ATM Management System

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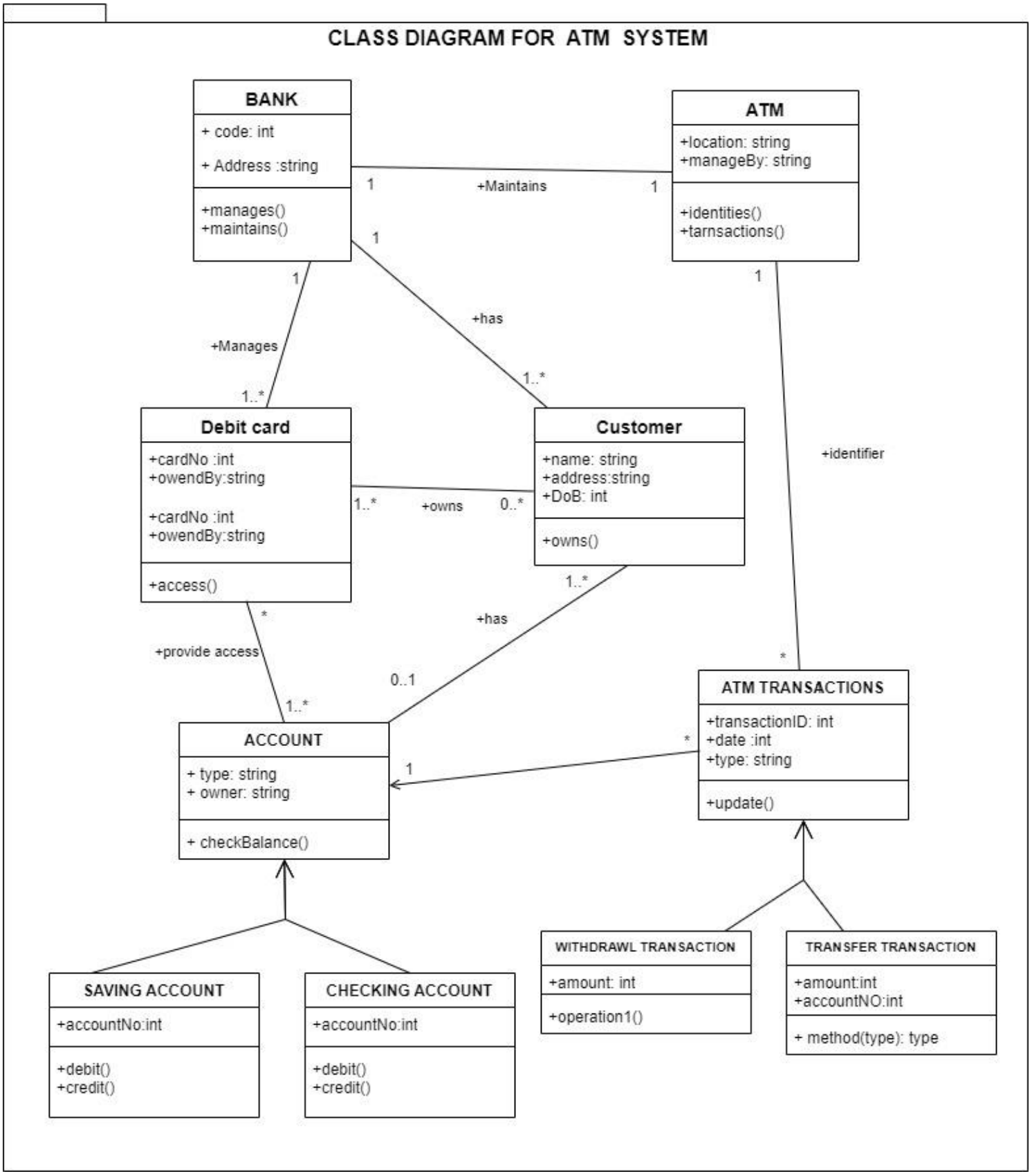
CLASS DIAGRAM OF ATM MANAGEMENT SYSTEM

The class diagram for a comprehensive ATM Management System involves several essential classes that collectively streamline various aspects of the system's functionality.

- CUSTOMER
- BANK
- CARD
- ATM
- TRANSACTIONS
- ACCOUNT

An ATM (Automated Teller Machine) system is an electronic banking service that allows customers to perform various financial transactions without visiting a physical bank branch. Customer can access their accounts, withdraw or deposit cash, check balances, transfer funds, and perform other banking activities using a bank card and a personal identification number (PIN). ATMs provide convenient and 24/7 access to banking services, enhancing accessibility and flexibility for account holders. These machines are located in various public and private locations, offering a secure and efficient means of managing one's finances.

