

Design

- Each user has one bank account at the bank
- Users should be able to type the account Number and PIN using the keypad displayed on the screen to perform transactions.
- If the pin is incorrect, the system will print "Incorrect Pin or Account Number" and display the welcome message again.
- ATM should authenticate user on the basis of the PIN entered
- Once authenticated, users should be able to do transactions, namely **view balance**, **deposit cash** and **withdraw cash**. And also if one wants to change the pin, they can update it.
- After selecting one of the options, users can select how much money they would want to deposit or withdraw and from what account.
- Users cannot withdraw amounts greater than 10,000 at a time.
- If an account does not have enough money, user receives an error message: "Invalid Funds to complete request"
- Initially 50000 cash has been loaded into the ATM machine. If the withdrawal amount is greater than amount in the machine. User receives a message: "Insufficient cash available in the ATM"
- At the end of a transaction, appropriate messages were displayed on the screen to the user to communicate the success/failure of the transaction.
- Users are able to collect receipts at the end of each transaction containing the details of - TransactionID, Time, Date, balance, Deposit or Withdrawal Amount.
- At the end of a transaction, the user should be able to start another transaction or he/she can exit from the System.

Functionalities

- ENTER ACCOUNT NO & PIN — User has to enter Account Number and PIN, once they have inserted the card
- SELECT TRANSACTION — User to select a transaction from the given menu
- DEPOSIT — User has to input required cash, once they have selected the deposit cash option.
- WITHDRAW — User has to input required amount, once they have selected the withdraw cash option
- DISPLAY BALANCE — Display account balance once the transaction is over and wait for the user to decide the next transaction or exit.
- UPDATE PIN — User can change their PIN by entering the old pin and then they can set the new PIN

- **ERROR MESSAGE** — Display error message if the ATM has insufficient cash or the user's account has insufficient balance and ask the user to decide the next transaction or exit.

Class Details

Customer

- Name
- AccountNumber
- PIN
- Balance
- MobileNumber

Bank

- Has the list of all customers
- Has method to change PIN

KeyPad

- Displays a keypad to type

CashDispenser

- Has the method to see denominations of amount

Transaction(**ABSTRACT**)

- Has method to perform transactions

Classes **Withdrawal**, **Deposit**, **Balance** extends **Transaction**.

Receipt(**ABSTRACT**)

- Details regarding transactions
- Time issued
- Receipt generation method

Classes **DepositReceipt**, **WithdrawReceipt** extends **Receipt**

ATM

- Has the method to ask account details
- Display list of transactions
- Has the method to perform transaction

ATMsystem(Main)

- Has ATM object

CLASS DIAGRAM

