FAMILY WALLET

Mini Project Report

COEN 6311 - Software Engineering

By

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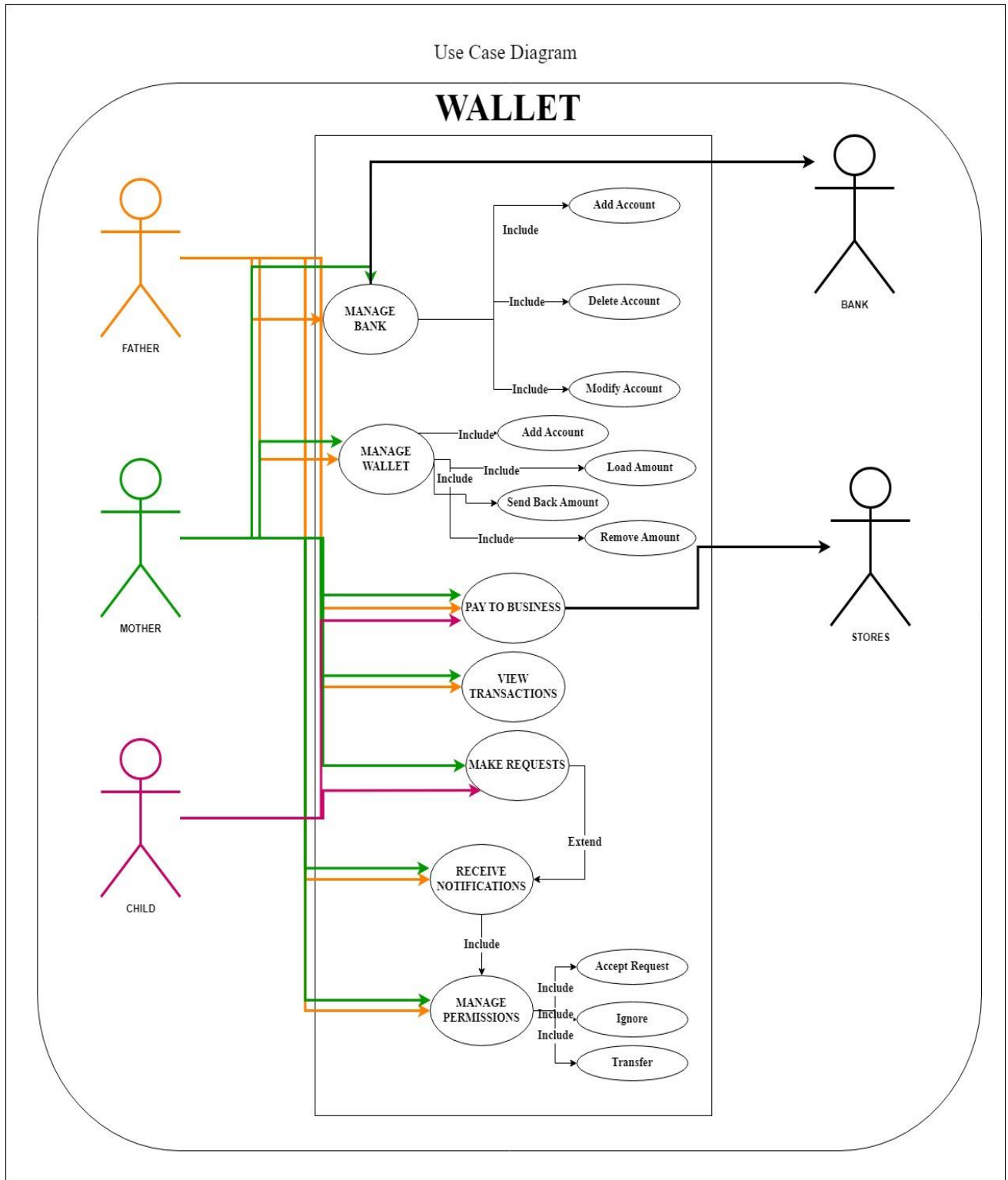Fall 2022

