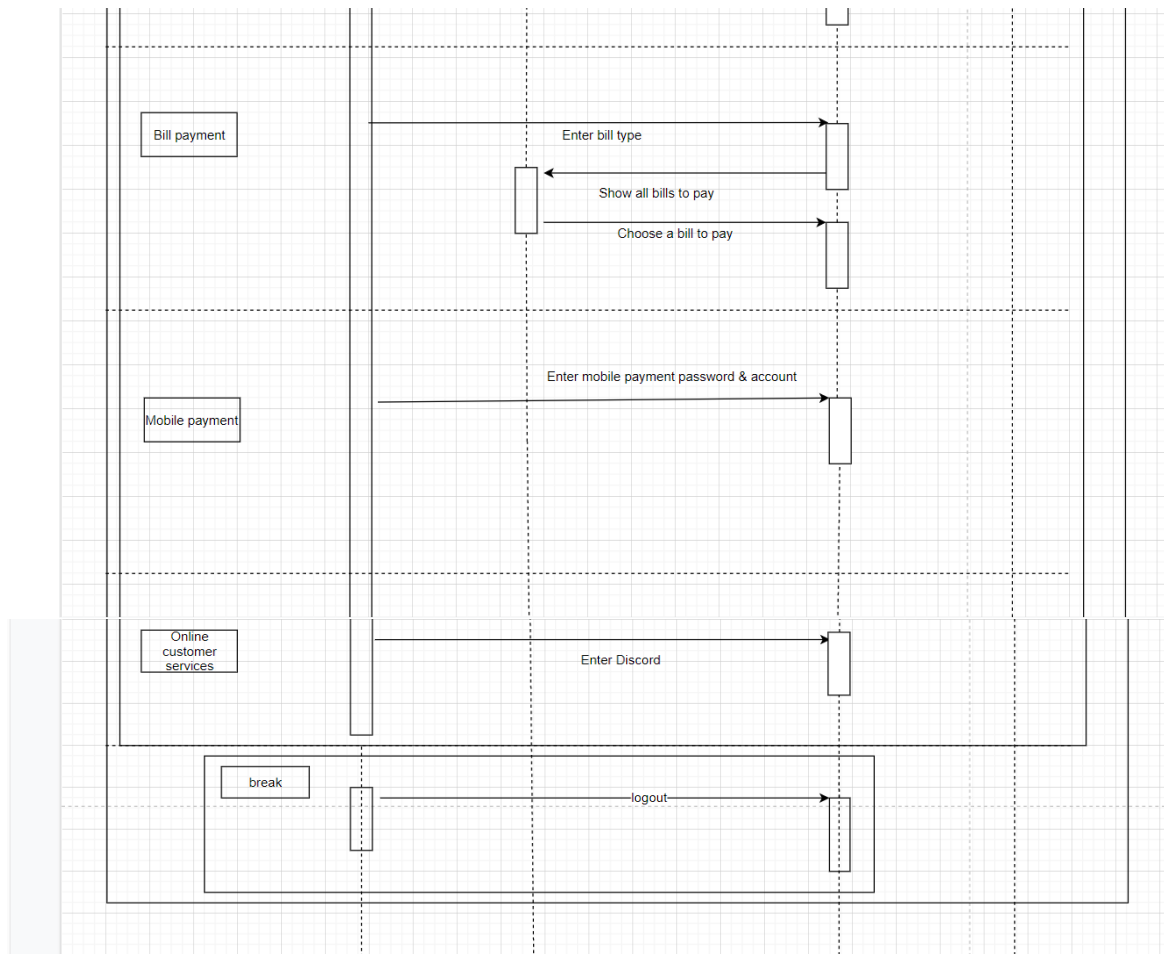channel

Use case diagram

Sequential case diagram

Constraints and extended

There is a lethal problem that we cannot instantly deposit or withdraw money from OBS. Thus, the field of physical money usage is not we should focus on. Instead, we support mobile payment device. We make attempt to link bank account to a mobile payment application, which indirectly make account money a use.

