UNIVERSITY
OF WOLLONGONG
AUSTRALIA

Technical Design Document

For

Secure Autopay

Final Year Project SS18

Supervisor
Prem

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Introduction

This document n is an overview of the Technical Designment Document for Pocket (Secure Autopay System).

Purpose

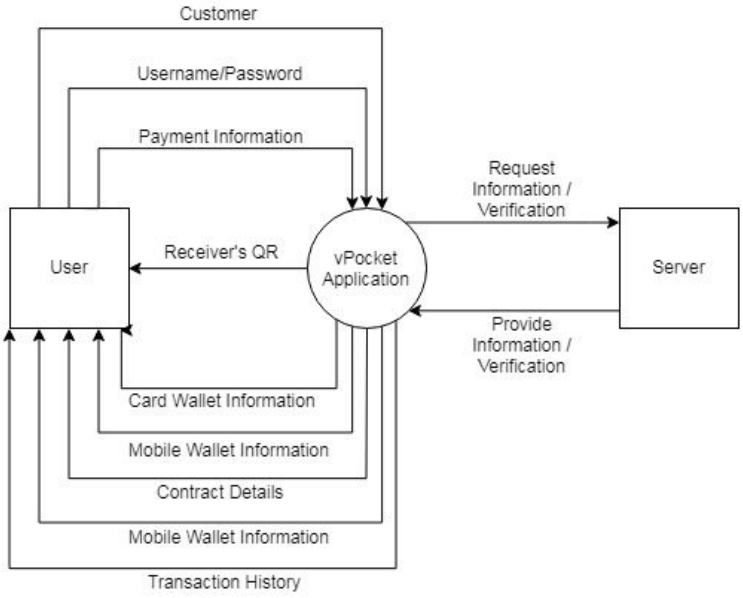
The purpose of this document is to provide guidance and template to assist the relevant staff in producing the Secure Autopay System, Pocket.

Design Approach

System Environment

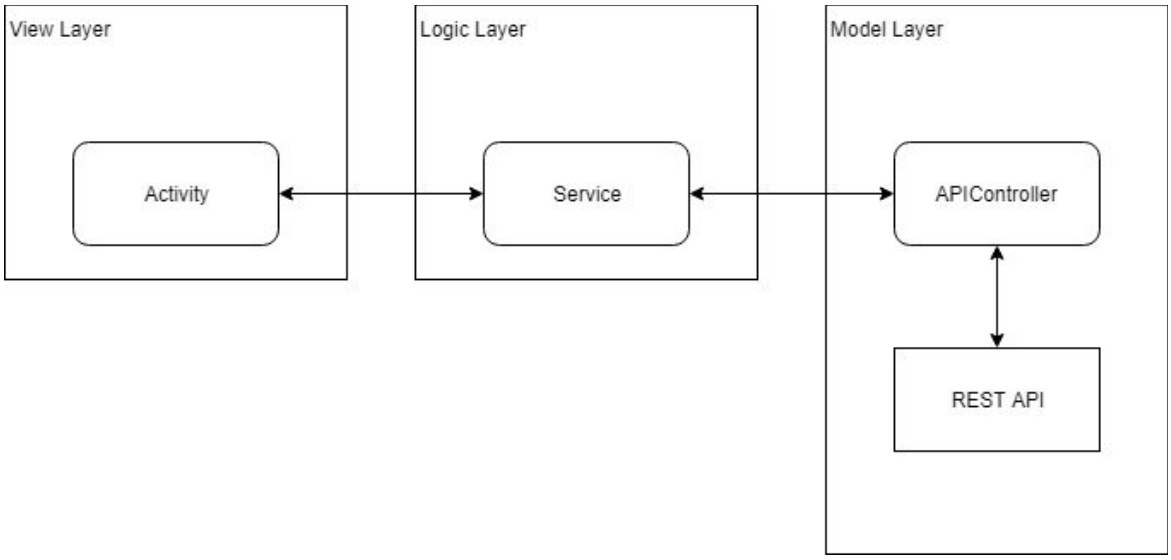
- Android 7.x Nougat and above
- Server OS: Linux Server LTS 18.0
- Database: mySQL
- Web Server: Apache Tomcat 9.0
- Revision Control: Github

