Mid Exam - Grads

**Question 1: Write 3 Use Cases (3 points each)**

**Write a use case for a customer withdrawing cash from the customer’s account.**

This use case describes how a Bank Customer uses an ATM to withdraw money from his/her bank account.

Observe your surroundings before using an ATM

1. The customer enters his/her card into the ATM.
2. The ATM verifies that the card is a valid bankcard. If the user has an invalid card

* The ATM will display error message.
* The ATM will eject the card.
* The user will take the card.
* The use case returns to step 1 and continues.

1. The ATM requests a PIN code.
2. The customer enters their PIN code.
3. The ATM validates the bankcard against the PIN code. If the user entered an invalid PIN.

* The ATM will indicate that the wrong PIN has been entered.
* The system will log and check number of tries.
* The ATM will ask the customer to enter their PIN again.
* The use case returns to step 4 and continues. Otherwise if the user always tries pin if it is invalid also then
* The ATM will retain the user’s card.
* The ATM will capture a 10-second video image of the Customer.
* The ATM will create an event log entry to record the fact that the customer failed to enter the correct PIN number in three attempts.
* The ATM will send the event log entry to the bank system.
* The use case ends.

1. The ATM presents service options including “Withdraw”.
2. The customer chooses “Withdraw”.
3. The ATM verifies sufficient funds in the customer’s bank account. If the customer does not have sufficient funds in the bank account.

* The ATM will inform the customer that the bank has rejected the withdrawal.
* The ATM will advise the user to contact the bank for further details.
* The system will record a transaction log entry for the transaction including the reason given for the transactions rejection.
* The use case ends.

1. The ATM presents options for amounts.
2. The customer selects an amount or enters an amount.

**11.**The ATM verifies that the customer is below withdrawing limits.

* The ATM verifies that it has enough cash in its hopper.
* The ATM debits the customer’s bank account.
* The ATM returns the customer’s bankcard.
* The customer takes their bankcard.
* The ATM issues the customer’s cash.
* The customer takes the cash.
* The ATM system prints the receipt.
* The ATM system returns the Bank Card to the Bank Customer. The use case ends. If Card stuck in card reader while ejecting
* The ATM may just try to eject the Bank Card for 2 minutes. If it still can’t eject the Bank Card, then it has to be kept by the ATM. An alarm is then sent to the maintenance crew and the Bank Consortium. The local video camera starts recording. The ATM displays a warning message to the Bank Customer. The use case ends.
* The use case ends successfully.

**Write a use case for a customer making a deposit into one of the customer’s accounts.**

This use case describes how a Bank Customer uses an ATM to deposit money into his/her bank account.

Observe your surroundings before using an ATM

**Flow of Events**

**1. Insert Card**

This use case begins when the Bank Customer inserts a Bank Card in the card reader on the ATM machine. The ATM validates the card.

Suppose if the card is not valid then it is ejected to the Bank Customer with a "**sorry not a valid card**" message. The use case ends.

**2. Enter PIN**

1. The ATM asks for the customer PIN code. The Bank Customer enters the PIN code. If the user entered an invalid PIN.

* The ATM will indicate that the wrong PIN has been entered.
* The system will log and check number of tries.
* The ATM will ask the customer to enter their PIN again.
* The use case returns to step 4 and continues. Otherwise if the user always tries pin if it is invalid also then
* The ATM will retain the user’s card.
* The ATM will capture a 10-second video image of the Customer.
* The ATM will create an event log entry to record the fact that the customer failed to enter the correct PIN number in three attempts.
* The ATM will send the event log entry to the bank system.

The use case ends.

**3. Select ‘Deposit Funds’**

The ATM displays the different alternatives that are available on this unit. The Bank Customer selects “Deposit Funds”.

**4. Enter Account and Amount**

The ATM asks for account to deposit into and amount to deposit. The Bank Customer enters account and amount.

**5. Deposit Money**

The ATM asks the Bank Customer to put all bills in an envelope and insert it in the safety 'insert box'. The Bank Customer puts bills or a check in an envelope and inserts it in the deposit input. When the envelope is stored in the safety box the ATM prints the transaction id on the envelope.

If no envelope is inserted. The time out is 1 minute; if there is no envelope after that time then a warning signal will sound, and a new message requiring an envelope displayed. If there still is no envelope, the transaction is terminated.

**6. Credit Bank Account**

The ATM sends the card id, PIN, amount and account to the Bank Consortium. The Bank Consortium replies that the deposit is accepted. The ATM system notifies the Cashier that there is an accepted deposit in the ATM safety box.

If there is no contact with Bank Consortium, the ATM cannot contact the Bank Consortium then the ATM displays a message to the Bank Customer that the connection to the Bank Consortium was lost and 'Try again later', the Bank Card and cash envelope are returned, and the use case ends.

**7. Print Receipt**

The ATM system prints the receipt.

**8. Receive Card**

The ATM system returns the Bank Card to the Bank Customer. The use case ends. If Card stuck in card reader while ejecting

The ATM may just try to eject the Bank Card for 2 minutes. If it still can’t eject the Bank Card, then it has to be kept by the ATM. An alarm is then sent to the maintenance crew and the Bank Consortium. The local video camera starts recording. The ATM displays a warning message to the Bank Customer. The use case ends.

**Write a use case for a bank employee adding cash to the ATM**

Automatic teller machines (ATM) are electronic banking outlets that allow people with a debit or credit card to access their bank account and make basic transactions, such as withdrawals or deposits, without visiting a bank teller or representative.

Before bank employee adding cash to the ATM, he/she need to go with security they need to check surroundings and then open the atm door. After entering the atm room then closes the door. The bank customer will enter his ID number then keep the money in to the atm money box. Then bank customer closes the atm money box. Then return to the bank and say details.