*Use Case Specifications Document*

Use Case ID: 1

Use Case Name: ATM login

Relevant Requirements:

Primary Actor: ATM Module, Central Module

Pre-conditions: ATM client is online (exists and connected to Central Module)

Post-conditions: Customer has access to their accounts via ATM

Basic Flow or Main Scenario: 1. Customer initiates login request e.g. click a button

2. ATM module asks for credentials

3. Customer enters credentials

4. ATM Module sends credentials to Central Module

5. Central Module validates credentials

6. Central module checks if account access status is “No Active Access”

7. Central Module sends account information to ATM Module

8. Central Module marks account “In Active Access”

9. ATM Module displays account information to Customer

Extensions or Alternate Flows: 1. Credentials invalid (includes non-existent credentials): Central Module rejects request and sends FAILURE message to ATM

2. Attempt to access account which is “In Active Access”: Central Module rejects request and sends FAILURE message to ATM

Exceptions: 1. Central module does not receive credentials

2. Account information not sent or incompletely sent to ATM after login accepted

3. Change of account access status fails

Related Use Cases: 3, 5

Use Case ID: 2

Use Case Name: Employee login

Relevant Requirements:

Primary Actor: Teller Module, Central Module

Pre-conditions: Teller client is online (exists and connected to Central Module)

Post-conditions: Bank employee has access to Teller module

Scenario: 1. Employee initiates login request e.g. click a button

2. Teller module asks for credentials

3. Employee enters credentials

4. Teller Module sends credentials to Central Module

5. Central Module validates credentials

6. Central Module allows Teller Module access to all data

Extensions or Alternate Flows: Credentials invalid (includes non-existent credentials): Central Module rejects request and sends FAILURE message to Teller (DO WE WANT AN ALERT?)

Exceptions: 1. Central module does not receive credentials

2. Information not sent or incompletely sent to Teller module after login accepted

Related Use Cases: 4, 8

Use Case ID: 3

Use Case Name: Withdrawal via ATM

Relevant Requirements:

Primary Actor: ATM Module

Pre-conditions: 1. Customer is logged in

Post-conditions: Customer has withdrawn money i.e., customer account balance reduced by withdrawal amount

Basic Flow or Main Scenario: 1. Customer selects an account

2. ATM module presents account actions for that account (withdraw, deposit, view transaction history)

3. Customer chooses withdraw funds option

4. ATM module asks for amount

5. Customer enters amount to withdraw

6. ATM module checks if amount is valid and that it has enough cash reserves

7. If valid, ATM module passes withdrawal message to Central module

8. Central module updates account balance temporarily

9. ATM module gives amount to customer i.e., it’s cash reserve gets reduced by withdrawal amount

10. ATM module sends confirmation to Central module

11. Central module updates account balance permanently

12. Central module adds action to transaction history for account

13. Account’s daily ATM withdrawal limit adjusted

Extensions or Alternate Flows: 1. Customer tries to withdraw invalid amount: ATM module rejects request

2. ATM has insufficient cash: ATM module rejects request

Exceptions: 1. Central module does not receive withdrawal confirmation from ATM

2. Central module does not receive messages in order

3. Central module account balance not updated

4. Transaction history not updated

5. ATM cash reserves not updated correctly after withdrawal

6. Account’s daily ATM withdrawal limit not adjusted or adjusted incorrectly

Related Use Cases: 1

Use Case ID: 4

Use Case Name: Withdrawal via Teller Module

Relevant Requirements:

Primary Actor: Teller Module

Pre-conditions: 1. Teller is logged in

2. Teller has verified customer

Post-conditions: Teller has withdrawn money i.e., customer account balance reduced by withdrawal amount

Basic Flow or Main Scenario: 1. Teller selects customer’s account

2. Teller module presents account actions for that account (withdraw, deposit, view transaction history)

3. Teller chooses withdraw funds option

4. Teller module asks for amount

5. Teller enters amount to withdraw

6. Teller module checks if amount is valid (withdrawal amount < account balance)

7. If valid, Teller module passes withdrawal message to Central module

8. Central module updates account balance

9. Central module adds action to transaction history for account

Extensions or Alternate Flows: 1. When Teller tries to select account, if account is “In Active Access”, Central Module sends FAILURE response to Teller Module

