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 diagram for an ATM System using a CASE tool, illustrating the interactions between the customer, banking system, administrator, and technician in handling financial transactions.

Procedure :

1. Open a CASE tool like StarUML, IBM Rational Rose, or Visual Paradigm.

2. Identify the main actors: Customer, Banking System, Administrator, and Technician.

3. List the use cases for each actor, such as withdrawing money, depositing funds, and

maintaining the ATM.

4. Create a Use Case Diagram to show interactions between actors and the ATM system.

5. Design a Class Diagram with classes like ATM, Account, Transaction, and User.

6. Develop a Sequence Diagram to represent the step-by-step process of an ATM

transaction.

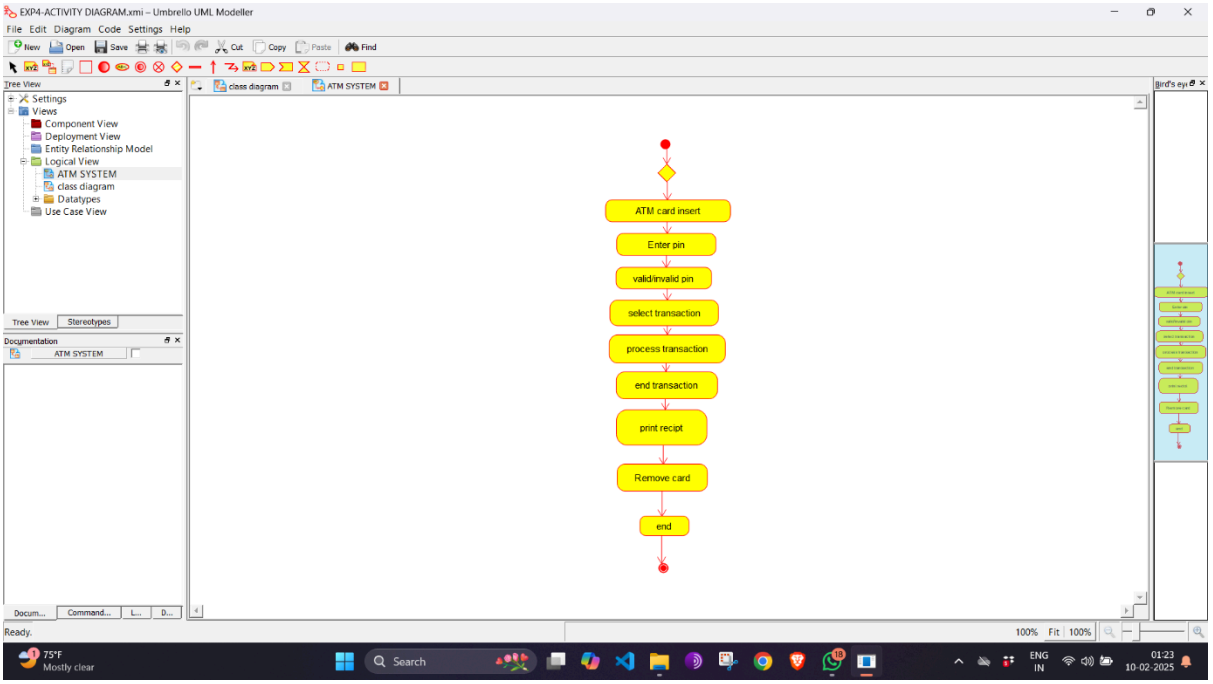
7. Construct an Activity Diagram to illustrate the workflow of financial transactions.