CLASS DIAGRAM FOR ATM SYSTEM



SEQUENCE DIAGRAM FOR ATM SYSTEM

A sequence diagram for an ATM (Automated Teller Machine) system provides a visual representation of the interactions and messages exchanged between various components involved in processing a transaction. Below is a description of the key steps and components in the sequence diagram:

Customer Interaction: The sequence starts with the User interacting with the ATM by inserting their bank card into the card reader.

Card Reader to ATM: The Card Reader forwards the received account information to the ATM.

User Enters PIN: The User enters their Personal Identification Number (PIN) using the keypad on the ATM.

ATM Verifies PIN: The ATM sends a message to the Bank to verify the entered PIN.

Bank Verifies PIN: The Bank authenticates the PIN. If correct, it sends a confirmation back to the ATM.

User Selects Transaction: The User selects a transaction (e.g., Withdraw, Check Balance) from the available options on the ATM screen.

ATM Processes Transaction: The ATM sends a request to the Bank for processing the selected transaction along with any required details (e.g., withdrawal amount).

Bank Processes Transaction: The Bank evaluates the transaction request. If approved, it sends a confirmation back to the ATM.

Cash Dispensing: In the case of a withdrawal, the ATM interacts with the Cash Dispenser to dispense the requested amount.

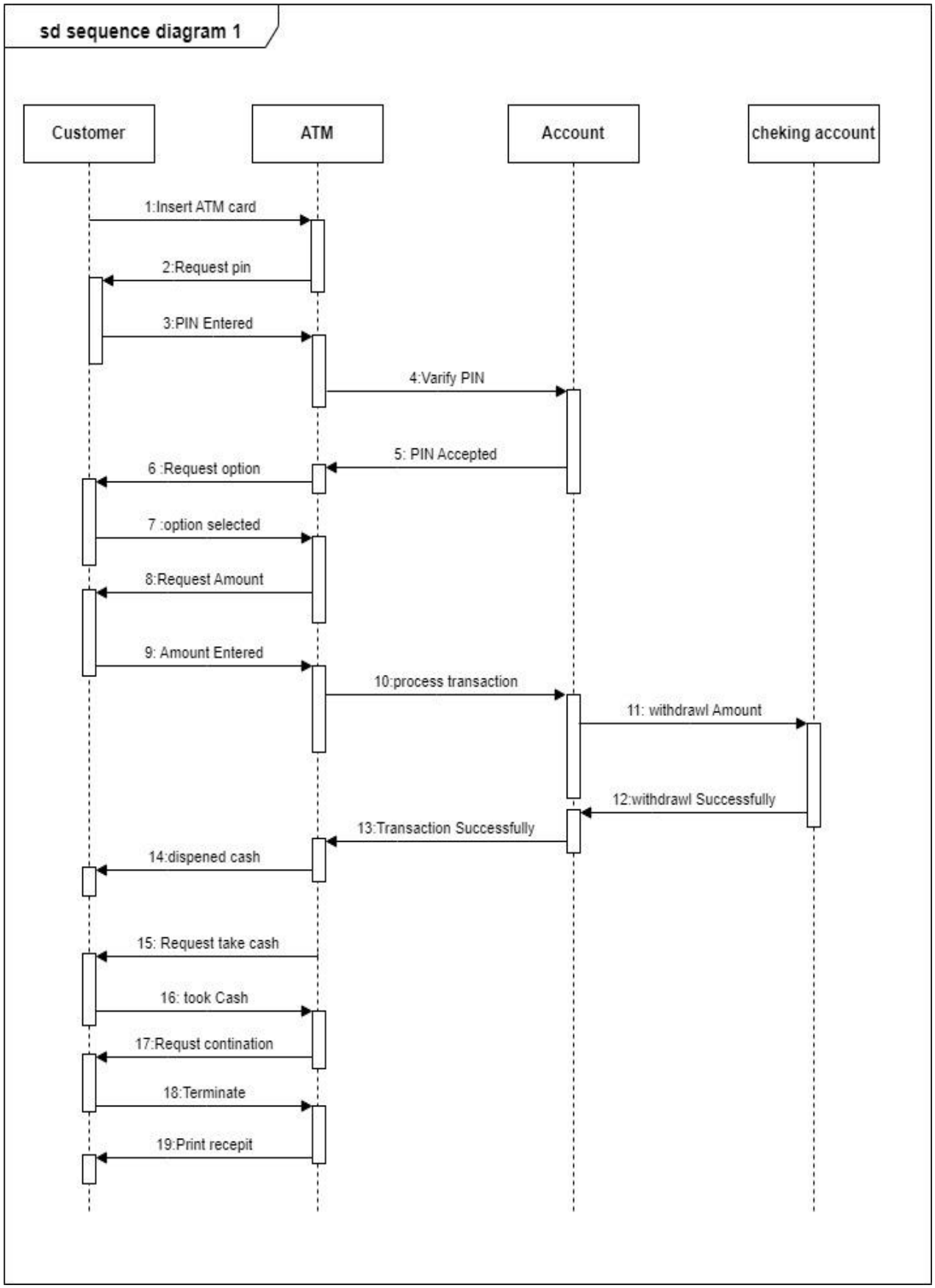
ATM Updates Account Balance: The ATM communicates with the Bank to update the account balance after a successful transaction.

