1. Explain about relationships in the above use case.

A: **Operator** manages the ATM system’s startup and shut down.

**Customer** goes for a transaction session for withdrawl of money, deposit of money, transfer of money or for balance inquiry and if the customer enters wrong pin for 3 consecutive time then his/her card will be locked in the ATM.

**Bank** manages the transactions or other operations such as withdrawl of money, deposit of money, transfer of money or balance inquiry. Invalid pin extension is that if the customer consectively enters 3 wrong pins at a time then the ATM machine will block its card.

1. Does this use case model require any modifications?

A: There are still flaws in the diagram. For example the operator shall perform the maintenance operation apart from system startup and system shutdown. The operator should keep a check on the ATM machine whether its working properly or not if there is cash or not.

1. Write decriptive use case for withdrawal use case

A: **Use case Title:** Withdrawl from ATM machine.

**Primary Actor:** Customer.

**Pre-condition:**

1. ATM must have electricity and connected to Bank’s databse/system.
2. ATM should have cash in it.
3. The ATM should be programmed to withdraw money in time of need.

**Trigger:** To withdraw money from ATM.

**Scenario:**

1. The ATM shall accepts the card from the customer.
2. The ATM shall accepts the pin for that card from the customer.
3. The ATM shall accepts the customer’s request for withdrawl of money.
4. The ATM shall perform the withdrawl request (including withdrawl amount and issuance of receipt) according to the choices that the customers made.

**Exceptions:**

1. The electricity goes out un-expectedly.
2. The system is unable to detect the card.
3. Due to internal issues ATM is unable to give the cash.
4. Due to some issue the card gets stuck in the machine even the user has provided with correct pin.

**Frequency of Use:**

Multiple times during the whole day.

**Channel to the Actors:**

ATM machine and banking system/database.

**Secondary Actors:**

* + Bank staff
  + Operator

**Channel to the secondary actors:**

ATM machine and banking system.

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