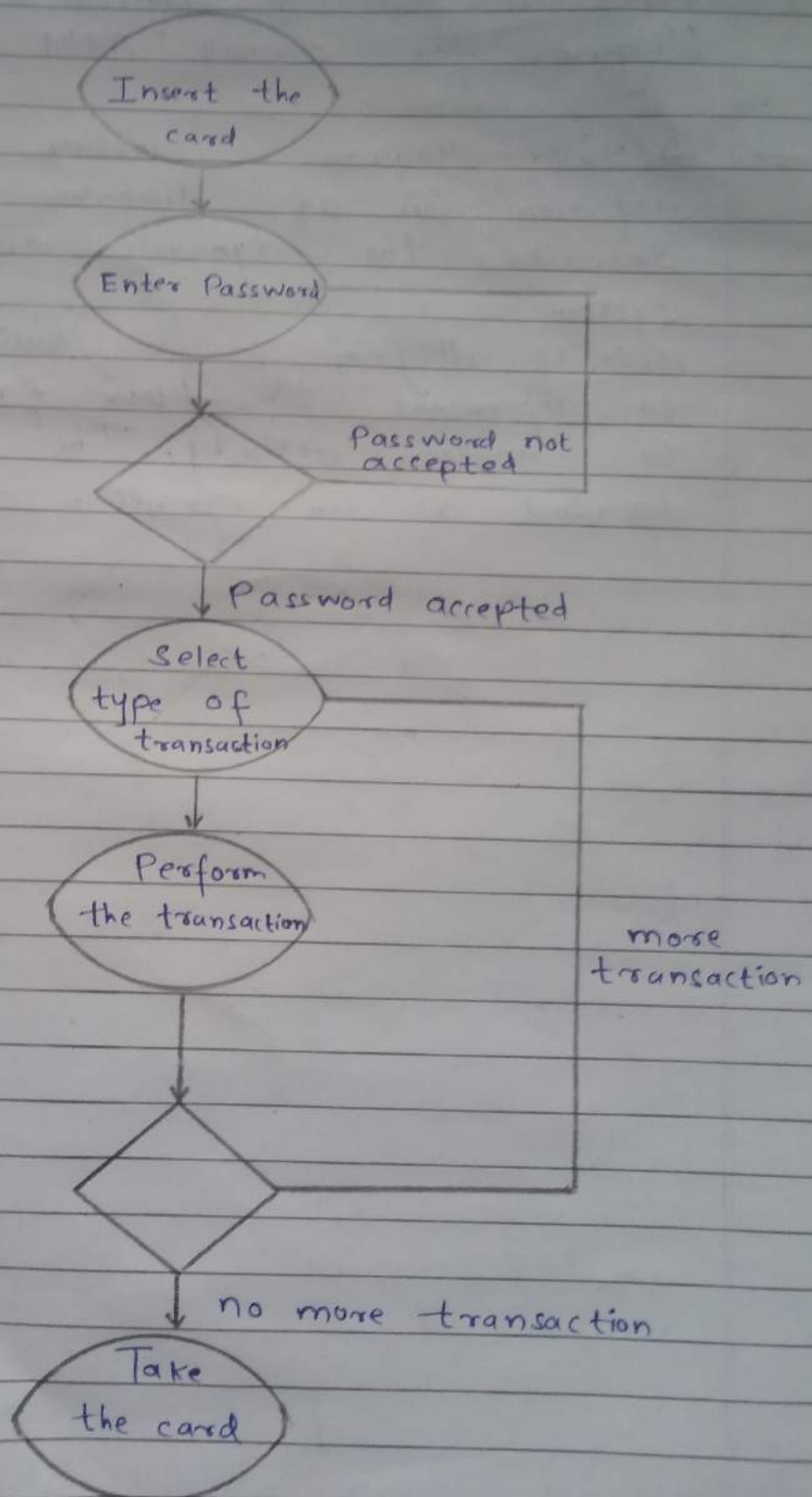## SE ASSIGNMENT ①

Q.1. What is Activity Diagram? Draw Activity Diagram for overall ATM machine.

→ Activity diagram is another important representation of diagram in UML to describe the dynamic aspects of the system.