2. Customer tries to withdraw invalid amount: Teller module rejects request

3. When Teller selects an account, Central module marks account “In Active Access”

4. When teller exits account, Central module marks account “No Active Access”

Exceptions: 1. Central module does not receive withdrawal message

2. Account balance not updated or updated incorrectly

3. Transaction history not recorded or recorded incorrectly

Related Use Cases: 2

Use Case ID: 5

Use Case Name: Start Deposit via ATM

Relevant Requirements:

Primary Actor: ATM Module

Pre-conditions: 1. ATM is connected to central module

2. Customer is logged in

Post-conditions: ATM Module is ready to process deposit

Basic Flow or Main Scenario: 1. Customer selects an account

2. ATM module presents account actions for that account (withdraw, deposit, view transaction history)

3. Customer chooses deposit funds option

4. ATM module asks to select deposit type (cash or cheque)

5. Customer selects option

Extensions or Alternate Flows: 1. Customer selects cash deposit: Use Case 6

2. Customer selects cheque deposit: Use Case 7

Exceptions:

Related Use Cases: 1, 6, 7

Use Case ID: 6

Use Case Name: Cash deposit via ATM

Primary Actor: ATM Module

Pre-conditions: 1. Customer selected cash deposit option

Post-conditions: User account balance increased by deposit amount

Basic Flow or Main Scenario: 1. ATM asks customer to insert money

2. Customer inserts cash. Here, this would simply be a number input

3. ATM module checks if deposit < $4000 threshold for the day

4. If valid, ATM module accepts deposit and sends deposit message to Central module

5. ATM module updates (reduces) daily cash deposit limit

6. Central module updates account balance

7. Central module records action in transaction history

Extensions or Alternate Flows:

Exceptions: 1. Central module does not receive deposit message

2. Account balance not updated or updated incorrectly

3. Transaction history not recorded or recorded incorrectly

4. Cash deposit limit not updated or updated incorrectly

Related Use Cases: 5

Use Case ID: 7

Use Case Name: Cheque deposit via ATM

Primary Actor: ATM Module

Pre-conditions: 1. Customer selected cheque deposit option

Post-conditions: User account balance increased by deposit amount

Basic Flow or Main Scenario: 1. ATM asks customer to insert cheque

2. Customer inserts cheque. Here, this would simply be the relevant parameters

3. ATM module checks if amount on cheque < $10000 threshold for the day

4. If valid, ATM module accepts cheque and sends deposit message to Central module

5. ATM module updates (reduces) daily cheque deposit limit

6. Central module updates account balance

7. Central module records action in transaction history

Extensions or Alternate Flows:

Exceptions: 1. Central module does not receive deposit message

2. Account balance not updated or updated incorrectly

3. Transaction history not recorded or recorded incorrectly

4. Cheque deposit limit not updated or updated incorrectly

Related Use Cases: 5

Use Case ID: 8

Use Case Name: Deposit via Teller

Relevant Requirements:

Primary Actor: Teller module

Pre-conditions: 1. Teller is logged in

2. Teller has verified customer

Post-conditions: Teller has deposited money i.e., customer account balance increased by deposit amount

Basic Flow or Main Scenario: 1. Teller selects an account

2. Teller module presents account actions for that account (withdraw, deposit, view transaction history)

3. Teller chooses deposit funds option

4. Teller module asks teller to enter deposit amount

5. Teller module sends deposit message to Central module

6. Central module updates account balance

7. Teller exits account

Extensions or Alternate Flows: 1. When Teller selects an account, mark account “Active Access”

2. When teller exits account, mark account “No Active Access”

Exceptions: 1. Central module does not receive deposit message

2. Account balance not updated or updated incorrectly

3. Transaction history not recorded or recorded incorrectly

Related Use Cases: 2