Data Flow

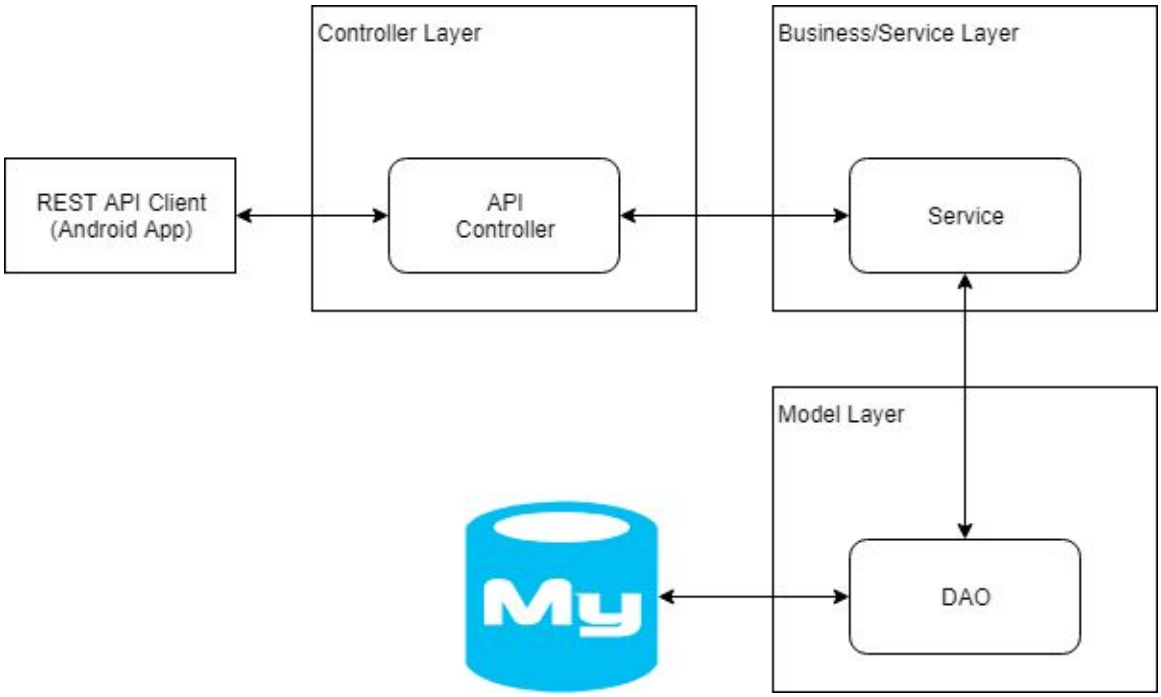


Architecture Design

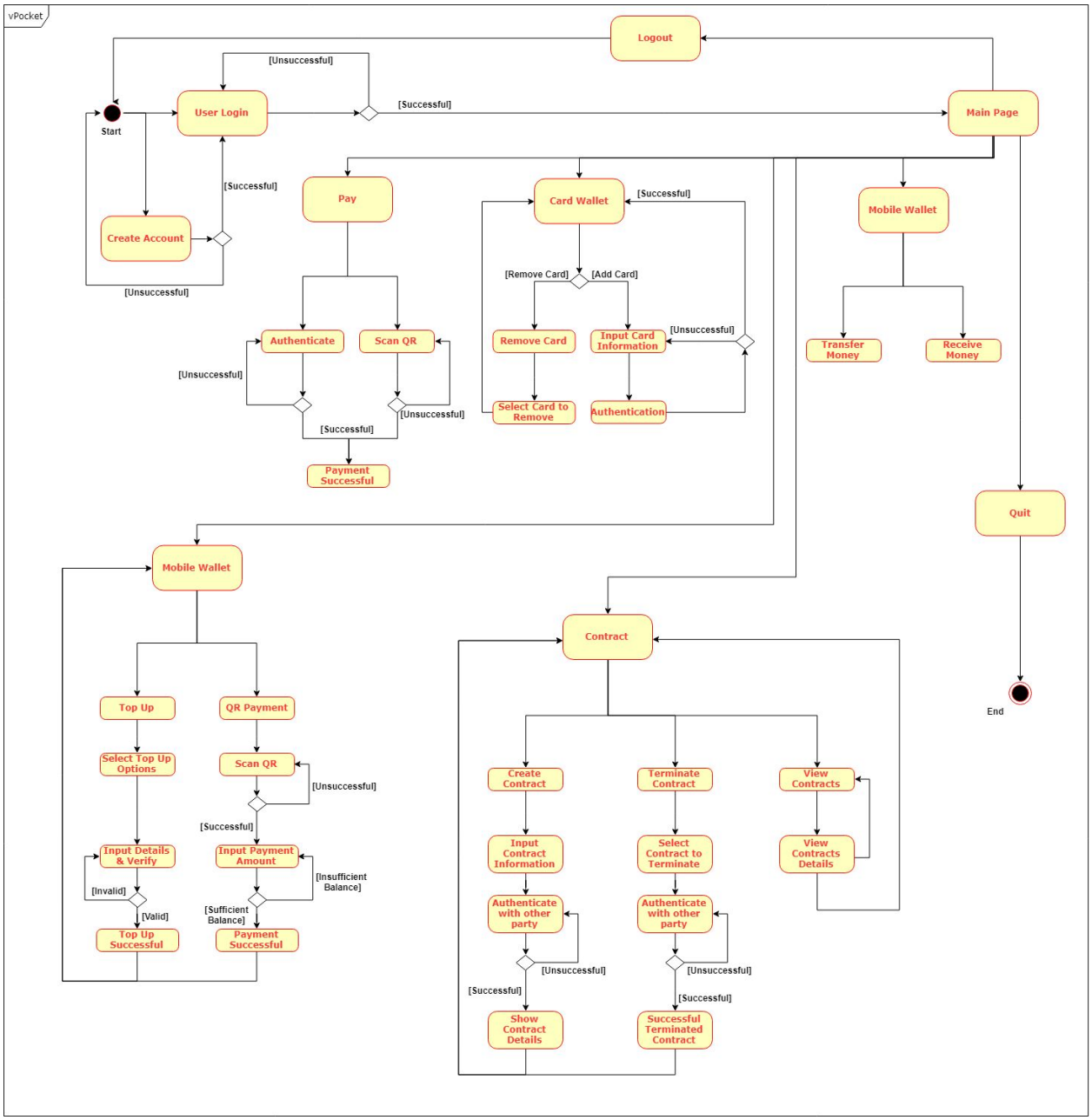
Application



Server

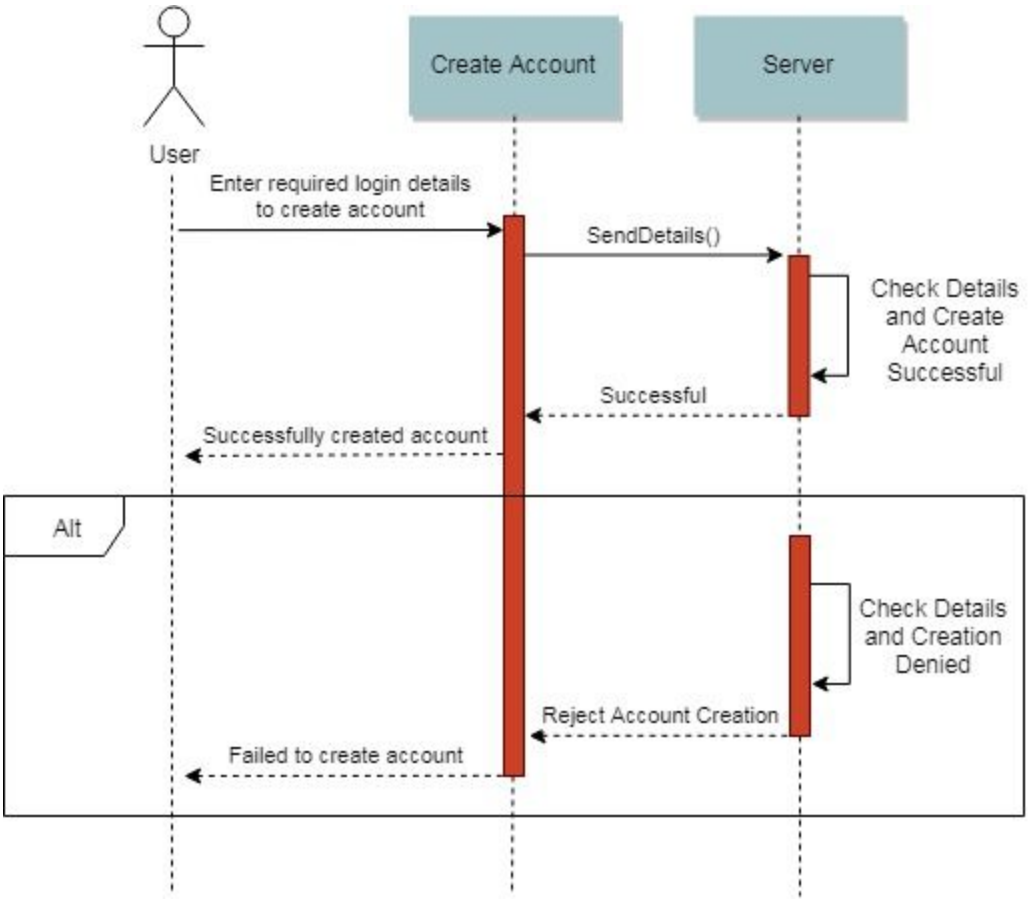


Activity Diagram

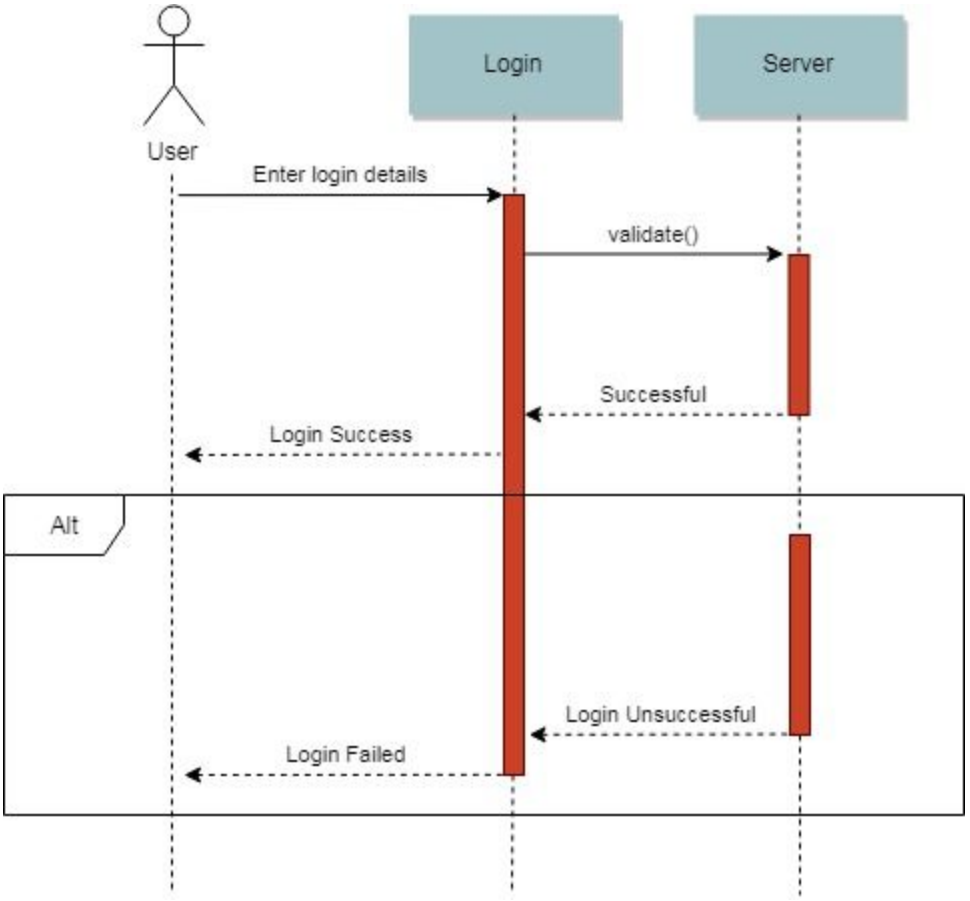