Specific requirements

This section contains all functional and quality requirements of the system. It gives a detailed description of the system and all its features.

Graphical User Interface

線上銀行
ONLINE BANKING

登入

註冊帳號　　　　　忘記/查詢密碼

登入

請選擇服務項目
PLEASE SELECT A TRANSACTION

轉帳 TRANSFER	貸款 LOAN
投資 INVESTMENT	餘額查詢
繳費	交易紀錄查詢
更改密碼/安全密碼	信用卡申請
行動支付連接	線上客服

登出 Logout

Money transference

請輸入轉入銀行代號
PLEASE ENTER TRANSFEREE BANK ID

下一步

查詢銀行代號

輸入單位代號
TRANSFEREE BANK ID
台灣銀行(004)

請輸入轉入帳號
PLEASE ENTER TRANSFEREE ACCOUNT NO.

下一步

請輸入轉帳金額
PLEASE ENTER AMOUNT TO WHICH BE TRANSFERED

下一步

請輸入安全密碼
PLEASE ENTER YOUR SECURITY PASSWORD

下一步

交易成功

交易時間	
轉出帳號	
轉入帳號	
轉帳金額	
帳戶餘額	
交易序號	

回主選單 Main Menu   登出 Logout

Loan

貸款
LOAN

信貸線上申請	信貸申請書
房貸申請	信貸契約書
貸款試算	信貸流程說明

請輸入身分資料

身分證字號

出生年月日

驗證碼

FAEN1

下一步

上傳相關文件

身分證(正面)　　選擇檔案

身分證(反面)　　選擇檔案

工作證明　　選擇檔案

所得證明　　選擇檔案

下一步

Credit card application

正卡人身分證

身分證編號

出生日期

驗證碼   *FEAU1*   重新產生

很多同意事項

☐ 我已閱讀並同意上述條款

下一步

Security

更改密碼/安全密碼

更改密碼

更改安全密碼

回主選單

更改密碼

舊密碼

新密碼

密碼強度:

確認舊密碼

變更密碼

Investment

請選擇投資項目

股票	ETF
基金	債券
期貨	權證

回到主選單

Mobile payment link

行動支付連結

支付宝
ALIPAY

連結 Link

Bill payment system

選擇繳費類型

| 規費 | | 水電費 |

請輸入身分證字號

下一步

帳單查看

選擇帳單年月　109年06月　　　選擇帳單類別　規費

顯示帳單內容

回主選單　　　登出

View account information

查詢結果

查詢日期	
查詢帳號	
帳戶餘額	
可用餘額	

回主選單　　　　　　登出

交易紀錄查詢

開始時間　109年06月01日　　　　結束時間　109年06月11日

顯示交易紀錄

回主選單　　　　　　登出

Online customer service

線上客服

 Discord

回主選單

ONLINE BANKING ⌄

⌄ 文字頻道 ＋
一般 👤⁺ ⚙

⌄ 語音頻道 ＋
🔊 客服頻道1
🔊 客服頻道2 👤⁺ ⚙
🔊 客服頻道3
🔊 客服頻道4
　　🟠 duncan56567

Cost for design

We use COCOMO model to estimate some figure about OBS.

OBS is an organic project type.

Suppose the size of our project is 150 thousand lines of code. Thus, we get KLOC = 15

Effort = $2.4(KLOC)^{1.05}$

E = $2.4 * (400)^{1.05}$ = 2.4 * 192.70 = 462.5(PMs)

Development time = $2.5(Effort)^{0.38}$

D = $2.5 * (462.5)^{0.38}$ = 2.5 * 10.30 = 25.7(Months)

Summary

Finally, we finished construct the whole thoughts of OBS. We build functions which meets users' requirements, also add some new function in it. We adopt direct way and simple UI to speed up the process of banking. Compare to physical bank, this system greatly shortens the time on waiting in line. Thus, we can say our project is match to the customers' expectation.