Activity diagram is a basically flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.
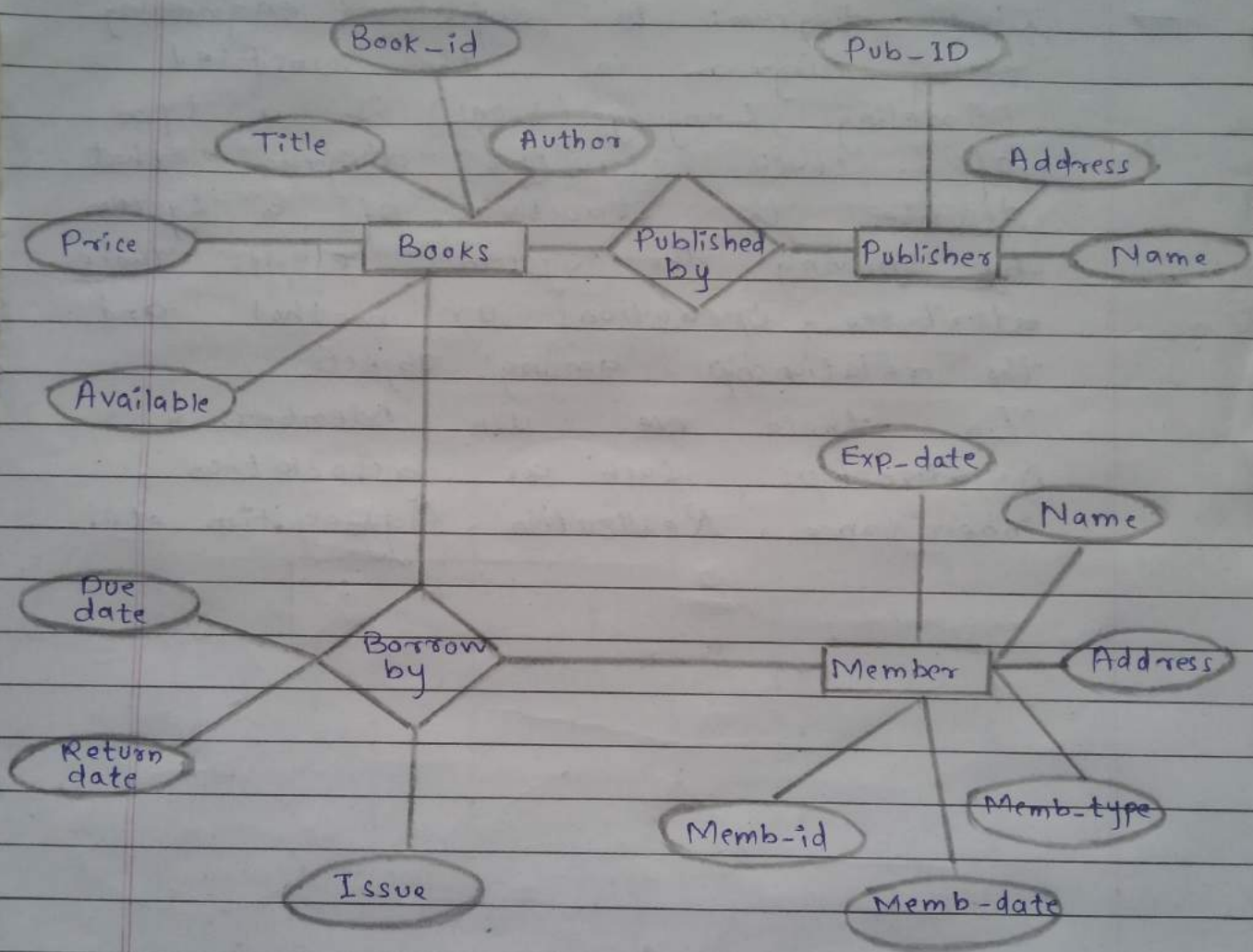
Diagram:

```
                    ┌─────────────┐
                    │ Insert the  │
                    │    card     │
                    └──────┬──────┘
                           │
                    ┌──────▼──────┐
                    │Enter Password│─────────────┐
                    └──────┬──────┘               │
                           │                      │
                          ◇              Password not
                          ◇               accepted
                           │
                           ▼ Password accepted
                    ┌─────────────┐
                    │   Select    │
                    │  type of    │──────────┐
                    │ transaction │          │
                    └──────┬──────┘          │
                           ▼                 │
                    ┌─────────────┐          │
                    │  Perform    │      more
                    │the transaction│   transaction
                    └──────┬──────┘          │
                           │                 │
                           ▼                 │
                          ◇─────────────────┘
                           │
                           ▼ no more transaction
                    ┌─────────────┐
                    │    Take     │
                    │  the card   │
                    └─────────────┘
```

Q.2. Implementation of ER-Diagram for library management system.

→

Q.3.   What is class diagram? Draw class diagram for ATM system.