Receipt Generation: The ATM instructs the Receipt Printer to generate a receipt containing transaction details.

ATM Presents Receipt to User: The ATM displays the generated receipt to the User.

Terminate of Transaction: The ATM session concludes, and the User's interaction with the ATM is complete.

User Retrieves Card: The User is prompted to retrieve their bank card from the Card Reader.


sd sequence diagram 1
Customer
ATM
Account
cheking account
1:Insert ATM card
2:Request pin
3:PIN Entered
4:Varify PIN
5: PIN Accepted
6 :Request option
7 :option selected
8:Request Amount
9: Amount Entered
10:process transaction
11: withdrawl Amount
12:withdrawl Successfully
13:Transaction Successfully
14:dispened cash
15: Request take cash
16: took Cash
17:Requst contination
18:Terminate
19:Print recepit

ER DIAGRAM FOR ATM SYSTEM

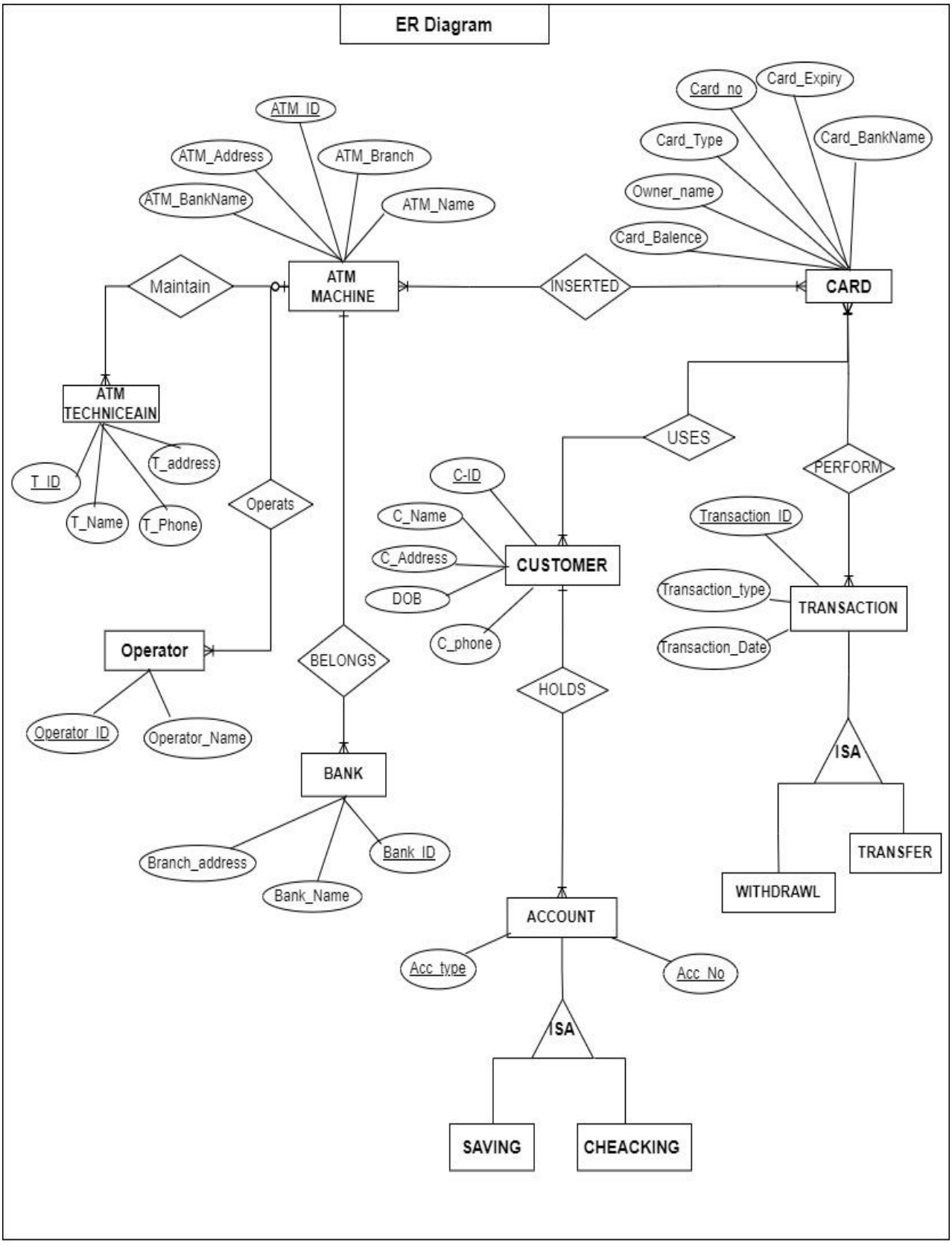
Creating a detailed ER (Entity-Relationship) diagram for an ATM (Automated Teller Machine) system involves defining entities, their attributes, and relationships between them. Below is a simplified ER diagram with descriptions of entities and their attributes:

