4). Draw a UML diagram for ATM System using CASE tool. The banking system allows a customer to access the financial transactions by ATM System, it has a step-by-step process describe the work of this process and elaborate the what are the work can do by customer, banking system, administrator and technicians with the ATM system.

Aim

To design a UML use case diagram for an ATM System that illustrates how a customer, bank system, administrator, and technician interact with the system for various operations such as financial transactions, maintenance, and administration.

Procedure

Step 1: Identify the main actors

- **Customer**
- **Banking System**
- **Administrator**
- **Technician**

Step 2: Identify the use cases

- For **Customer**:
  - Insert Card
  - Authenticate (Enter PIN)
  - Withdraw Cash
  - Check Balance
  - Transfer Funds
  - Print Receipt
  - Change PIN

- For **Banking System**:
  - Verify User
  - Process Transaction
  - Update Account

- For **Administrator**:
  - Manage User Accounts
  - Monitor Transactions
  - Generate Reports

- For **Technician**:
    - Perform Maintenance
    - Refill Cash

Step 3: Define relationships between actors and use cases

- **Customer** interacts with most of the ATM functions like withdrawal, balance inquiry, and fund transfer.

- **Banking System** supports customer activities by verifying, processing, and updating account information.

- **Administrator** manages user data and transaction monitoring.

- **Technician** ensures the ATM is operational by performing maintenance and refilling cash.

Step 4: Draw actors and use cases

- Use stick figures for actors and ovals for use cases.

Step 5: Connect actors to their respective use cases

- Draw lines from **Customer** to use cases such as Withdraw Cash, Check Balance, etc.

- **Administrator** and **Technician** have different sets of use cases that should be connected accordingly.
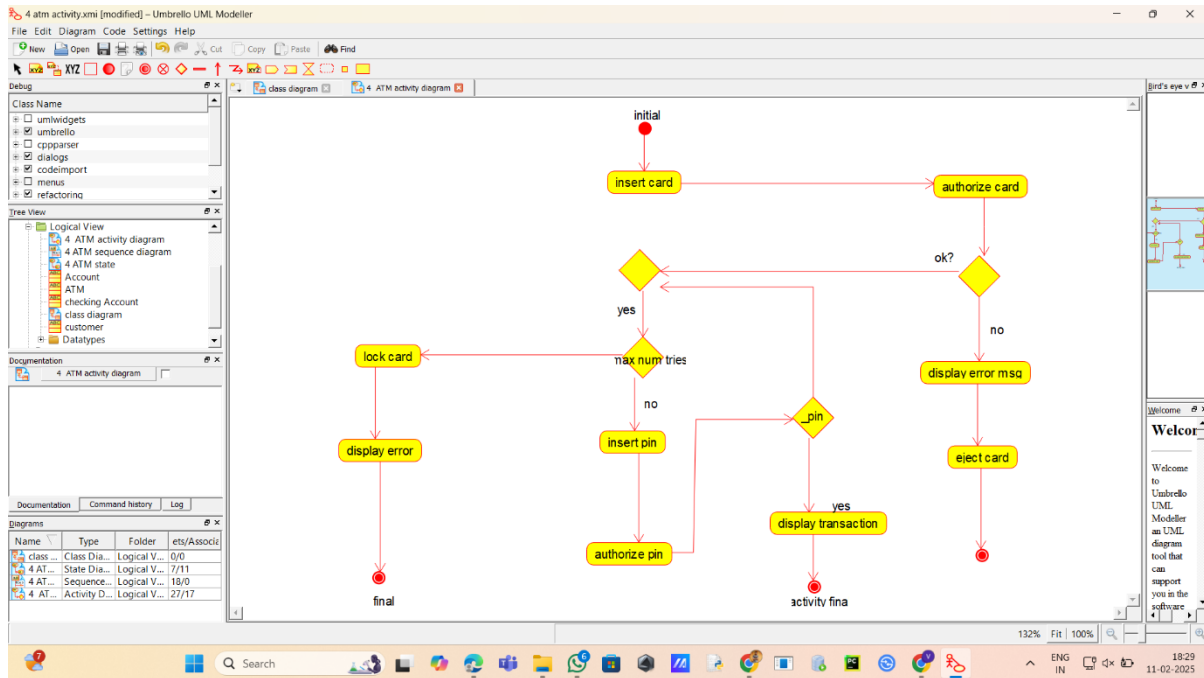
Step 6: Label the diagram