Sequence Diagrams

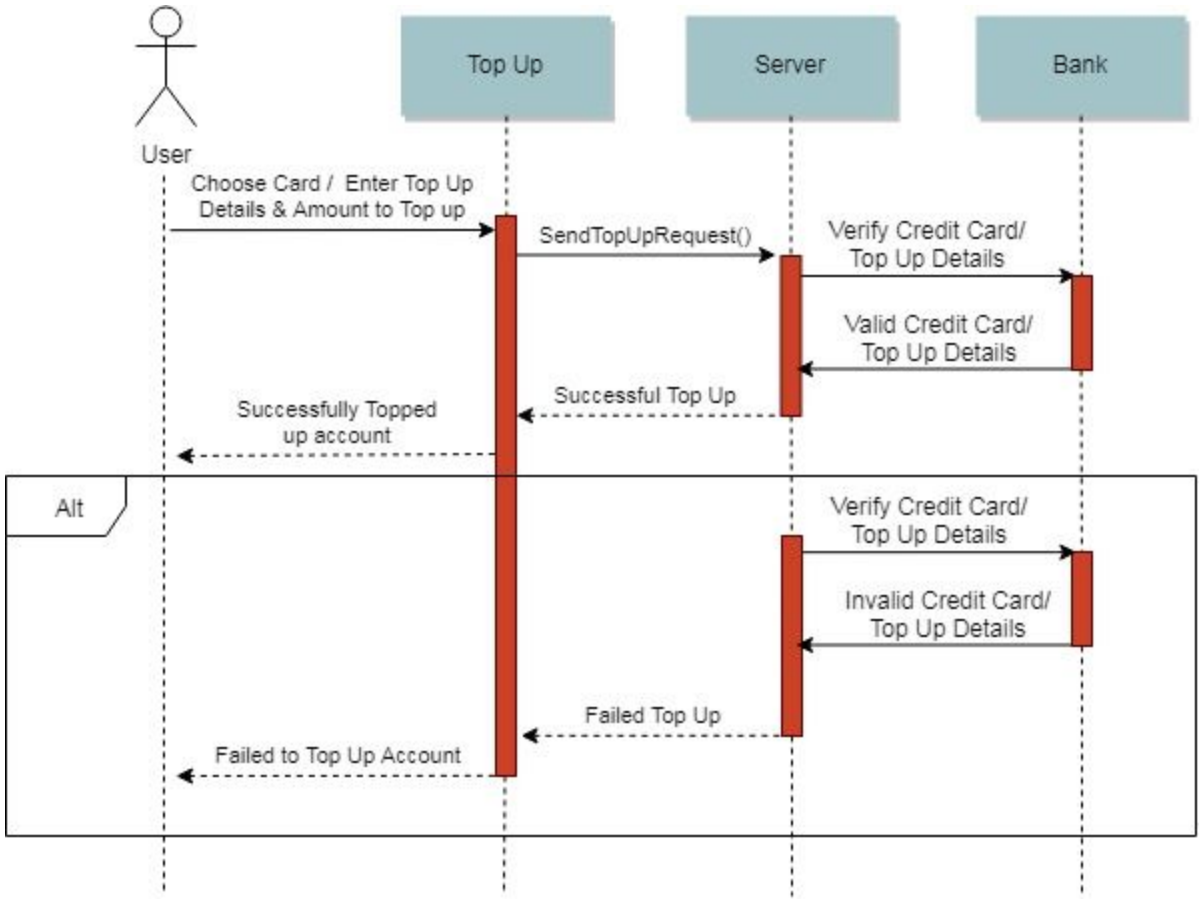
Create Account



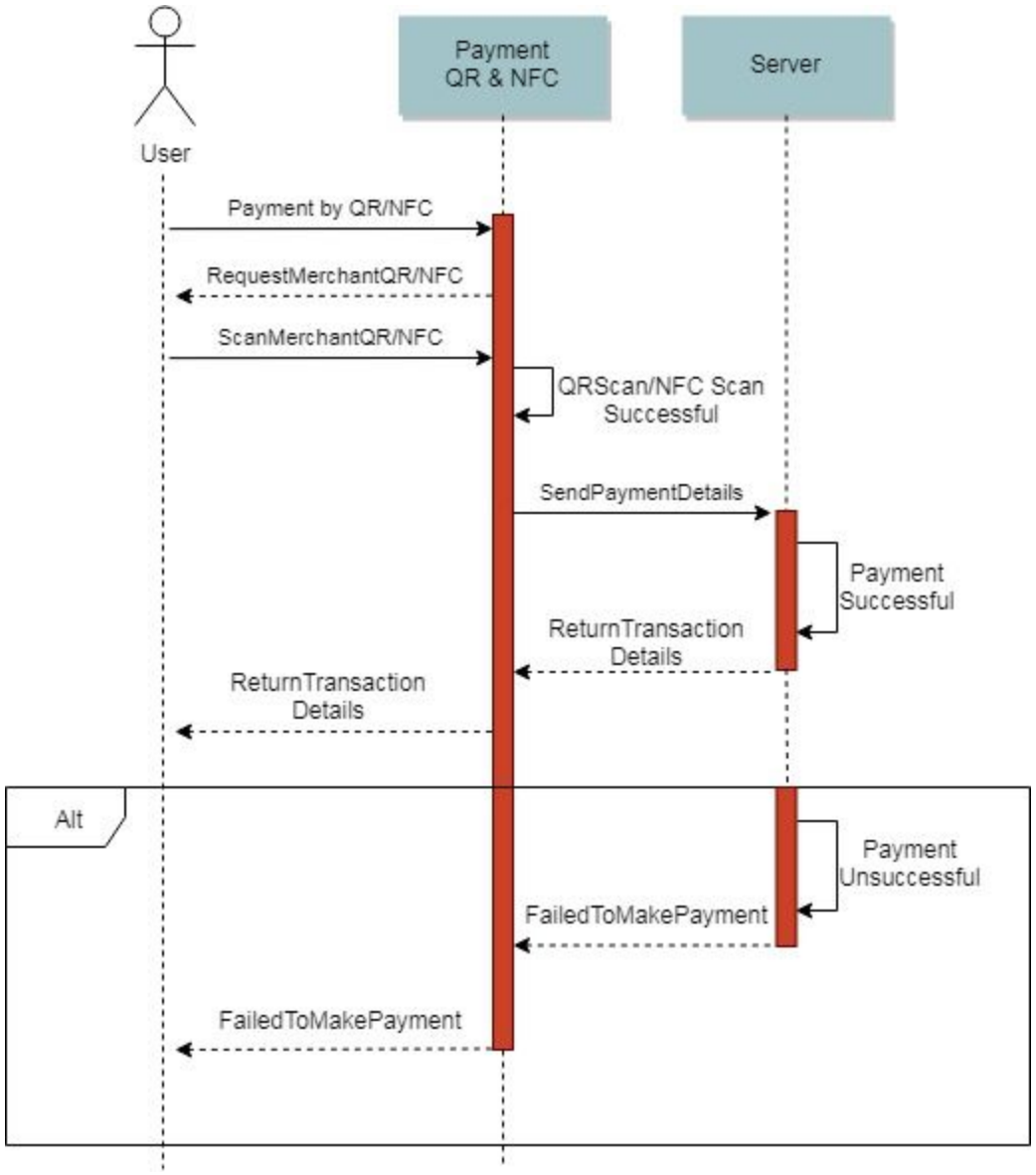
Login


User
Login
Server
Enter login details
validate()
Successful
Login Success
Alt
Login Unsuccessful
Login Failed

