

Case Study - Limited ATM Corp

A Bank wishes to introduce ATM service to provide limited facilities to her customers. Customers may get ATM cards on request. Users may only view their balance or withdraw money using these cards. Cards are given for only one account, but an account may be accessed using different cards. A card may be blocked temporarily or permanently by the Bank (e.g. If it is lost). A PIN is associated with each card to verify the authenticity of the user. There is an Over Draft (OD) limit associated with each checking account. Theoretically, any amount may be withdrawn from a checking account at any time (provided it is less than the balance + OD limit and assume always enough money is left in the machine), but there is a withdrawal limit (for a day) for each savings account. There is no OD facility for a savings account.

The personal information of the customers and their account details are already maintained by the Bank's main system. A subsystem is required to handle the ATM's functionality. There will be two hardware systems Card reader and Money dispenser communicating with this subsystem. The card reader reads the Card-No and passes it to the system. It is also able to eject the card when an eject signal is received from the system. Similarly the money dispenser is able to dispense the required amount of money.

The Limited ATM system is required to provide at least the following operations.

- Enter a new card detail
- Modify the validity of card
- Check the validity of the card
- Check the authenticity of the user
- View the balance of the account
- Withdraw money from the account
- Withdrawal information will be stored for later use
(Includes date, time, machineNo, cardNo, and amount)
- Change the PIN of a card

Here the first two operations are to be carried out by the Bank and the rest by the user.