- Clearly define the system boundary and label each component.
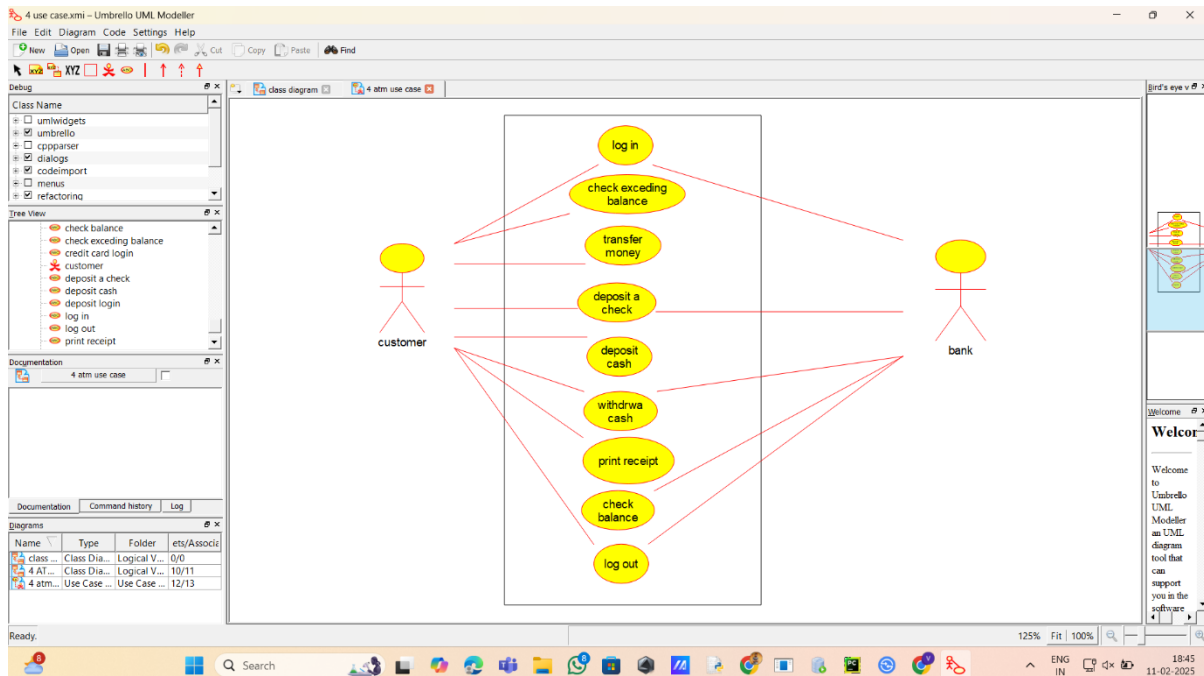
Step 7: Review and verify the diagram