Entities:

1. **Bank**: BankID (Primary Key), Name: Name of the bank.
2. **ATM**:ATM_ID (Primary Key),Location,Status,ATM_Branch.
3. **Card**: Card_no, Card_Balence, Owner_name, Card_Type.
4. **BankAccount**: Acc_No(Primary Key), Acc_type.
5. **Transaction**: TransactionID (Primary Key), Transaction_type, Transaction_Date.
6. **Customer**: C_ID (Primary Key),C_name, C_phone

Relationships:

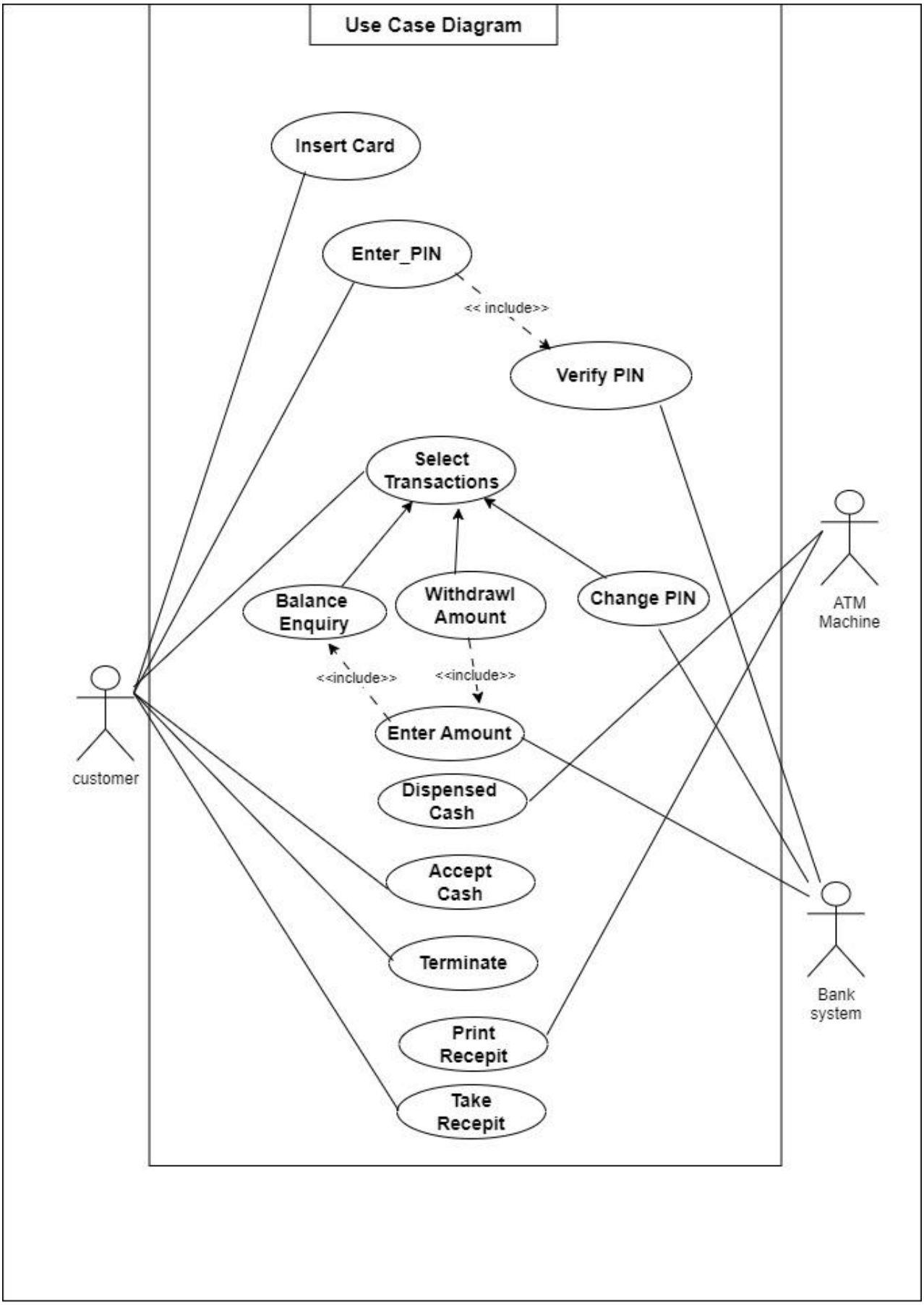
- **Bank** has many **ATMs**
- **Bank** has many **Accounts**
- **Account** belongs to one **Customer**
- **Customer** can have multiple **Accounts**
- **Card** belongs to one **Customer**
- **Customer** can Holds multiple **Cards**
- **Cards** can Perform multiple Transactions