→   class diagram:- In software enjineering class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes their attributes, Operations or method and the relationship among objects.
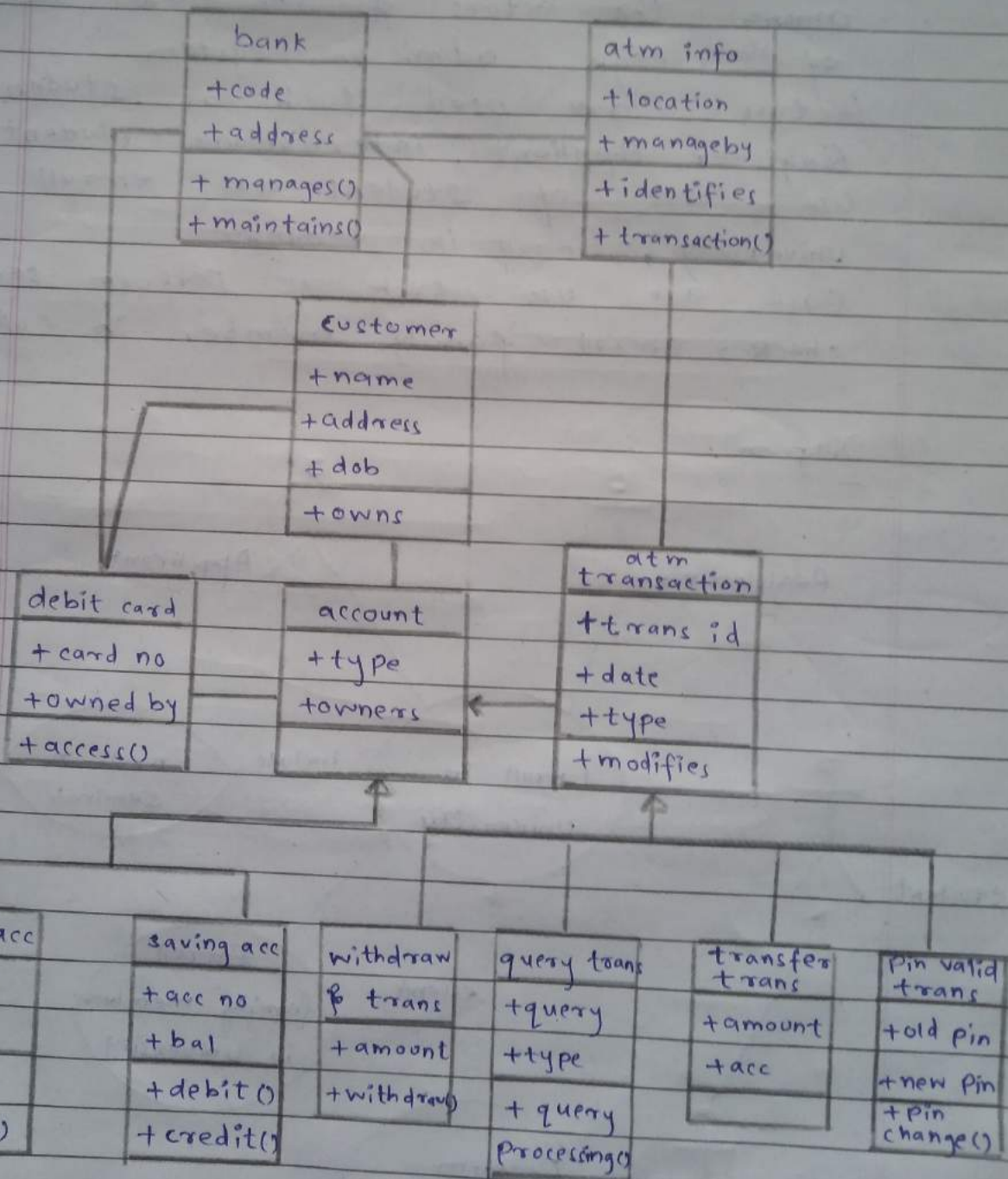In these we use Members, Relationships such as association, inheritance, Realization, Aggregation etc.

Diagram:

Class name
Attributes
Operations()
responsibility

bank
+code
+address
+ manages()
+ maintains()

atm info
+location
+ manageby
+identifies
+ transaction()

customer
+name
+address
+ dob
+owns

debit card
+ card no
+owned by
+access()

account
+type
+owners

atm transaction
+trans id
+date
+type
+modifies

current acc
+acc no
+ bal
+ debit()
+ credit()

saving acc
+acc no
+bal
+debit()
+credit()

withdraw trans
+amount
+withdraw()

query trans
+query
+type
+ query processing()