- Ensure all functional requirements are represented, and relationships are logical and complete.
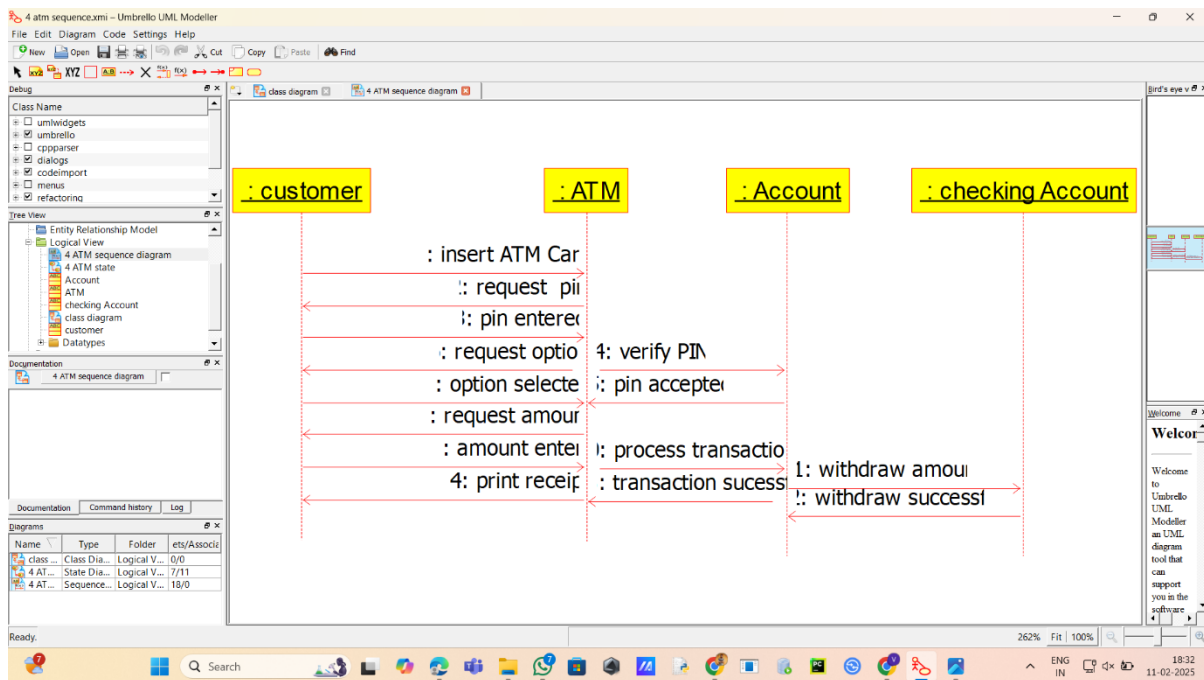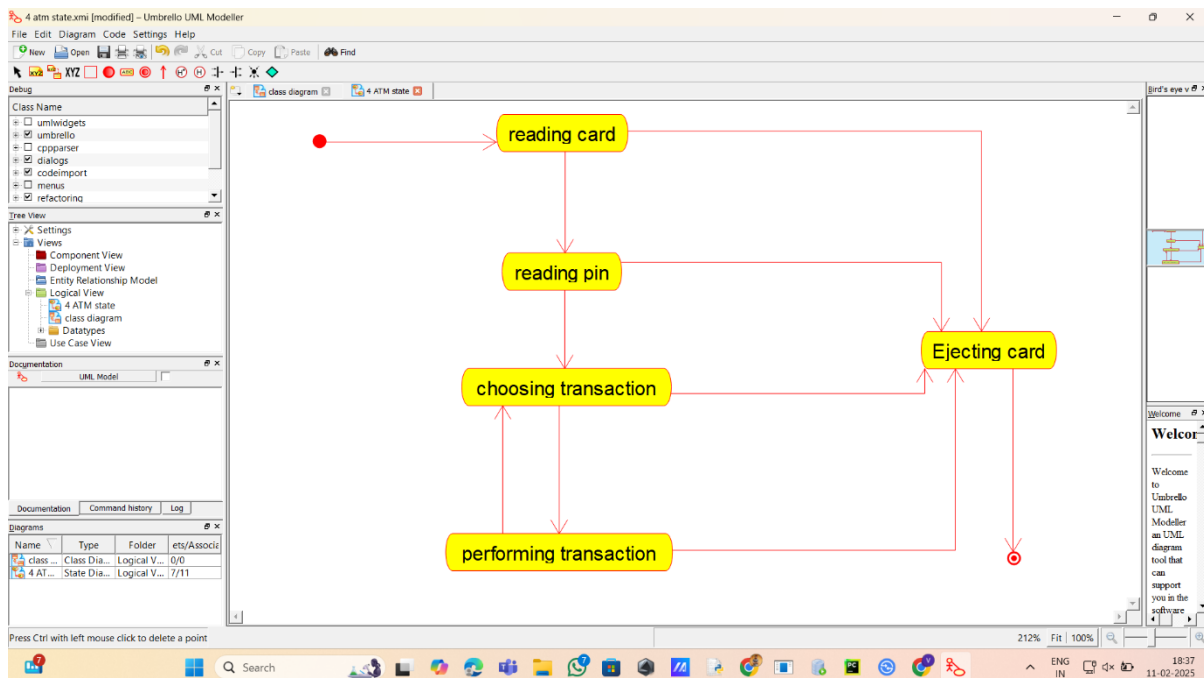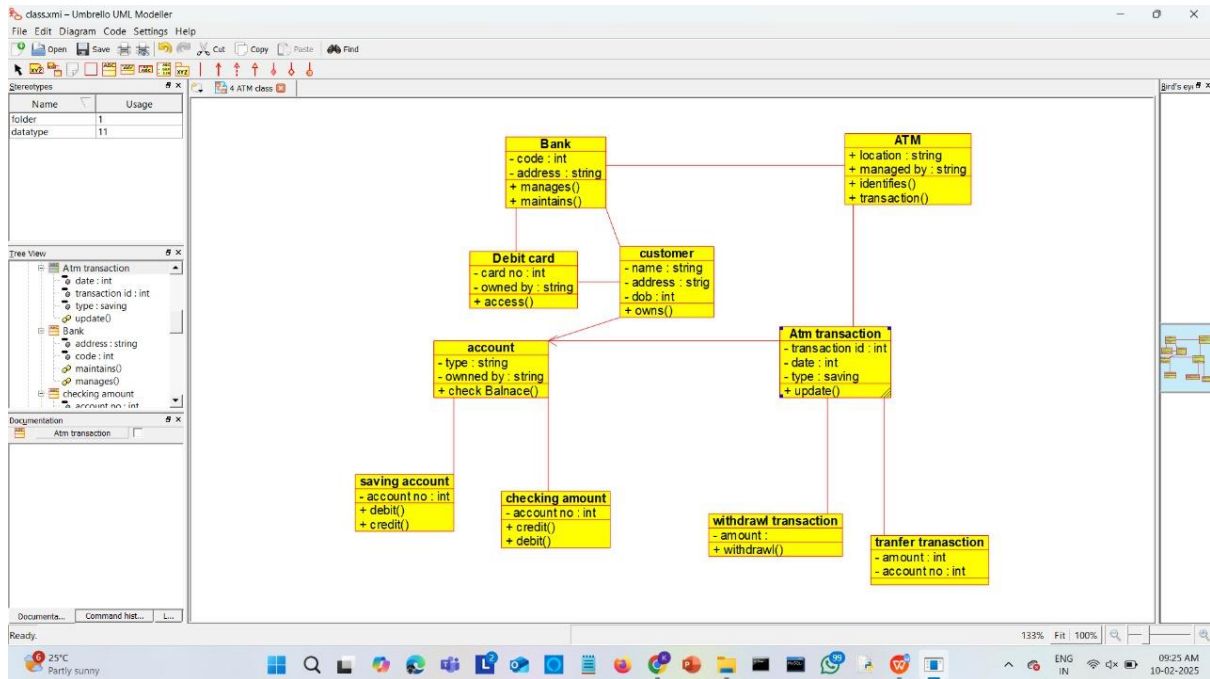
OBSERVATION:

ACTIVITY DIAGRAM
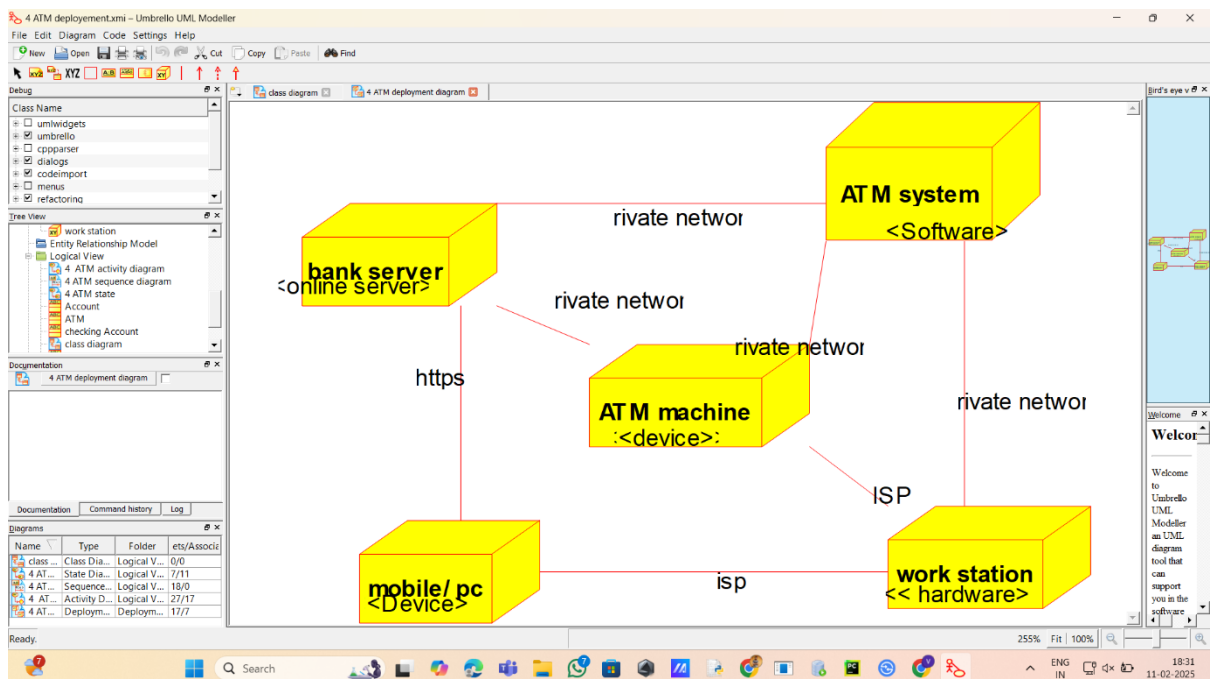

USE CASE DIAGRAM
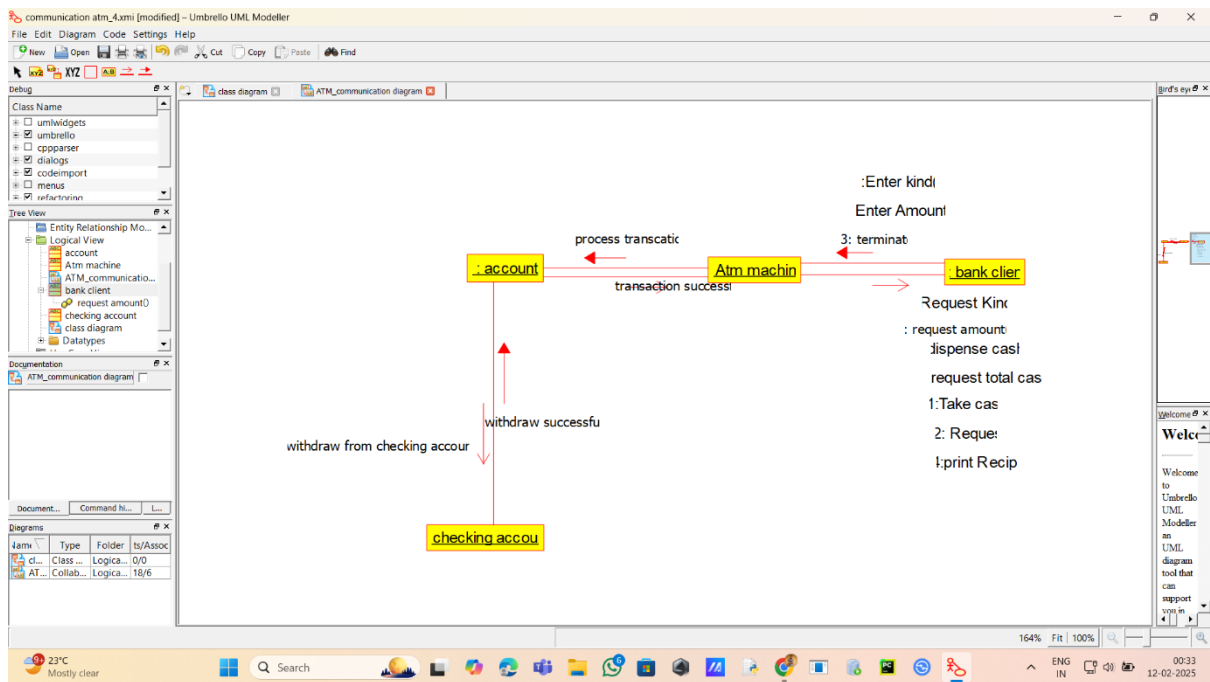
SEQUENCE DIAGRAM

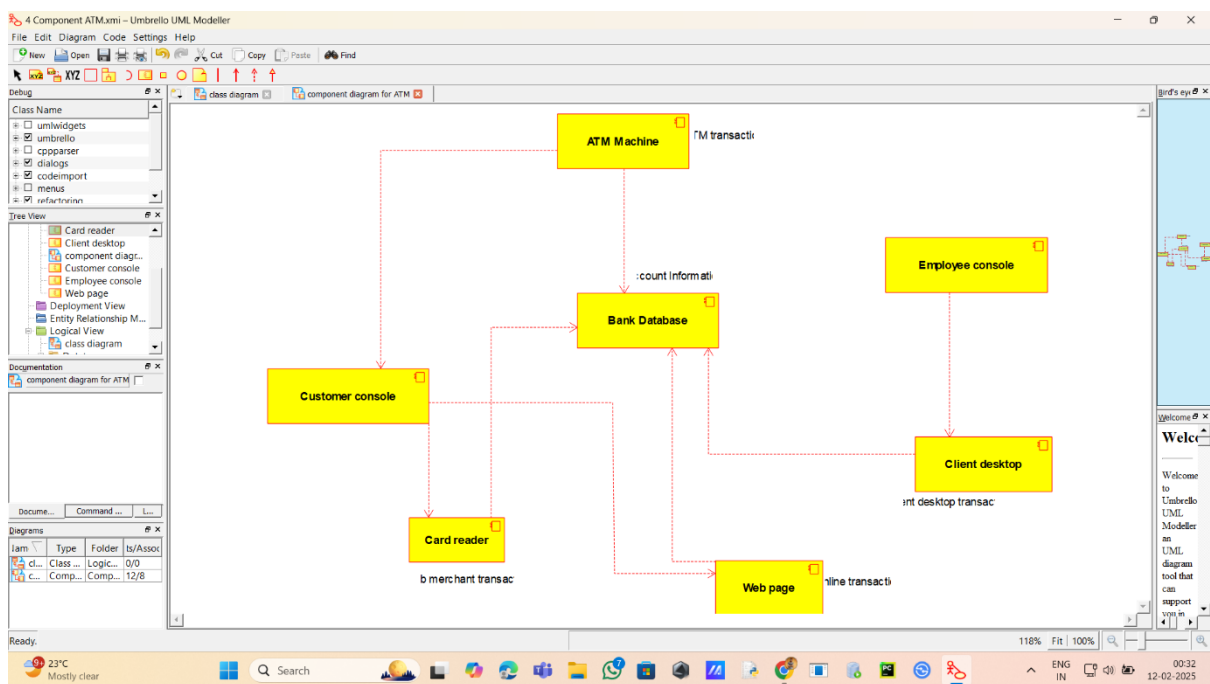

STATE DIAGRAM