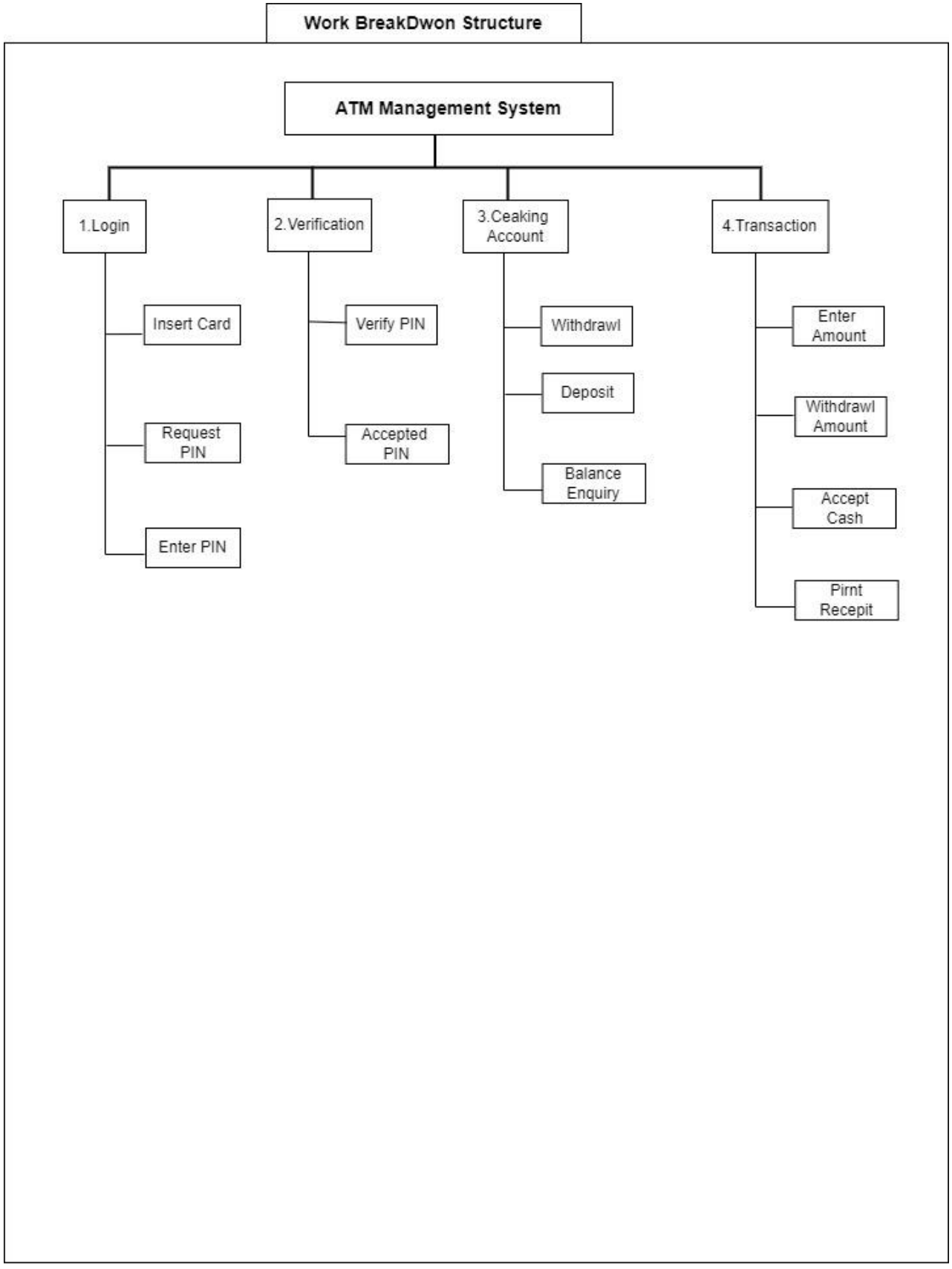

ER Diagram
ATM_ID
ATM_Address
ATM_Branch
ATM_BankName
ATM_Name
Card_no
Card_Expiry
Card_Type
Card_BankName
Owner_name
Card_Balence
Maintain
ATM MACHINE
INSERTED
CARD
ATM TECHNICEAIN
T_ID
T_address
T_Name
T_Phone
Operats
USES
PERFORM
C-ID
C_Name
C_Address
DOB
C_phone
CUSTOMER
Transaction_ID
Transaction_type
Transaction_Date
TRANSACTION
Operator
BELONGS
HOLDS
Operator_ID
Operator_Name
BANK
ISA
TRANSFER
WITHDRAWL
Branch_address
Bank_ID
Bank_Name
ACCOUNT
Acc_type
Acc_No
ISA
SAVING
CHEACKING

USECSAE MODEL OF ATM SYSTEM

A Use Case Model for an ATM (Automated Teller Machine) system outlines the various interactions and functionalities that the system provides to its users. Here are some common use cases for an ATM system:

1. **Insert Card**:This use case represents the action of a user inserting their bank card into the ATM. **Actors**: User
2. **Enter PIN:**The user enters their Personal Identification Number (PIN) after inserting the card. **Actors**: User
3. **Verify PIN:**The bank verify their Personal Identification Number (PIN) after Enter PIN.
   Actors: Bank
4. **Select transaction:**The user select transactio.
   Actors: User