User Stories

S.No	User Story	Priority	Estimation	Actual Time
1	As the **dad**, I want to **have full access of the family wallet** so that I can pay and withdraw money from the wallet	1	1 hour	2 hours
2	As the **dad**, I want to be able to **add bank accounts in the family wallet** so that I can transfer money from bank account to the family wallet	2	1 hour	2 hours
3	As the **dad**, I want to be able to **view all the transactions of all my family members, including listing of items and shop names as well as the amount of money with time stamps** so that I can keep track of the money my family spends from the family wallet.	3	1 hour	2 hours
4	As the **dad**, I want to have the **ability to block any users from the wallet** so that I can block my family members from using the family wallet	4	1 hour	2 hours
5	As the **dad**, I want to **receive request notification from my kids when the wallet balance is zero** so that I can accept the request and add money to the wallet or simply reject the request	5	1 hour	2 hours
6	As the **dad**, I want to **receive notifications when the wallet balance goes below 100 dollars** so that I can add money in the wallet or ignore and pay it later	6	1 hour	2 hours
7	As the **dad**, I want to **receive request notification when kids want to spend money more than once in a day** so that I can respond to that notification by accepting the request or rejecting it	7	1 hour	2 hours
8	As the **dad**, I want to **receive request notification from mom if she transfers the overspending request from kids** so that I can respond to that notification by accepting the request or by rejecting it	8	1 hour	2 hours
9	As the **mom**, I want to have **full access of the family wallet** so that I can pay and withdraw money from the wallet	9	1 hour	2 hours
10	As the **mom**, I want to be able to **add bank accounts in the family wallet** so that I can transfer money from bank account to the family wallet	10	1 hour	2 hours
11	As the **mom**, I want to be able to **view all the transactions of all my family members, including listing of items and shop names as**	11	1 hour	2 hours

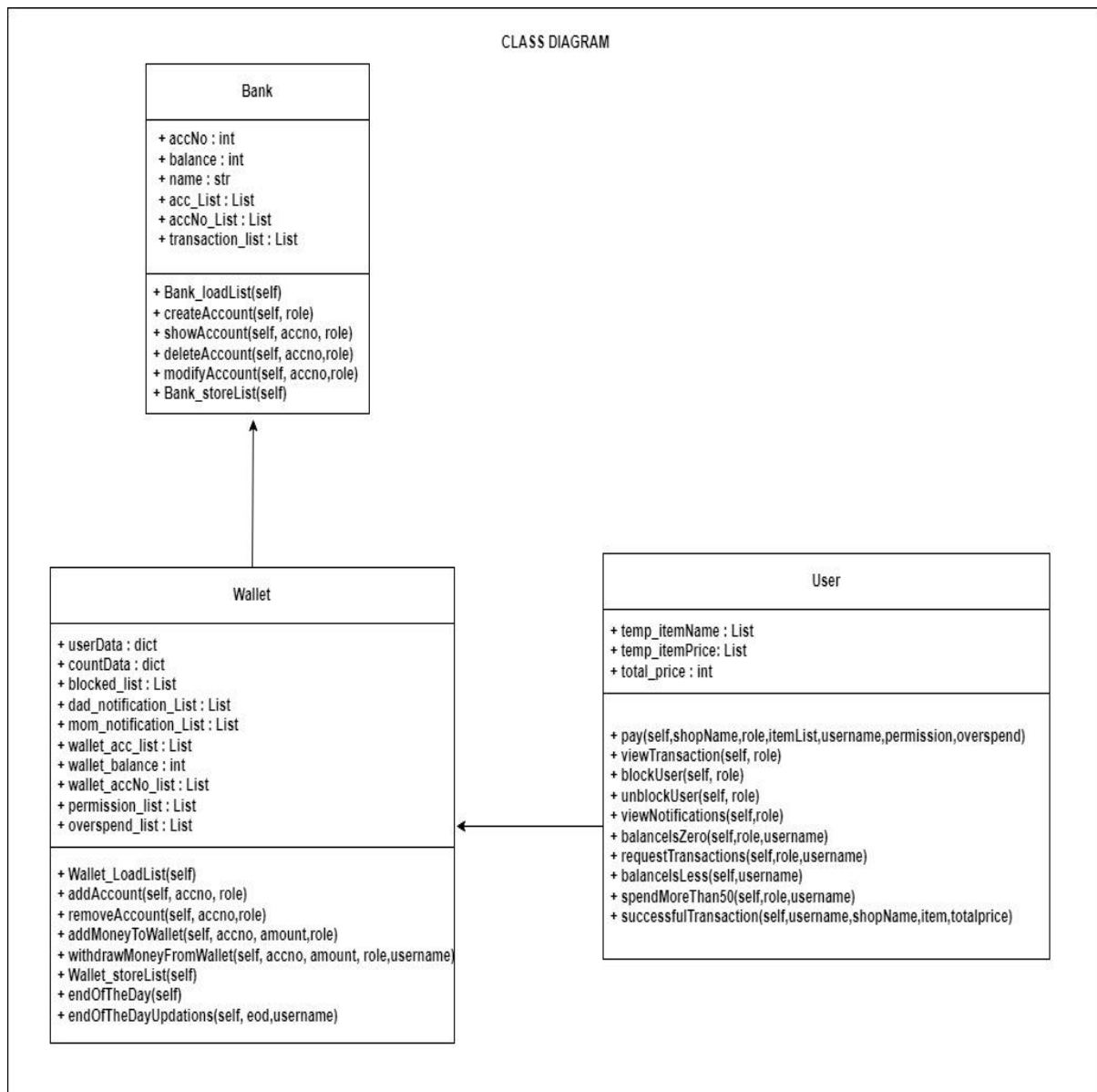|				
	well as the amount of money with time stamps so that I can keep track of the money my family spends from the family wallet			
12	As the **mom**, I want to **receive request notification from my kids when the wallet balance is zero** so that I can accept the request and add money to the wallet or simply reject the request	12	1 hour	2 hours
13	As the **mom**, I want to **receive notifications when the wallet balance goes below 100 dollars** so that I can add money in the wallet or ignore and pay it later	13	1 hour	2 hours
14	As the **mom**, I want to **receive request notification when kids want to spend money more than once in a day** so that I can respond to that notification by accepting the request or rejecting it	14	1 hour	2 hours
15	As the **mom**, I want to **receive notification from kids when they want to spend more than once in a day** so that I can accept the request, reject the request, or transfer it to dad	15	1 hour	2 hours
16	As the **child**, I want to be able to **pay for transactions from the family wallet** so that I can purchase things within 50 dollars per day	16	1 hour	2 hours
17	As the **child**, I want to be able to **request money** so that I can request money from my parents when the wallet balance becomes zero	17	1 hour	2 hours
18	As the **child**, I want to be able to **ask permission from my parents when I have to spend more than once in a day**	18	1 hour	2 hours
19	As the **child**, I want to be able to **ask permission to my mom when I have to spend more than 50 dollars in a day**	19	1 hour	2 hours
	Total		19 hours	38 hours