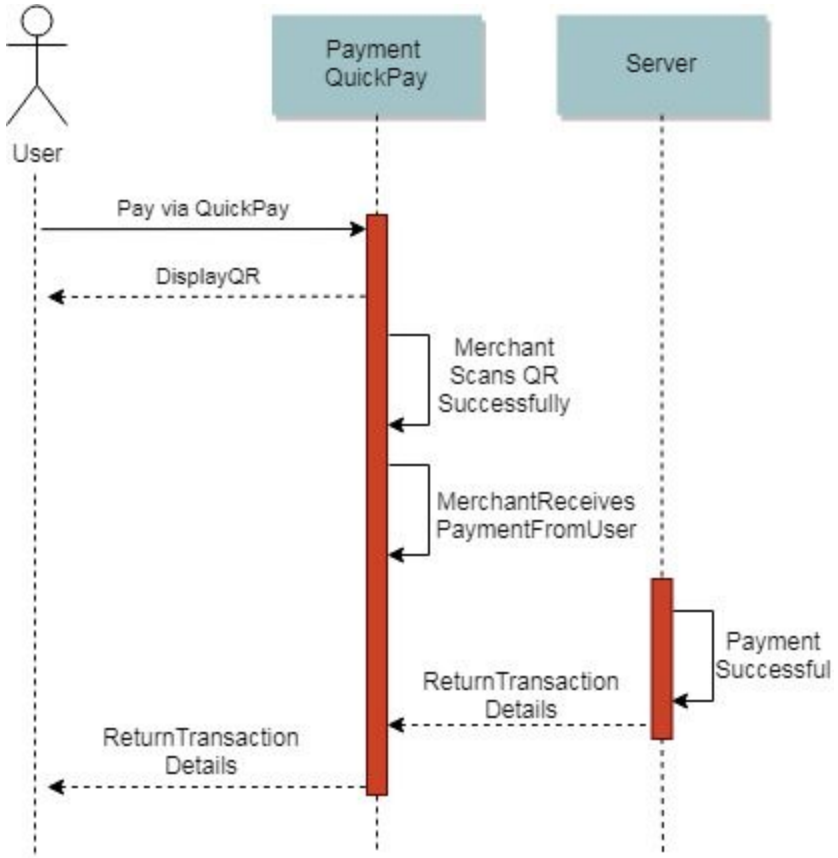
Top Up


User
Top Up
Server
Bank
Choose Card / Enter Top Up Details & Amount to Top up
SendTopUpRequest()
Verify Credit Card/ Top Up Details
Valid Credit Card/ Top Up Details
Successful Top Up
Successfully Topped up account
Alt
Verify Credit Card/ Top Up Details
Invalid Credit Card/ Top Up Details
Failed Top Up
Failed to Top Up Account

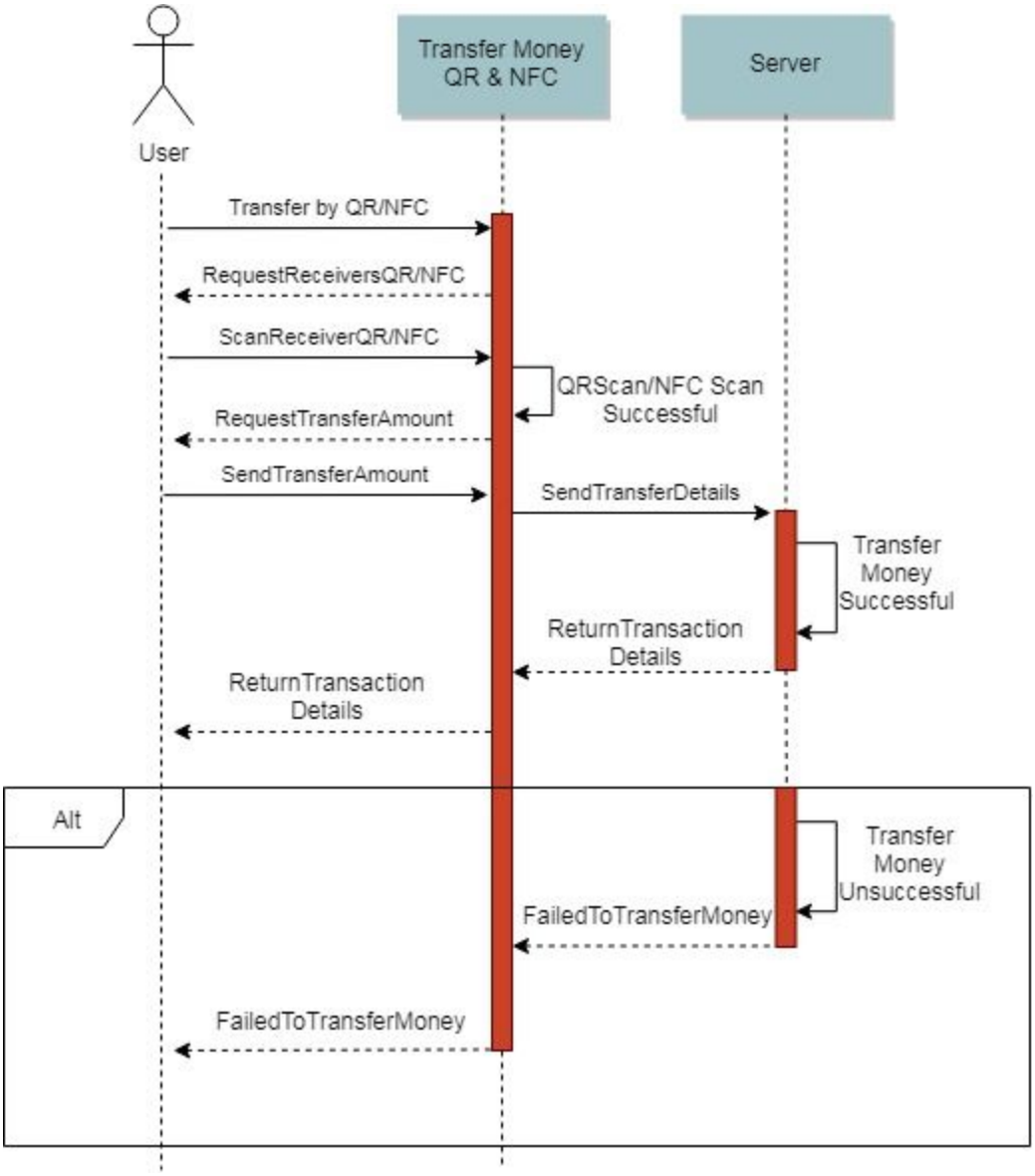
Pay (NFC/QR)


User
Payment
QR & NFC
Server
Payment by QR/NFC
RequestMerchantQR/NFC
ScanMerchantQR/NFC
QRScan/NFC Scan
Successful
SendPaymentDetails
Payment
Successful
ReturnTransaction
Details
ReturnTransaction
Details
Alt
Payment
Unsuccessful
FailedToMakePayment
FailedToMakePayment