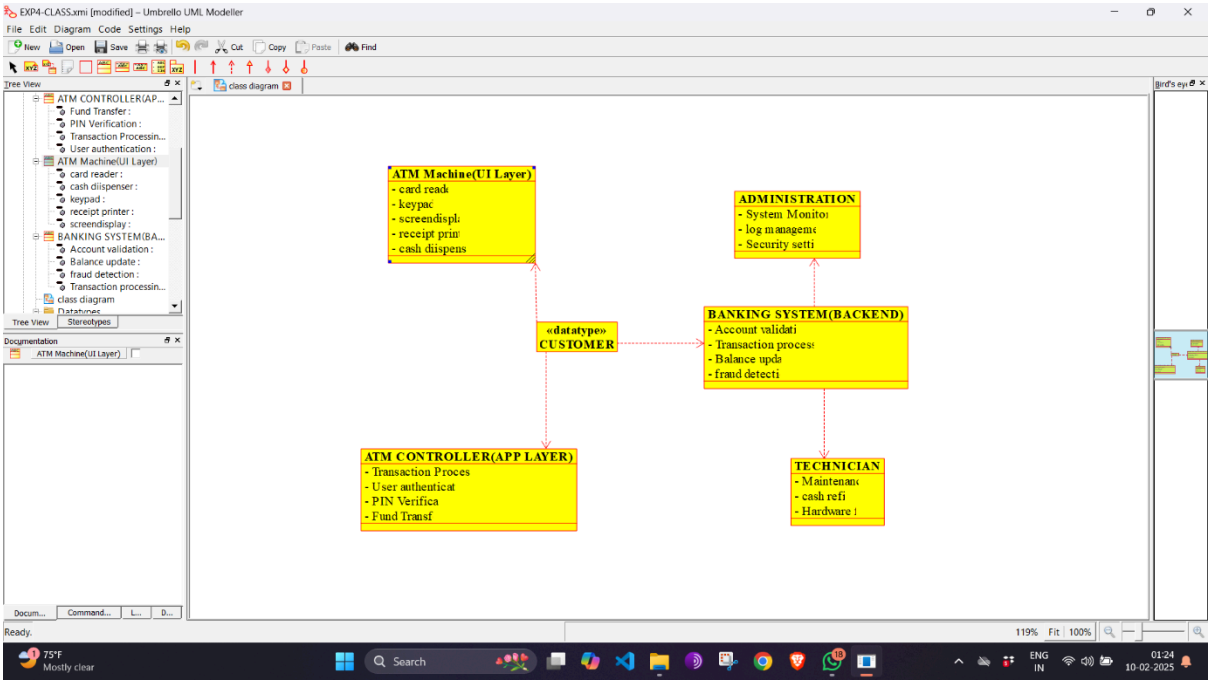
8. Connect entities, processes, and relationships clearly in the UML diagrams.

9. Verify the diagrams for completeness and accuracy.

10. Save and export the diagrams for documentation and implementation.

Diagram:


EXP4-ACTIVITY DIAGRAM.xmi – Umbrello UML Modeller
File Edit Diagram Code Settings Help
Tree View
Settings
Views
Component View
Deployment View
Entity Relationship Model
Logical View
ATM SYSTEM
class diagram
Datatypes
Use Case View
class diagram
ATM SYSTEM
ATM card insert
Enter pin
valid/invalid pin
select transaction
process transaction
end transaction
print recipt
Remove card
end
Ready.
Search