Use Case Diagram

There are 5 main actors in my project: **Father, Mother, Child, Bank** and
Stores

Class Diagram

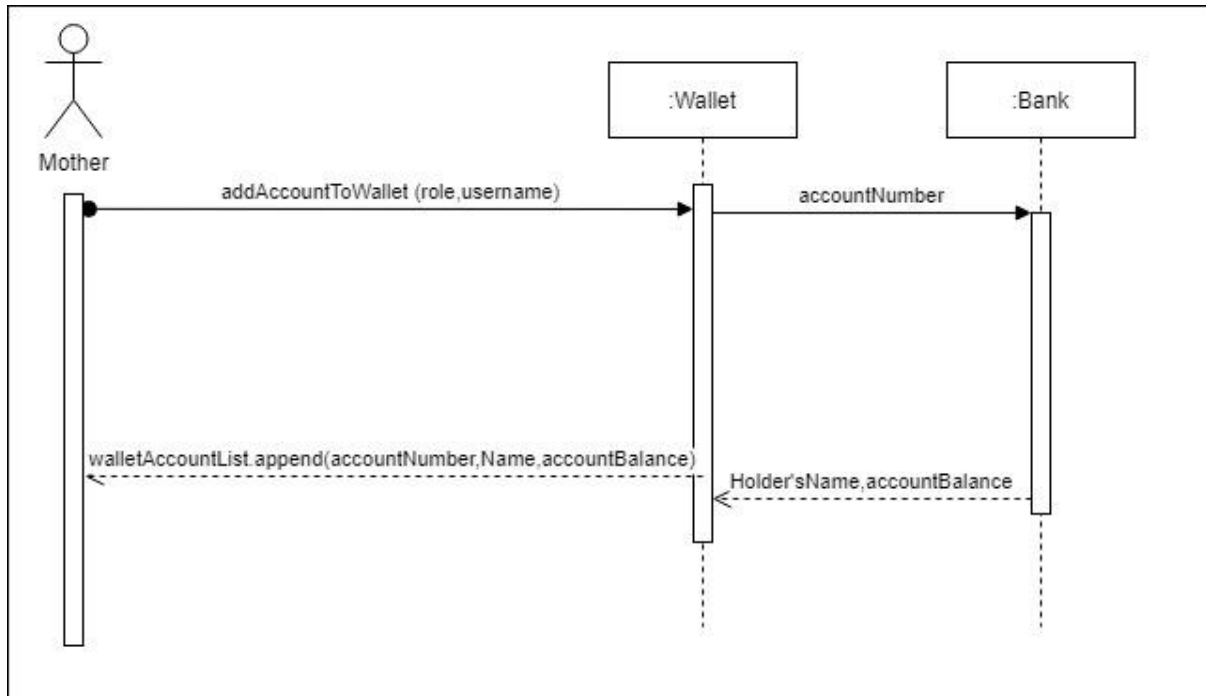In this project, I have created three classes:

1. **Bank Class** (Parent Class)
2. **Wallet Class**: Inherited from Bank Class (Child Class)
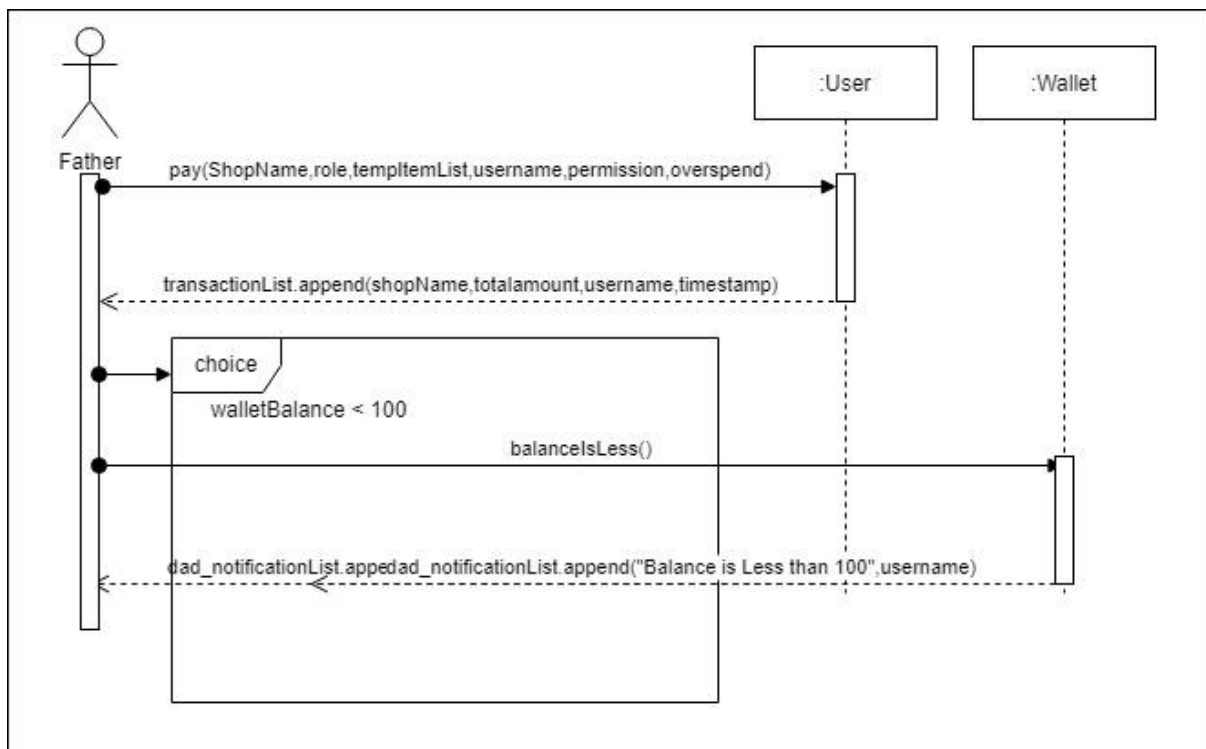3. **User Class**: Inherited from Wallet Class (Child Class)