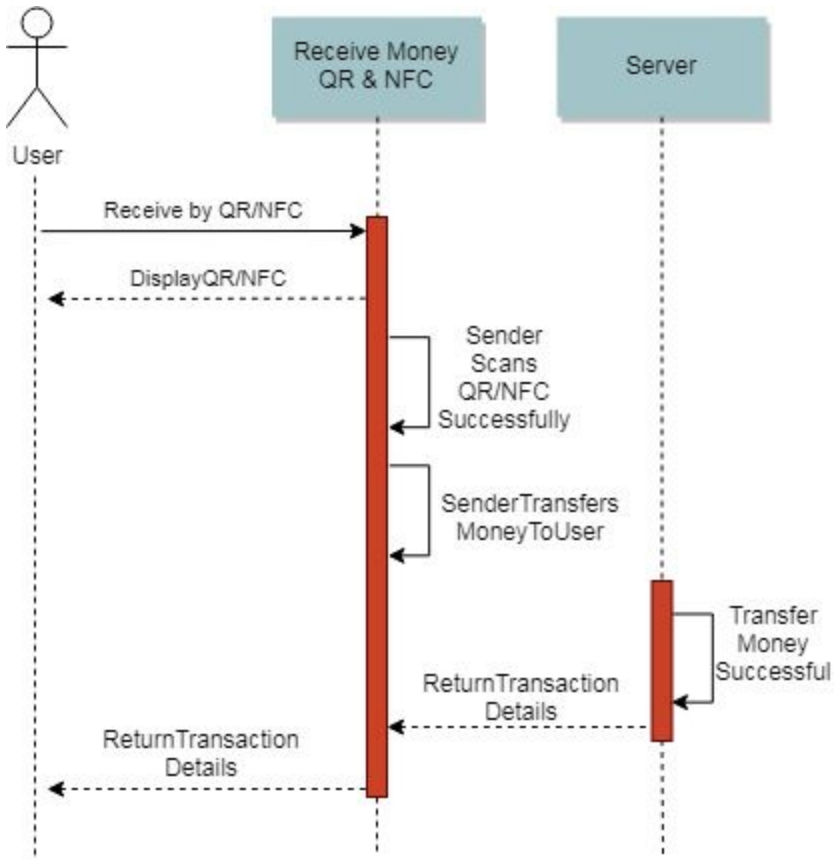
Quick Pay


User
Payment
QuickPay
Server
Pay via QuickPay
DisplayQR
Merchant
Scans QR
Successfully
MerchantReceives
PaymentFromUser
Payment
Successful
ReturnTransaction
Details
ReturnTransaction
Details

