Design Atm

Functional Requirement

1. The system should validate the user based on card number/pin combination
2. The user should be able to select different options from the menu/list
3. The user should be able to withdraw, deposit money, view current balance, print receipt after every transaction
4. The system should record all transactions done by user
5. The system should prompt the user to logout after completion of transaction. If the user forgot to logout , the system should automatically log out within 15 seconds

Use Cases

Actors

User

Operator

Bank Manager

Use cases

- Login
- User Credential Validation
- Display Menu to user
- Withdraw Money
- Transfer money
- Deposit Money
- Block/Unblock Card
- Balance Inquiry
- Print Receipt
- View Transaction history
- System startup/shutdown
- Machine Maintenance
- Cash Refilling
- Add Paper to Printer
- Total deposit/withdrawal
- Check remaining cash
- Print total deposit/withdrawal

Session
Includes
Transactions
Actor
Withdraw Money
Withdraw Money (cash/Cheque)
Transfer Money
Balance Inquiry
Turn on/off ATM Machine
Cash Refilling
Operator
Add Paper to Money
Check total withdrawl
Check Total Deposit
Check Remaining Cash
Print Total Deposit/Withdrawl
Bank Manager

Classes and Relations

Classes

Bank Account

Customer

Withdraw

Deposit

Transfer

Card Reader

Operations

Card

Cheque

Transactions

Printer

Logs

Relations

COMPOSITION BETWEEN LOG AND TRANSACIONS

ASSOCIATION BETWEEN BANK ACCOUNT AND CUSTOMER

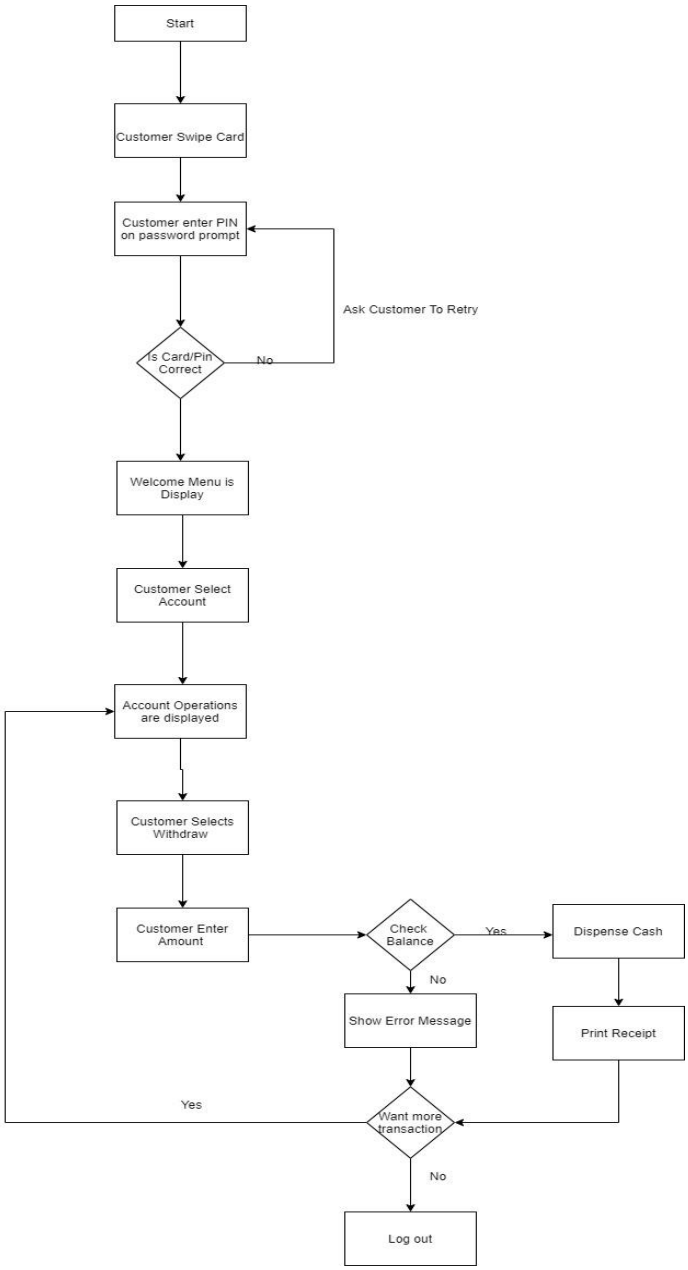
ASSOICATION BETWEEN ACCOUNT AND CARD

Association between Printer and transfer, withdraw and deposit

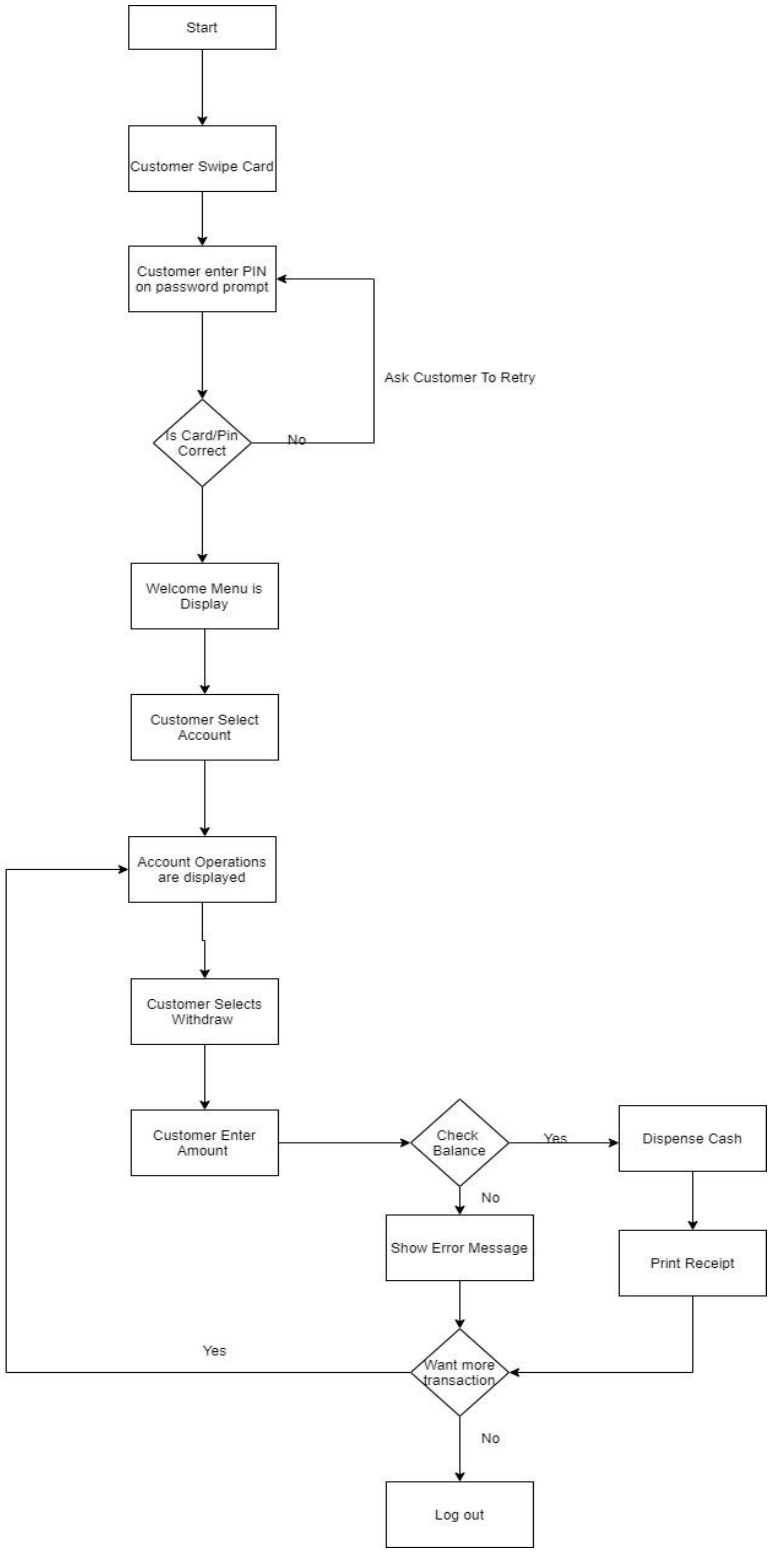
INHERITNACE BETWEEN Operations and Transfer, withdraw and deposit

Activity Diagram

Withdrawal


Start
Customer Swipe Card
Customer enter PIN on password prompt
Ask Customer To Retry
Is Card/Pin Correct
No
Welcome Menu is Display
Customer Select Account
Account Operations are displayed
Customer Selects Withdraw
Customer Enter Amount
Check Balance
Yes
Dispense Cash
No
Show Error Message
Print Receipt
Yes
Want more transaction
No
Log out

Deposit


Start
Customer Swipe Card
Customer enter PIN on password prompt
Ask Customer To Retry
Is Card/Pin Correct
No
Welcome Menu is Display
Customer Select Account
Account Operations are displayed
Customer Selects Withdraw
Customer Enter Amount
Check Balance
Yes
Dispense Cash
No
Show Error Message
Print Receipt
Yes
Want more transaction
No
Log out