CLASS DIAGRAM

Bank

+ accNo : int
+ balance : int
+ name : str
+ acc_List : List
+ accNo_List : List
+ transaction_list : List

+ Bank_loadList(self)
+ createAccount(self, role)
+ showAccount(self, accno, role)
+ deleteAccount(self, accno,role)
+ modifyAccount(self, accno,role)
+ Bank_storeList(self)

Wallet

+ userData : dict
+ countData : dict
+ blocked_list : List
+ dad_notification_List : List
+ mom_notification_List : List
+ wallet_acc_list : List
+ wallet_balance : int
+ wallet_accNo_list : List
+ permission_list : List
+ overspend_list : List

+ Wallet_LoadList(self)
+ addAccount(self, accno, role)
+ removeAccount(self, accno,role)
+ addMoneyToWallet(self, accno, amount,role)
+ withdrawMoneyFromWallet(self, accno, amount, role,username)
+ Wallet_storeList(self)
+ endOfTheDay(self)
+ endOfTheDayUpdations(self, eod,username)

User

+ temp_itemName : List
+ temp_itemPrice: List
+ total_price : int

+ pay(self,shopName,role,itemList,username,permission,overspend)
+ viewTransaction(self, role)
+ blockUser(self, role)
+ unblockUser(self, role)
+ viewNotifications(self,role)
+ balanceIsZero(self,role,username)
+ requestTransactions(self,role,username)
+ balanceIsLess(self,username)
+ spendMoreThan50(self,role,username)
+ successfulTransaction(self,username,shopName,item,totalprice)