transfer trans
+amount
+acc

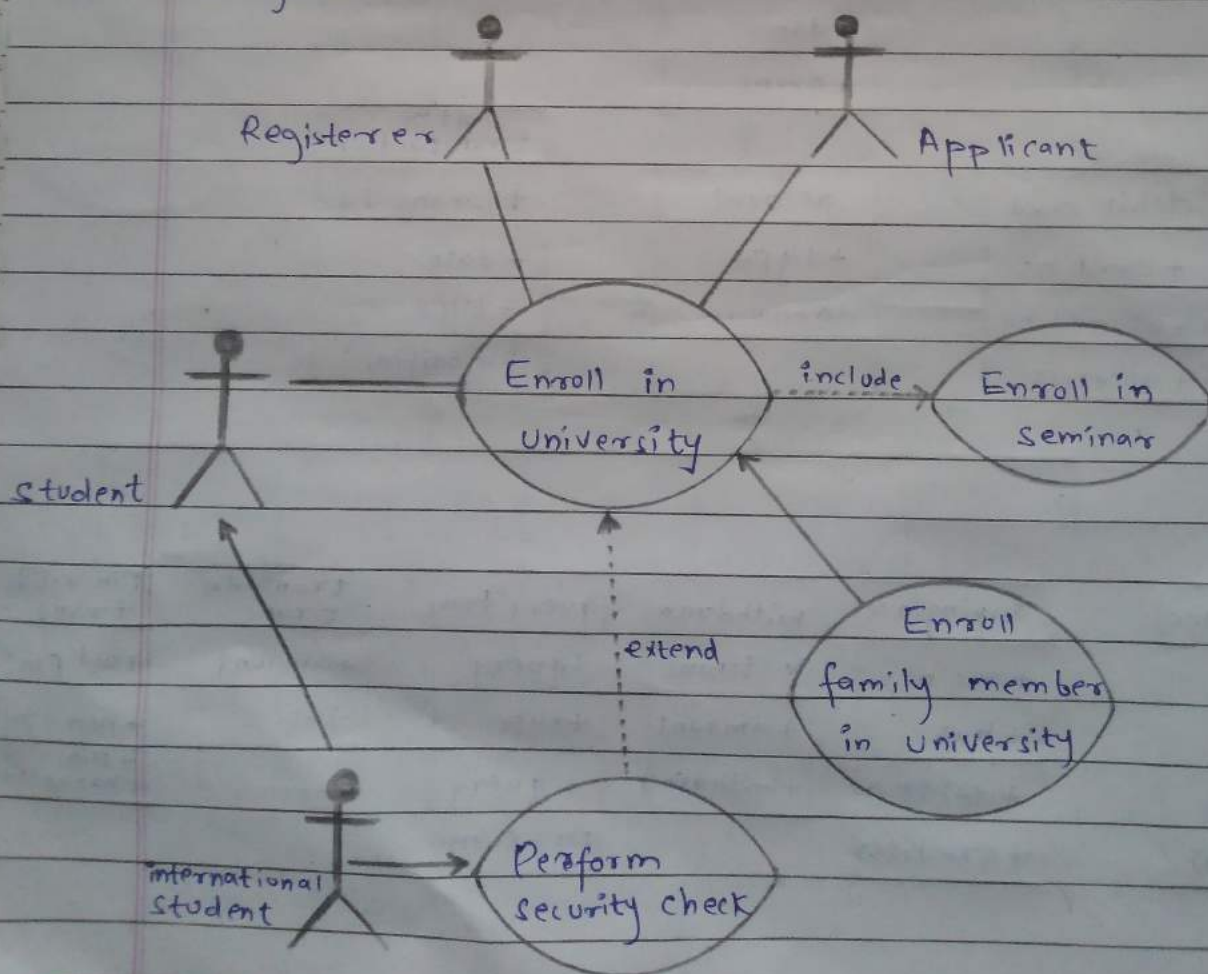| pin valid trans |
|---|
| +old pin |
| +new pin |
| +pin change() |

Q.4. Implementation of use case diagram for college admission system.

→ In these relationships between & among the actors & the user case of college admission system.
Actors are used such as student, Register, Appliant, international student.
Use cases of student are enroll in university, Enroll in seminar,
Case are use such as perform security check, enroll family member in college.

Diagram

Q.5. What is sequence diagram? Draw sequence diagram for hotel management (check in process).

→ A sequence diagram shows object interactions arranged in the sequence. depicts the object & classes involved in the scenario & the sequence of the message exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are sometimes called event diagrams or event scenarios.

Hotel management system in this UML system shows the interaction between the objects of customers, receptions, staffs, database.

Diagram:

Customer	Receptionist	Staff	Database

Visit Hotel

Ask For Help

Request Accomodation Availability

Check Rooms

Get Data

Room Avaliable

Avail Services

Provide Services

Cancel Booking

Update Database

Ask For Keys & Payment

Retrive Current Availability

Pay

Request Information

Provide Bill

Retrive information & generate bill