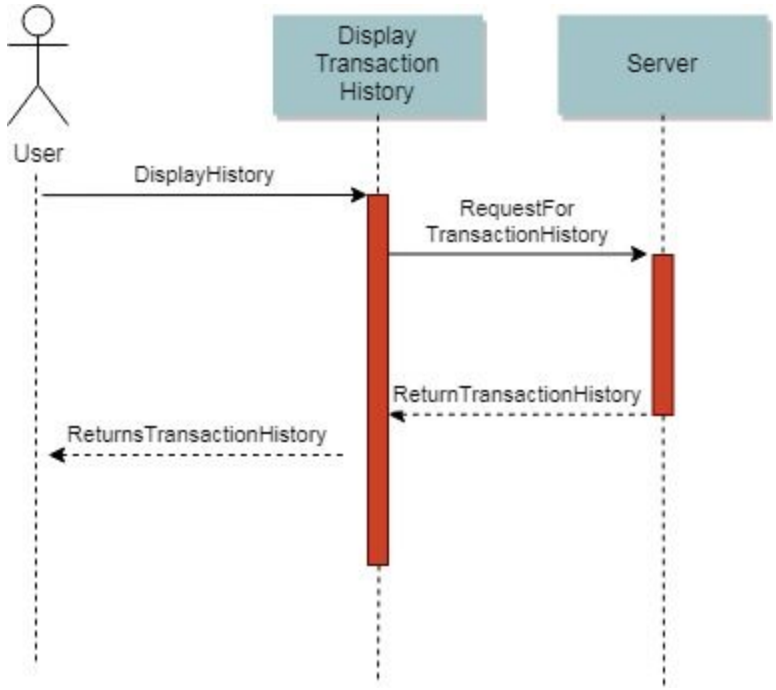
Transfer Money



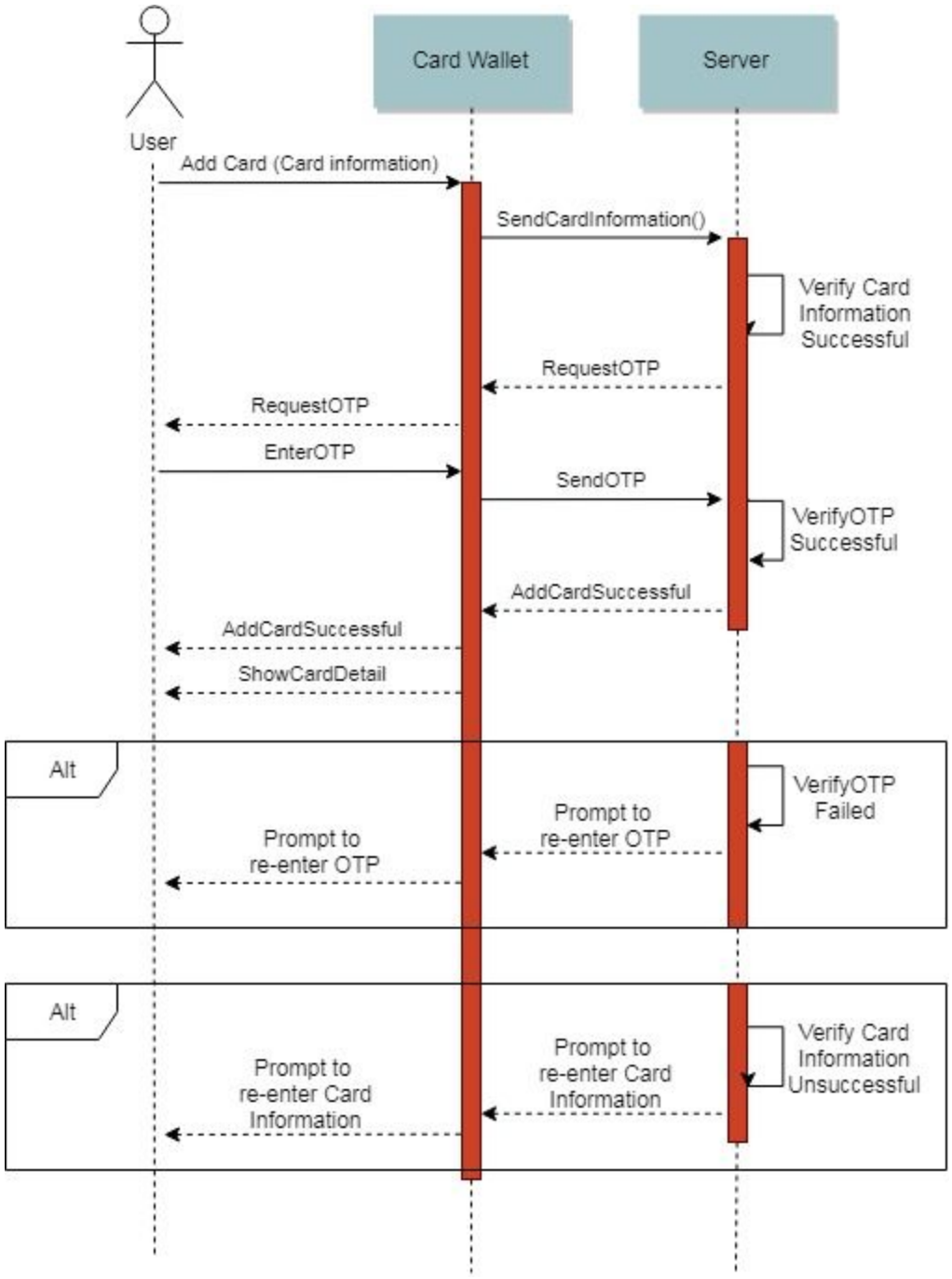
Receive Money



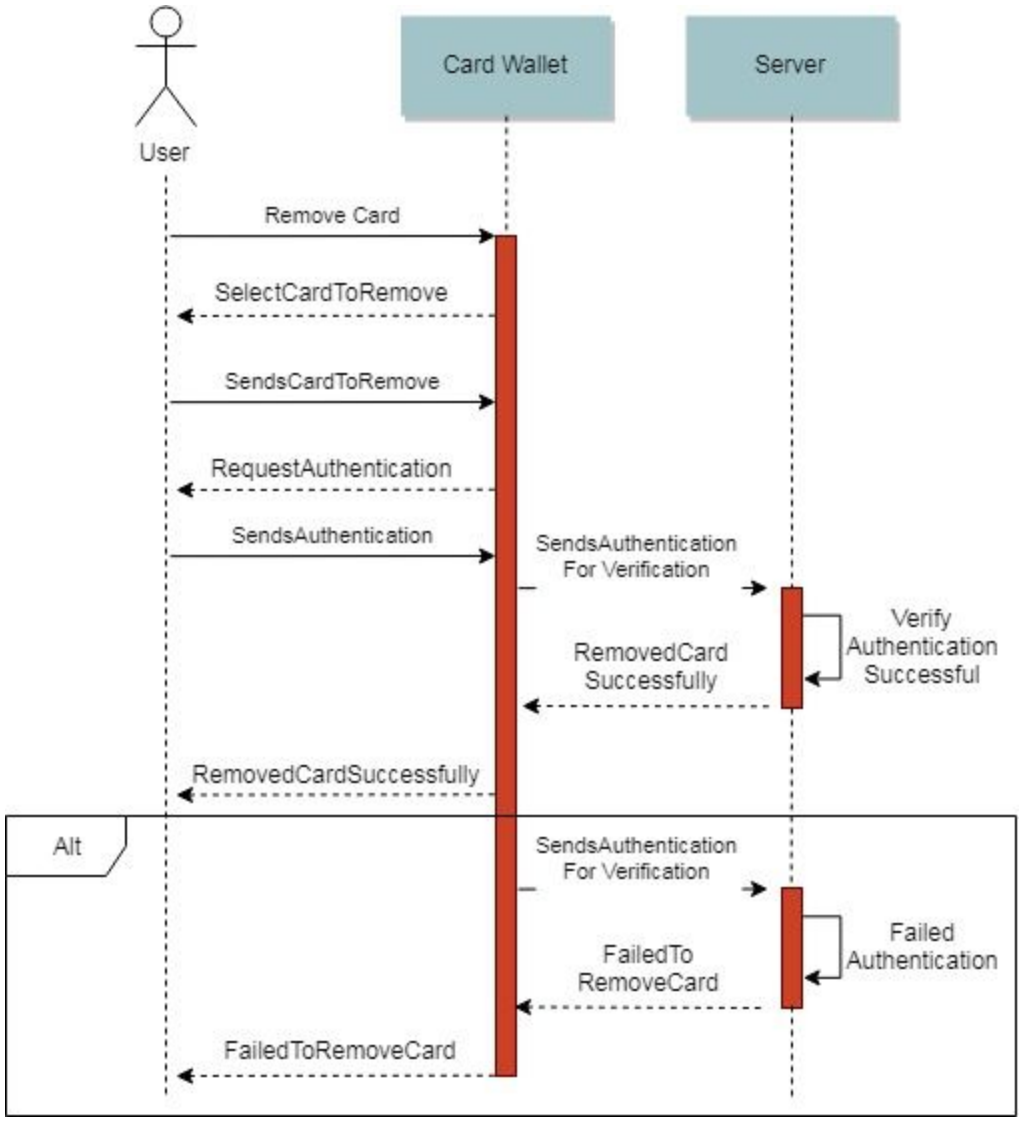
Display Transaction History



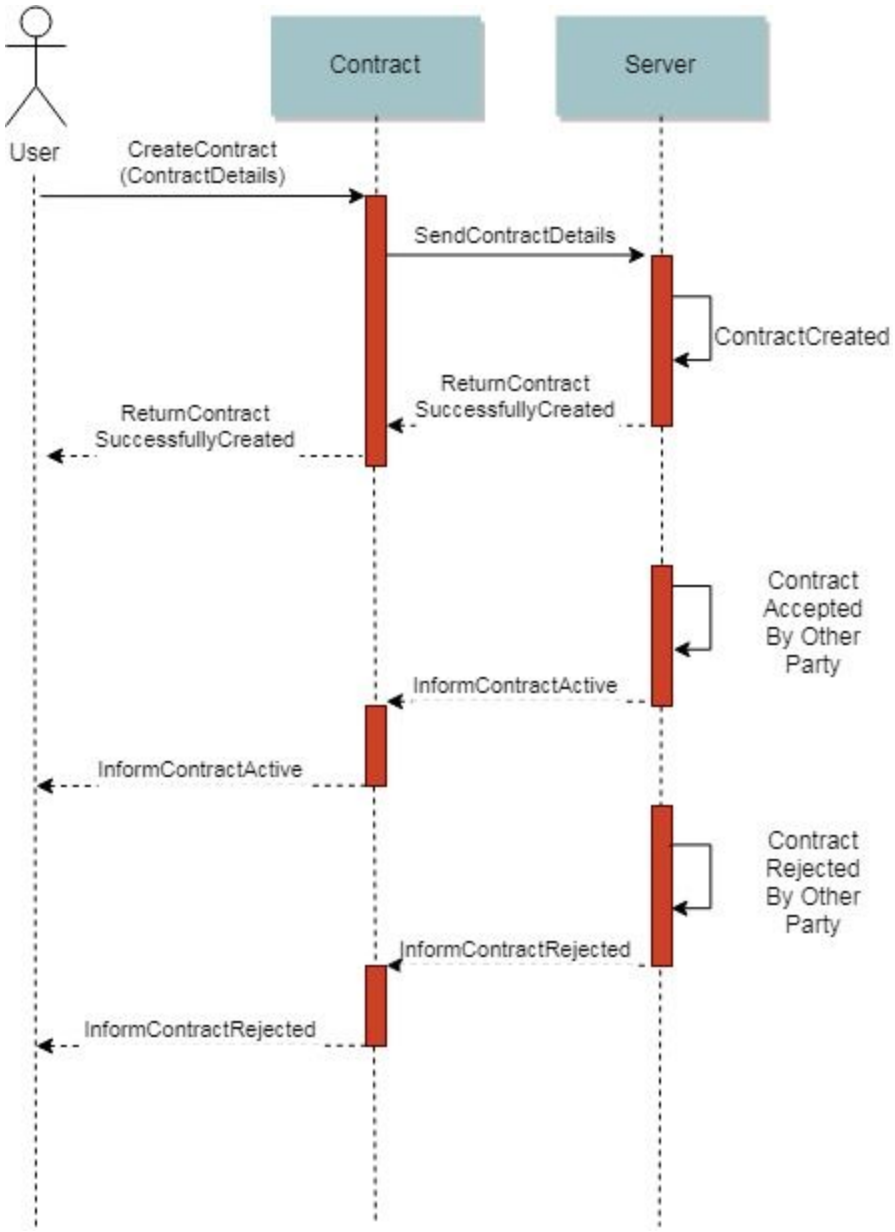
Add Card (Card Wallet)