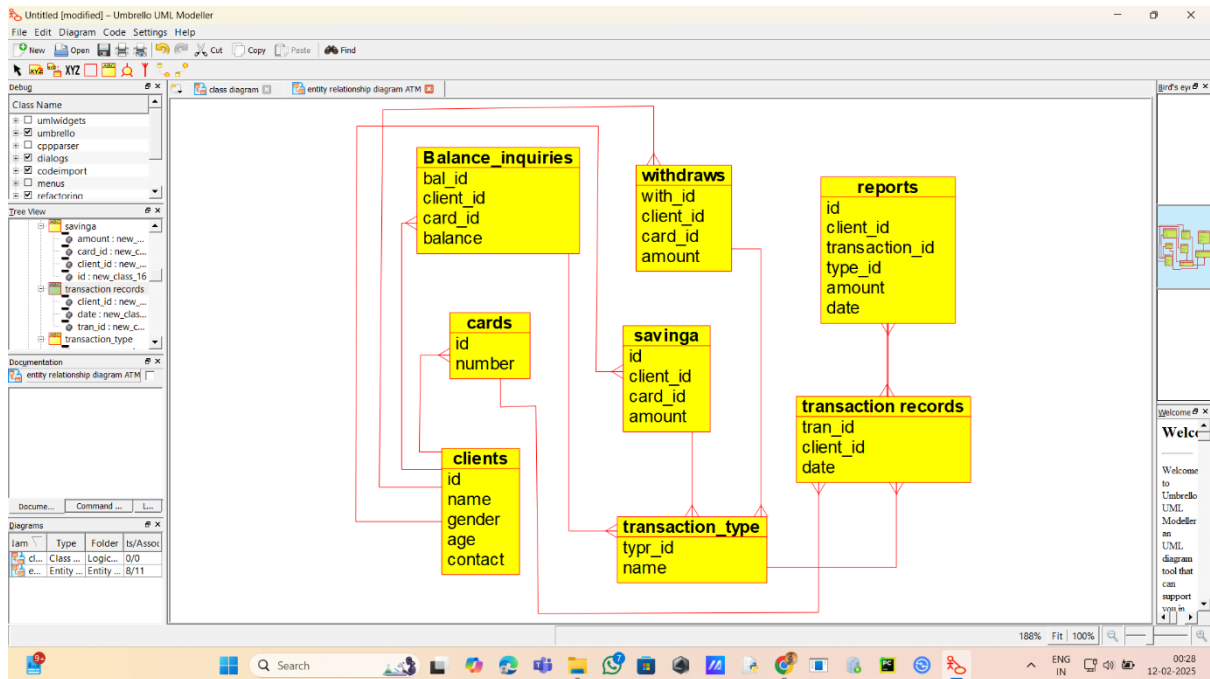# CLASS DIAGRAM

DEPLOYMENT DIAGRAM

COMMUNICATION DIAGRAM

COMPONENET DIAGRAM

ER DIAGRAM

Result

The UML use case diagram provides a visual representation of the ATM System's operations, showing how different actors interact with the system for tasks such as cash withdrawal, balance inquiry, account management, and system maintenance.