Sequence Diagrams

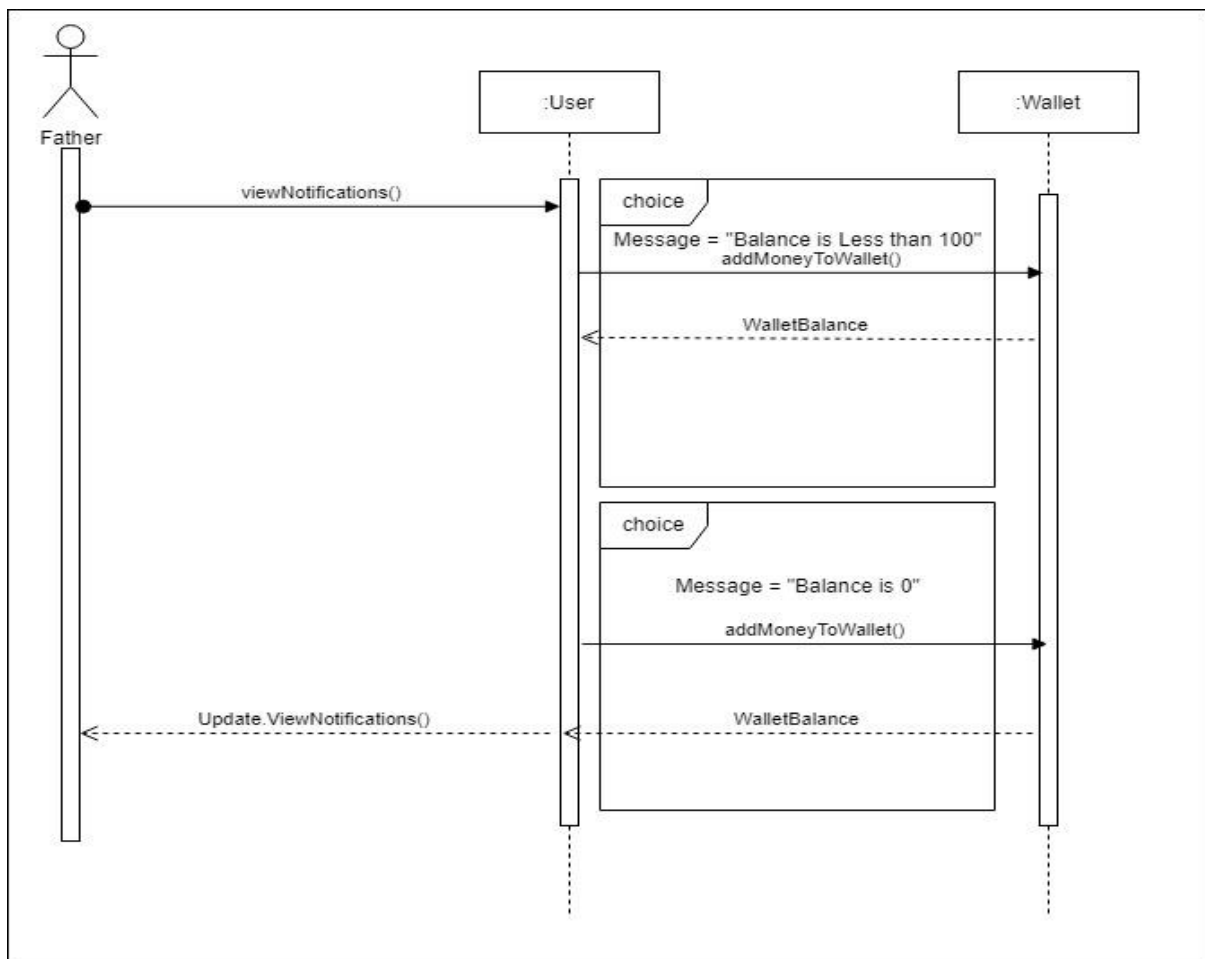I have drawn UML Sequence diagrams for 4 scenarios from the wallet
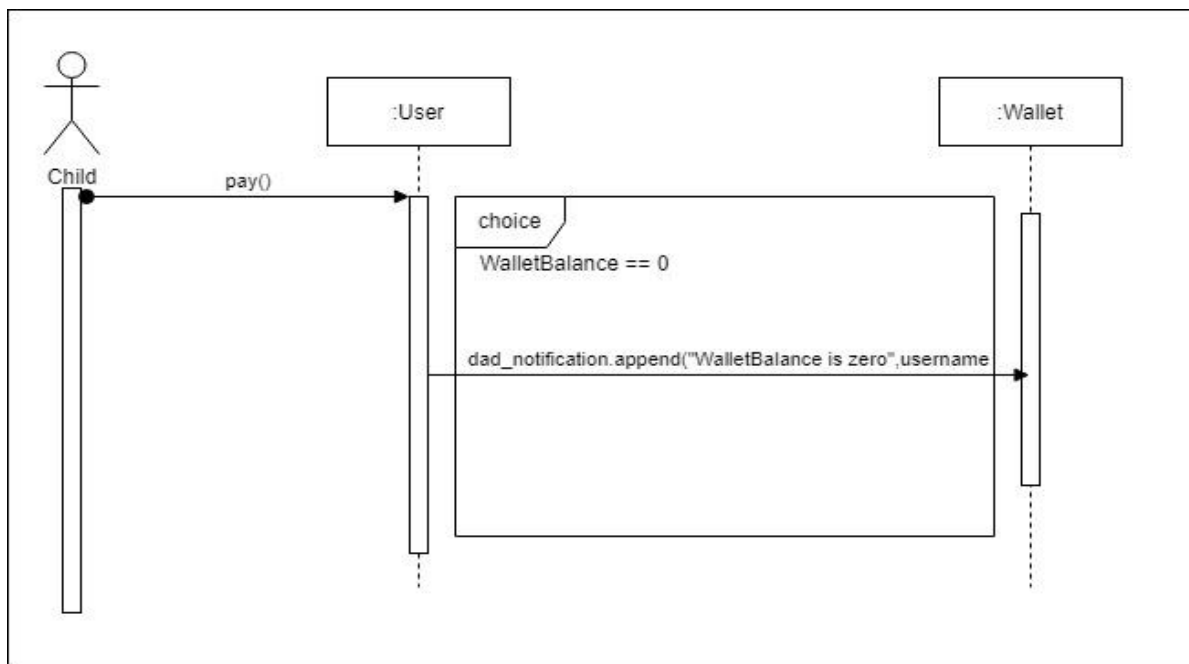
1. Adding an Account from Bank to the Wallet