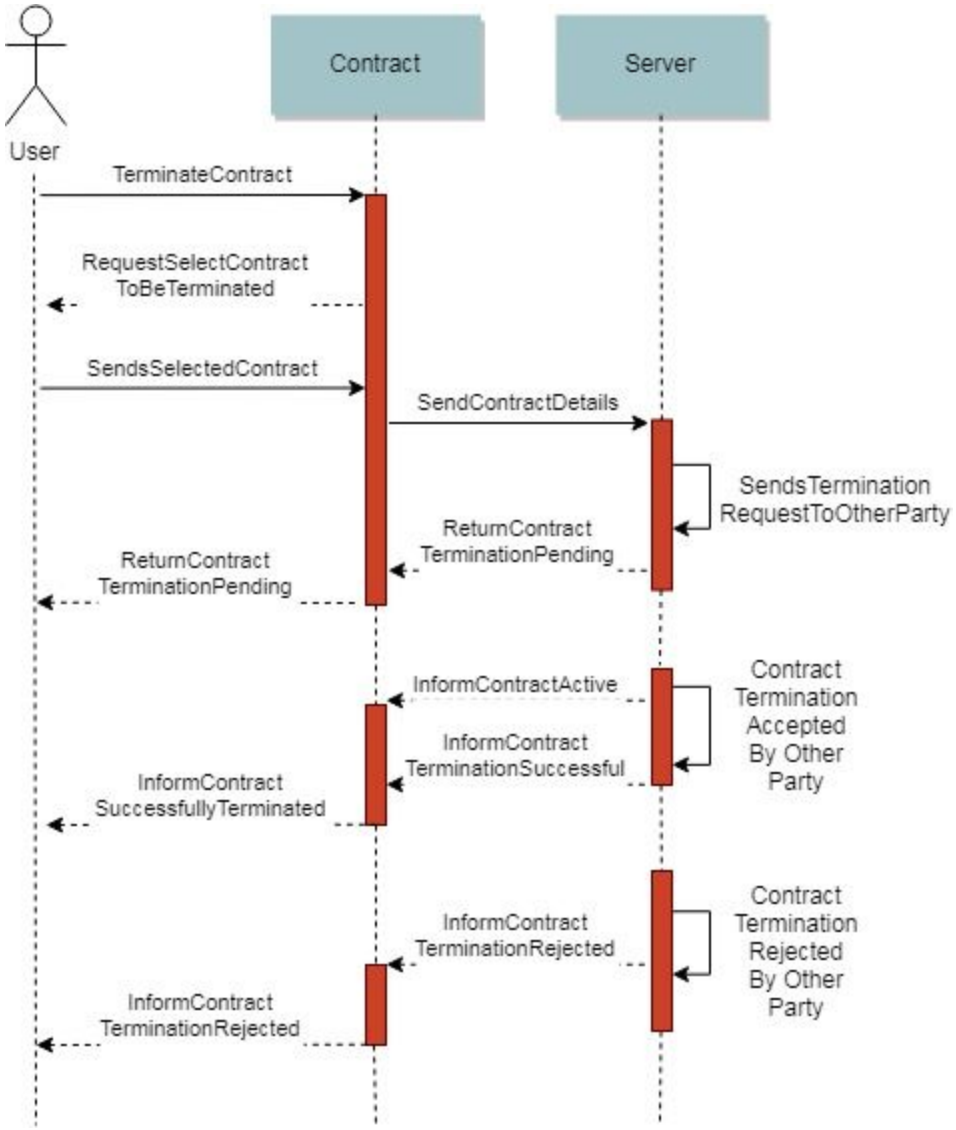
Remove Card (Card Wallet)