EXP4-CLASS.xmi [modified] – Umbrello UML Modeller
File Edit Diagram Code Settings Help
Tree View
ATM CONTROLLER(AP...
Fund Transfer :
PIN Verification :
Transaction Processin...
User authentication :
ATM Machine(UI Layer)
card reader :
cash diispenser :
keypad :
receipt printer :
screendisplay :
BANKING SYSTEM(BA...
Account validation :
Balance update :
fraud detection :
Transaction processin...
class diagram
Datatypes
class diagram
ATM Machine(UI Layer)
- card reade
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- System Monito
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CUSTOMER
BANKING SYSTEM(BACKEND)
- Account validati
- Transaction proces
- Balance upda
- fraud detecti
ATM CONTROLLER(APP LAYER)
- Transaction Proces
- User authenticat
- PIN Verifica
- Fund Transf
TECHNICIAN
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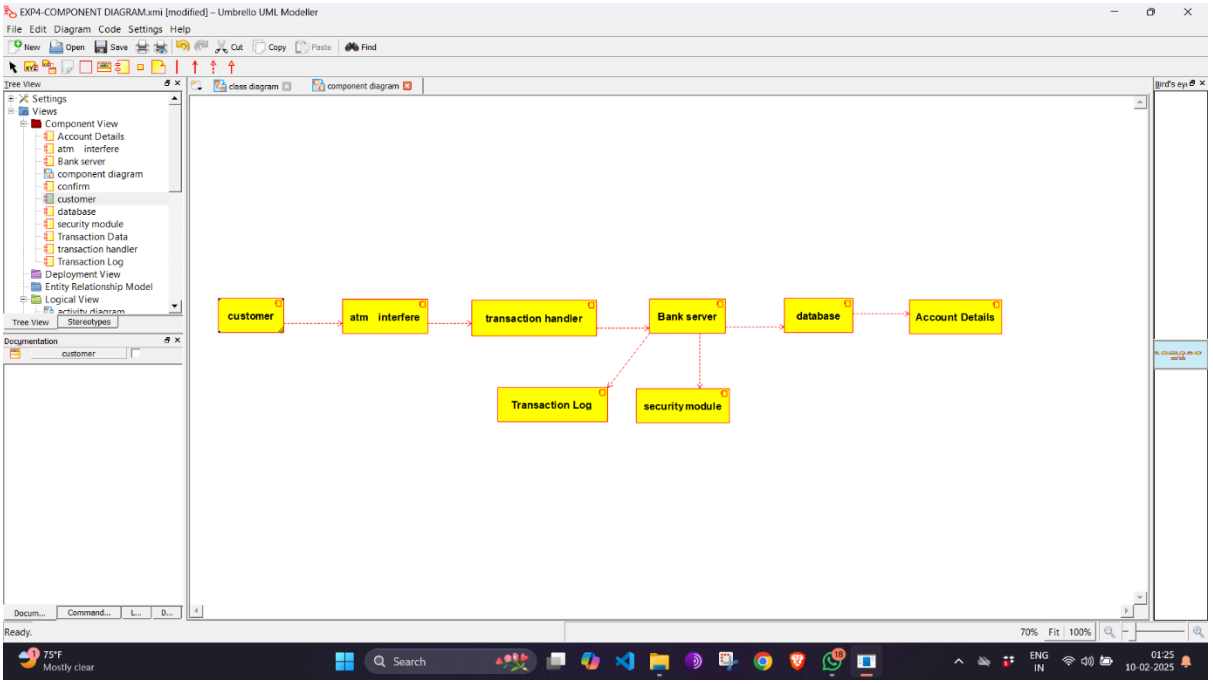
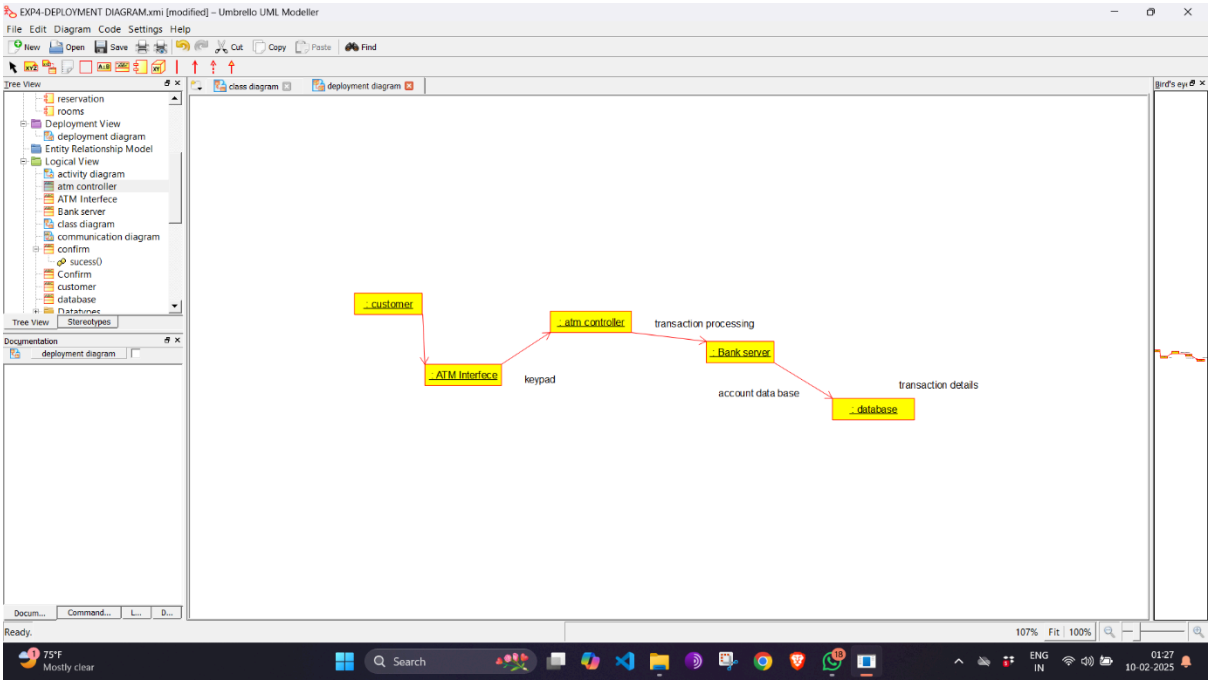
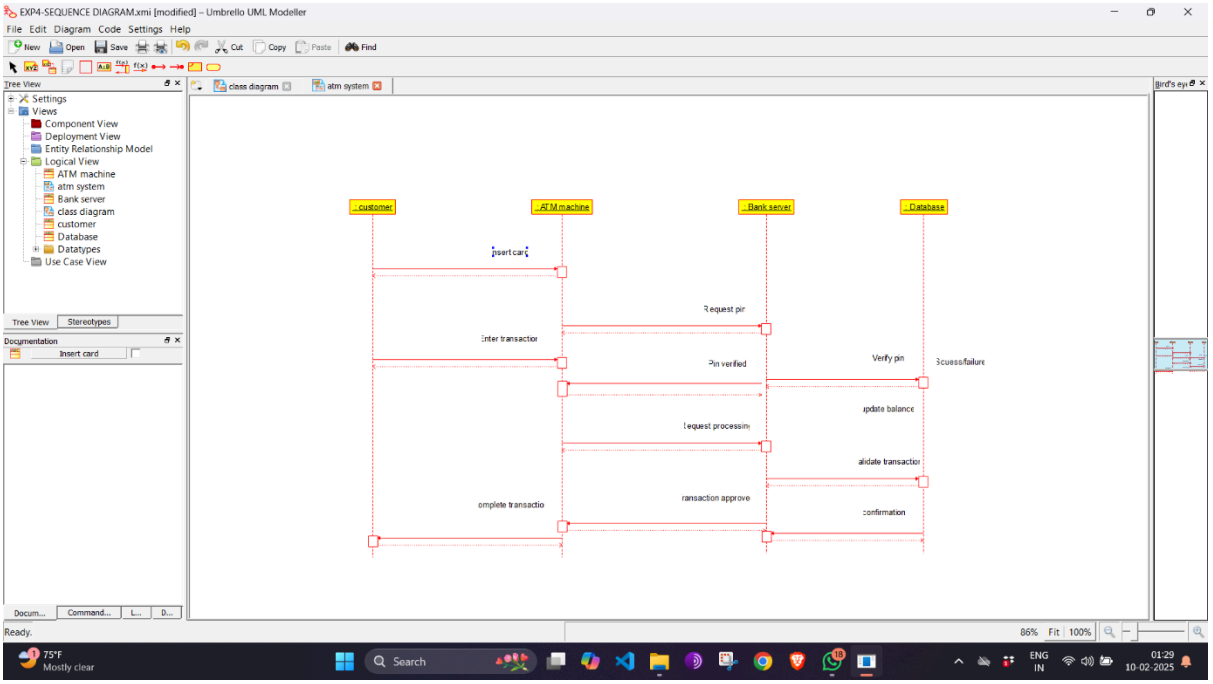
- cash refi
- Hardware i
Ready.
Search


