

System Requirements

1. The XYZ Bank Inc. can have many automated teller machines (ATMs), and the new software system shall provide functionality on all ATMs.
2. The system shall enable the customers of XYZ Bank Inc., who have valid ATM cards, to perform three types of transactions; 1) withdrawal of funds, 2) Query of account balance, and 3) transfer of funds from one bank account to another account in the same bank.
3. An ATM card usage shall be considered valid if it meets the following conditions:
 - a) The card was issued by an authorized bank.
 - b) The card is used after the start date, i.e., the date when the card was issued.
 - c) The card is used before the expiration date, i.e., the date when the card expires.
 - d) The card has not been reported lost or stolen by the customer, who had been issued that card.
 - e) The customer provides correct personal identification number (PIN), which matches the PIN maintained by the system.
4. The system shall confiscate the ATM card if it detects that a lost or stolen card has been inserted by a customer. The system shall also display an apology to the customer.
5. The system shall allow the customer to enter the correct PIN in no more three attempts. The failure to provide correct PIN in three attempts shall result in the confiscation of the ATM card.
6. The system shall ask for the transaction type after satisfactory validation of the customer PIN. The customer shall be given three options: withdrawal transaction, or query transaction, or transfer transaction.
7. If a customer selects withdrawal transaction, the system shall prompt the customer to enter account number and amount to be dispensed.
8. For a withdrawal transaction, the system shall determine that sufficient funds exist in the requested account, that the maximum daily limit has not be exceeded, and that there are sufficient funds available at the local cash dispenser.
9. If a withdrawal transaction is approved, the requested amount of cash shall be dispensed, a receipt shall be printed containing information about the transaction, and the card shall be ejected. The information printed on the receipt includes transaction number, transaction type, amount withdrawn, and account balance.
10. If a customer selects query transaction, the system shall prompt the customer to enter account number.
11. If a query transaction is approved, the system shall print a receipt and eject the card. The information contained on the receipt includes transaction number, transaction type, and account balance.
12. If a customer selects transfer transaction, the system shall prompt the customer to enter from account number, to account number, and amount to be transferred.
13. The system shall check if there are enough funds available in the from account, which are being requested for transfer to the to account.
14. If the transfer transaction is approved, a receipt shall be printed and card shall be ejected. The information printed on the receipt includes transaction number, transaction type, amount transferred, and account balance.
15. The system shall cancel any transaction if it has not been completed if the customer presses the Cancel button

16. The customer records, account records, and debit card records will all be maintained at the server and shall not be the responsibility of the system.

17. The system shall enable an ATM operator to shutdown or start up an ATM for routine maintenance.

18. The system shall enable an ATM operator to add cash to the cash dispenser.

19. The system shall not be responsible for opening or closing of accounts, and to create, update, and delete customer and debit card records. These tasks are performed elsewhere by a bank.

20. The system shall be linked with the bank server through communication systems, which are beyond the scope of the current system. It is assumed that this facility is always available.

21. The system shall not be responsible for the maintenance of the hardware devices of the ATM or network facilities.