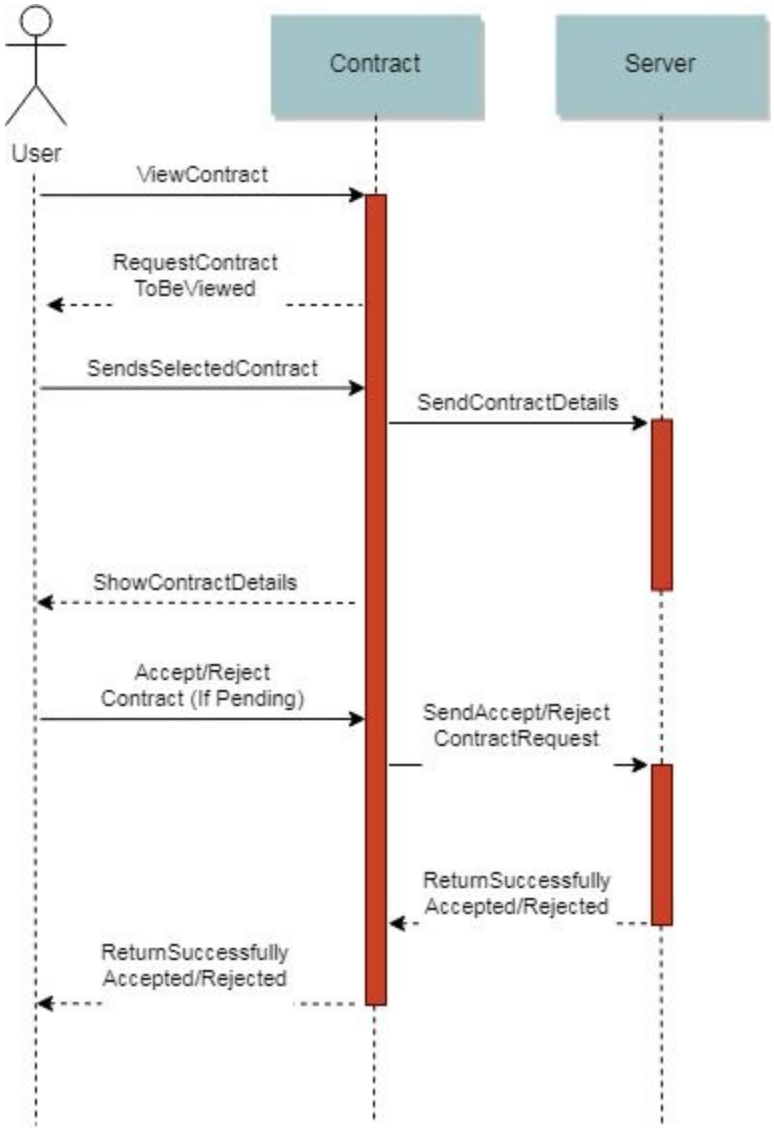
Create Contract



Terminate Contact

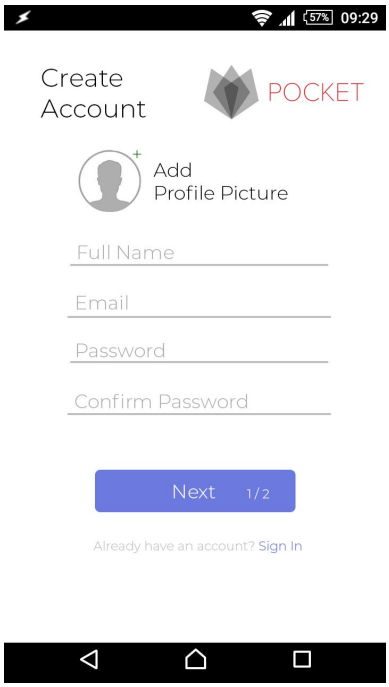


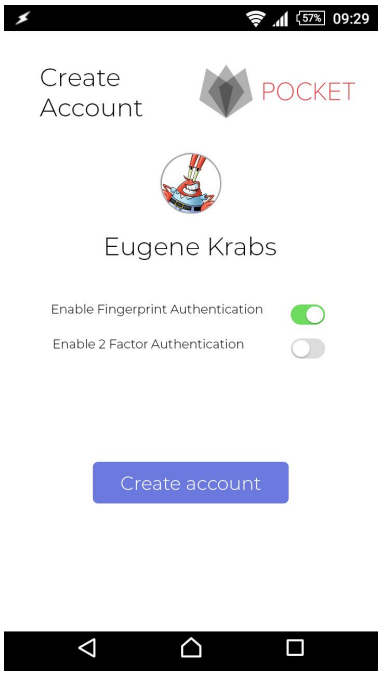
View Contract



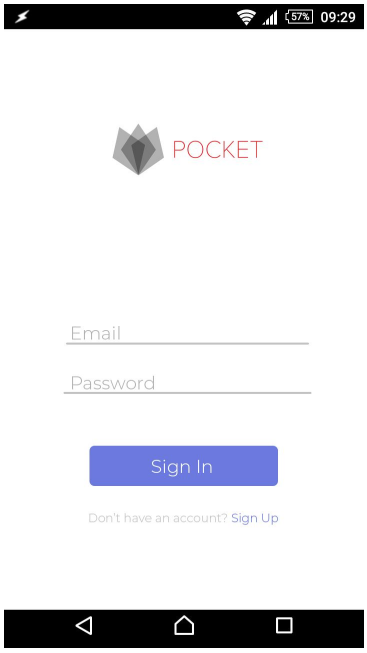
User Interface

Create Account

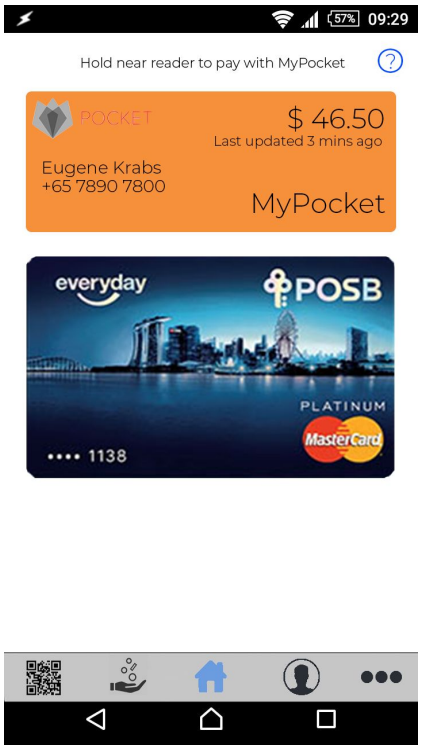


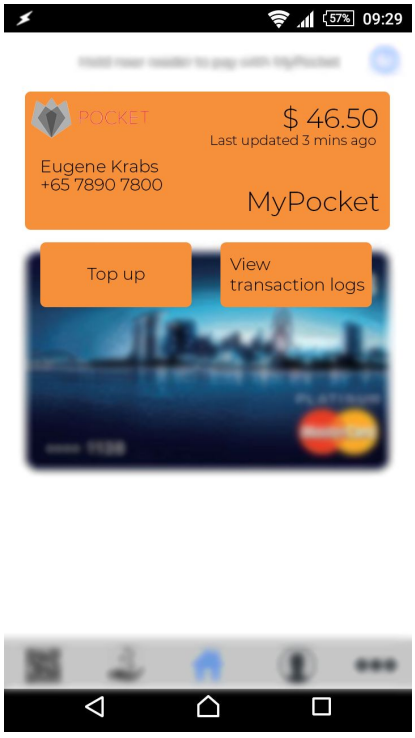


Login

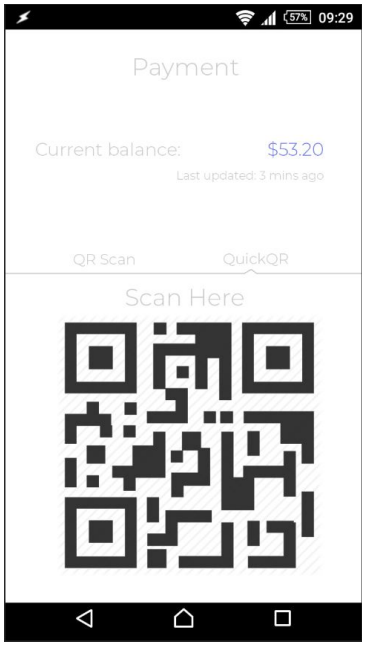


Home Menu



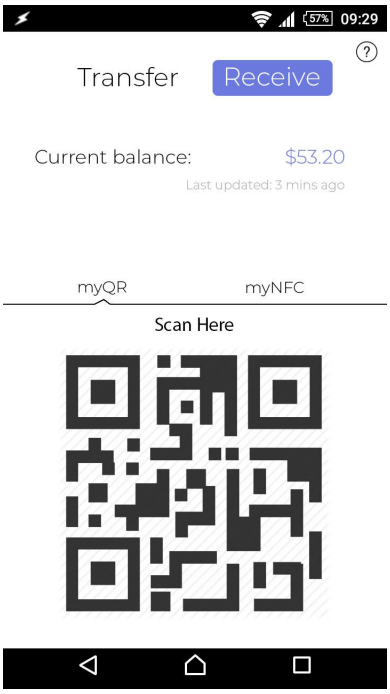


Pay Menu

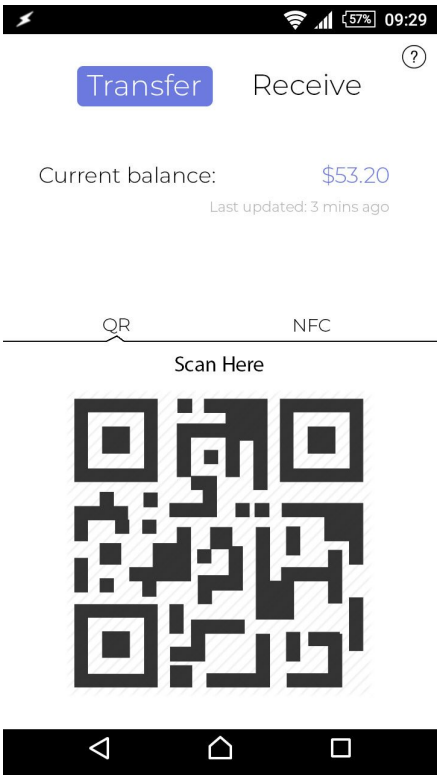


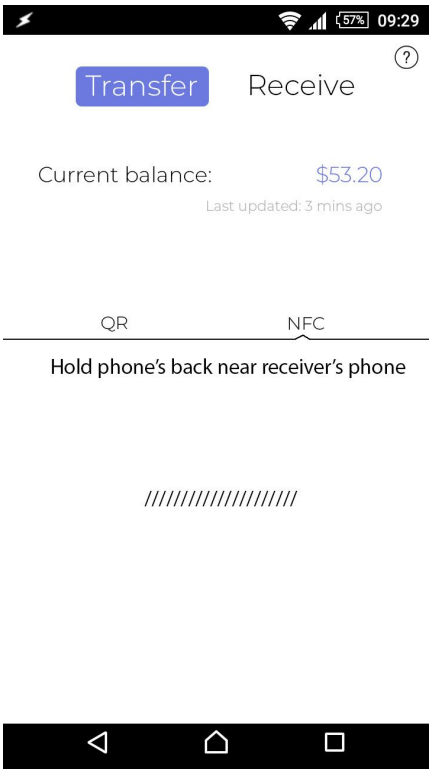
Transfer/Receive Menu

Transfer

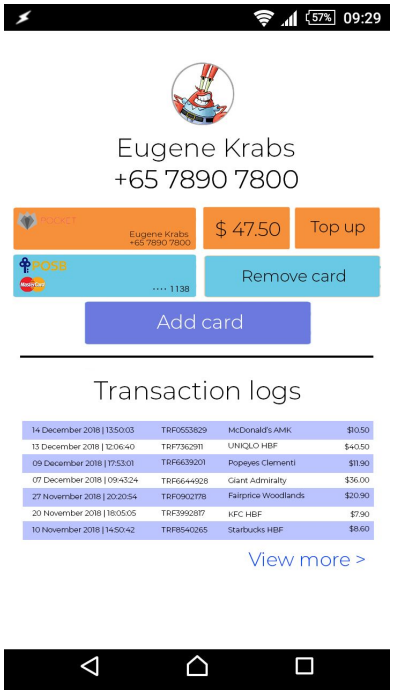
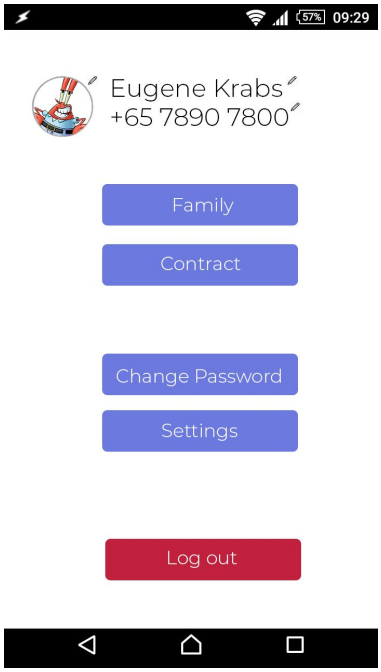


Receive





Me Menu



More Menu