EXP4-COMPONENT DIAGRAM.xmi [modified] – Umbrello UML Modeller
File Edit Diagram Code Settings Help
customer
atm interfere
transaction handler
Bank server
database
Account Details
Transaction Log
security module
Ready.


EXP4-DEPLOYMENT DIAGRAM.xmi [modified] – Umbrello UML Modeller
File Edit Diagram Code Settings Help
: customer
: ATM Interface
keypad
: atm controller
transaction processing
: Bank server
account data base
transaction details
: database
Ready.


EXP4-SEQUENCE DIAGRAM.xmi [modified] – Umbrello UML Modeller
File Edit Diagram Code Settings Help
New Open Save Cut Copy Paste Find
Tree View
Settings
Views
Component View
Deployment View
Entity Relationship Model
Logical View
ATM machine
atm system
Bank server
class diagram
customer
Database
Datatypes
Use Case View
Tree View
Stereotypes
Documentation
Insert card
class diagram
atm system
: customer
: ATM machine
: Bank server
: Database
Insert card
Request pin
Enter transactior
Pin verified
Verify pin
Scuessfailure
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Ready.
86% Fit 100%
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Search
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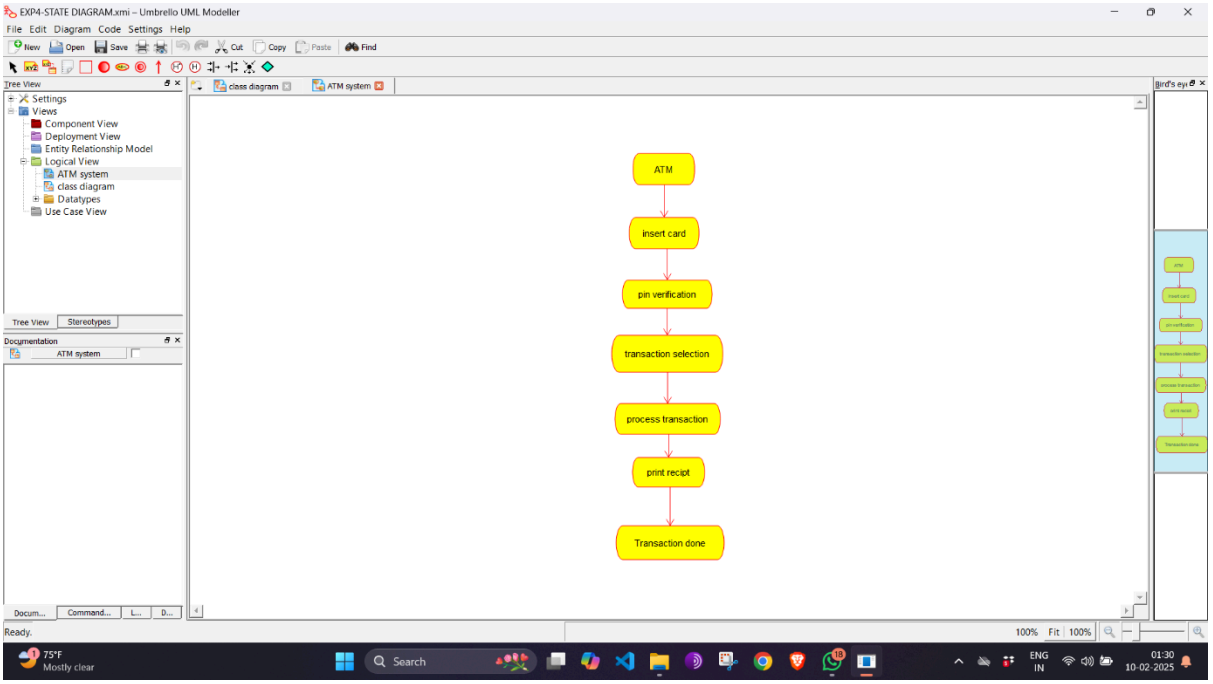
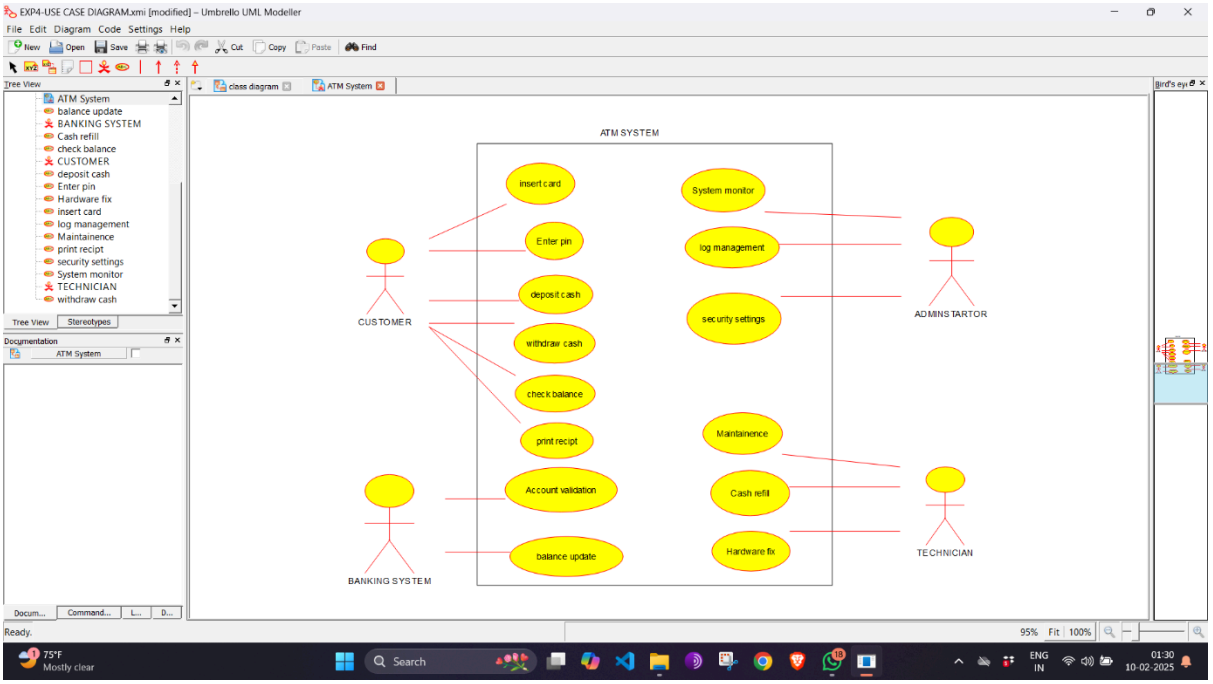
10-02-2025





Result :

The UML diagram for the ATM System was successfully designed using a CASE tool. The diagram effectively represents the interactions between various actors, including Customer, Banking System, Administrator, and Technician, and their respective use cases.