5. **Withdraw Cash:**The user requests to withdraw a specific amount of cash from their account. **Actors**: User, ATM, Bank
6. **Check Balance**:The user requests to check the balance of their account.
   Actors: User, ATM, Bank
7. **Change PIN**:The user requests to change their PIN.
   Actors: User, ATM, Bank
8. **Enter Amount**: User Enter Amount on the request of Bank.
   Actors: User, Bank
9. **Dispensed cash**:Thebank Dispense cash to transfer accounts.
   Actors: Bank
10. **Accept cash**:The user accept cash .
    Actors: User
11. **Terminate of Transaction:**The ATM session concludes, and the User's interaction with the ATM is complete.
    Actors: User, ATM
12. **Print Receipt**:The user requests to print a receipt for a transaction.
    Actors: User, ATM


Use Case Diagram
Insert Card
Enter_PIN
<< include>>
Verify PIN
Select Transactions
Balance Enquiry
Withdrawl Amount
Change PIN
<<include>>
<<include>>
Enter Amount
Dispensed Cash
Accept Cash
Terminate
Print Recepit
Take Recepit
customer
ATM Machine
Bank system


Work BreakDwon Structure
ATM Management System
1.Login
2.Verification
3.Ceaking Account
4.Transaction
Insert Card
Request PIN
Enter PIN
Verify PIN
Accepted PIN
Withdrawl
Deposit
Balance Enquiry
Enter Amount
Withdrawl Amount
Accept Cash
Pirnt Recepit