2. Father's Pay Functionality
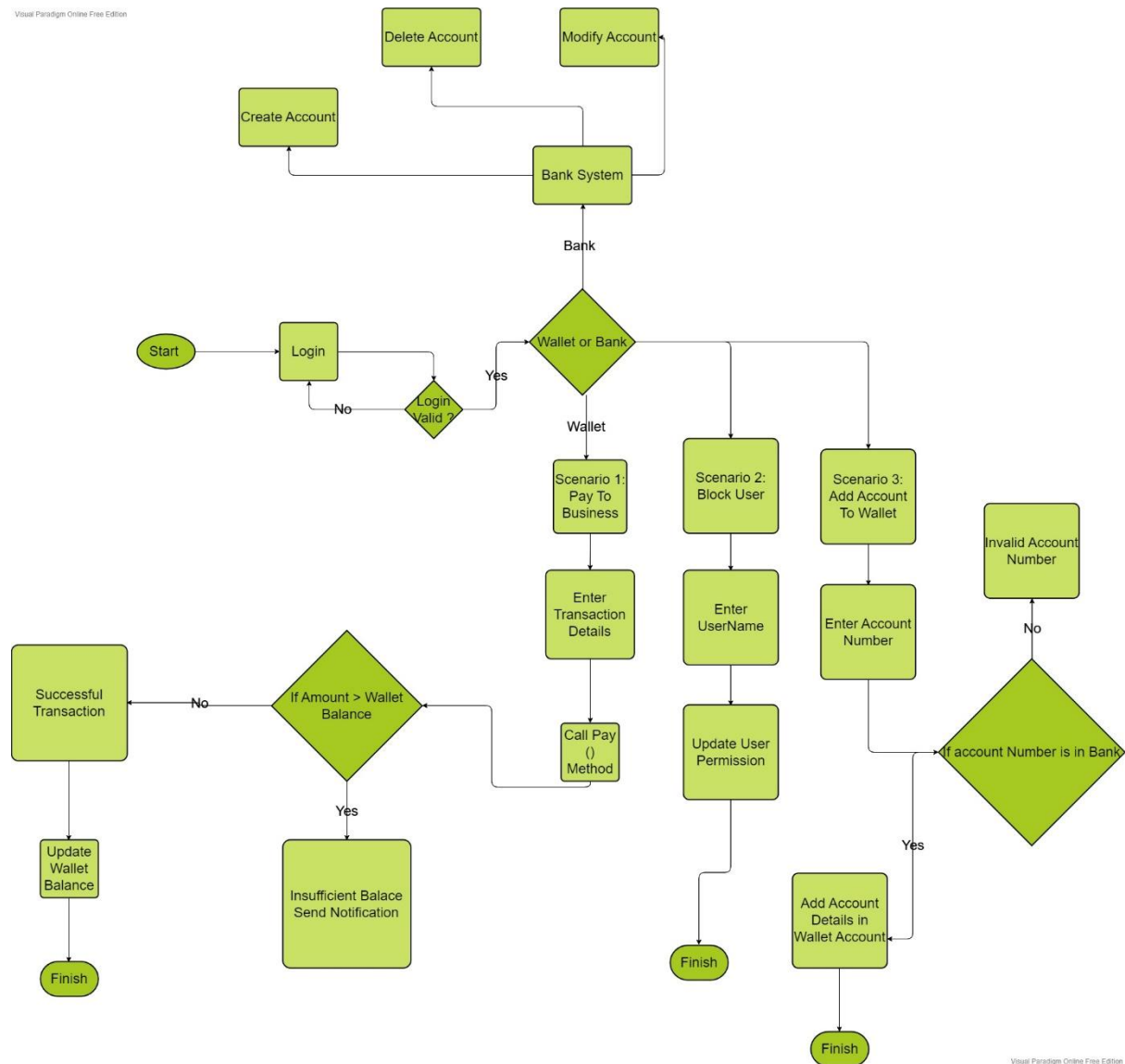
3. View Notifications Functionality of Father and Mother

4. Send Notification Functionality of Child when Wallet Balance is Zero

Business Model Diagram

I have specified three important scenarios in Business Model Diagram

1. Pay To Business
2. Block User
3. Enter Account to Wallet

Time Report

S.No	Task	Estimated Time	Actual Time
1	Writing user Stories	30 mins	30 mins
2	UML Diagrams	2 hours	4 hours
3	Setting Up Git Hub	15 mins	15 mins
4	Refreshing Python OOPS	2 hours	3 hours
5	Programming	20 hours	40 hours
6	Testing	2 hours	4 hours
7	Debugging	6 hours	10 hours

GitHub Link : https://github.com/Rishi-M-G/Family-Wallet