Exp: 1 UML diagrams for ATM machine

INTRODUCTION:

The visual effect of the UML diagram is the most important part of the entire process. Each UML diagram is designed to let developers and customers view a software system from a different perspective and in varying degrees of abstraction. UML diagrams are the ultimate output of the entire system.

A diagram is the graphical presentation of a set of elements, most often rendered as a connected graph of vertices (things) arcs (relationships).

UML includes the following nine diagrams:
1) Class diagram
2) Object diagram
3) Use case diagram
4) Sequence diagram
5) Collaboration diagram
6) Activity diagram
7) State chart diagram
8) Deployment diagram
9) Component diagram

USE CASE DIAGRAM:

Step1: First an Actor is Created and named as User/Customer.

Step2: Secondly a system is created for ATM.

Step3: A use case Enter PIN, Withdraw money is created and connected with user as association relationship.

Step4: Similarly various use cases like Deposit money, Balance Enquiry, Manage Account etc are created and appropriate relationships are associated with each of them.
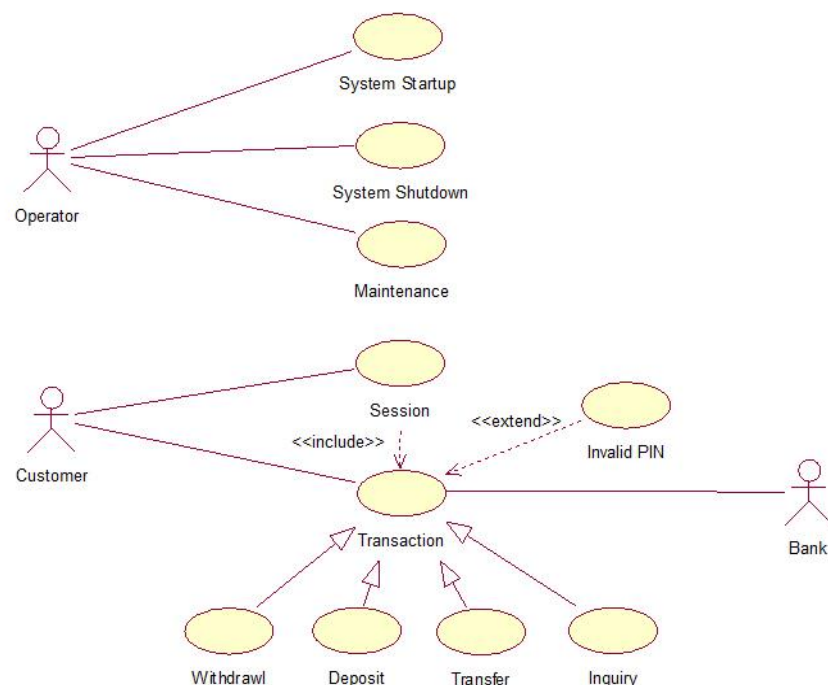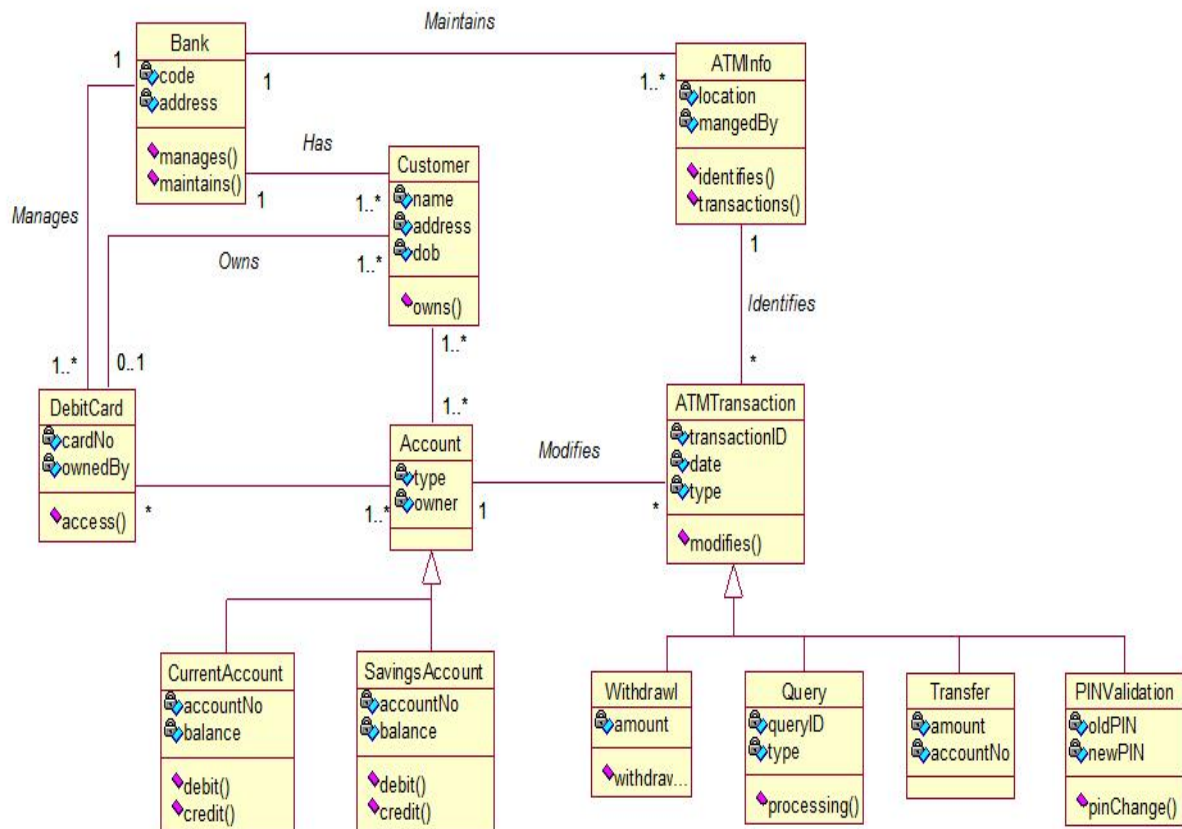
CLASS DIAGRAM:

Procedure:-

   Step1: First Classes are created.

   Step2: Named as Pin Valid, Account Type, Transaction, Update, Server, Customer classes are
   created.

   Step3: Appropriate relationships are provided between them as association.
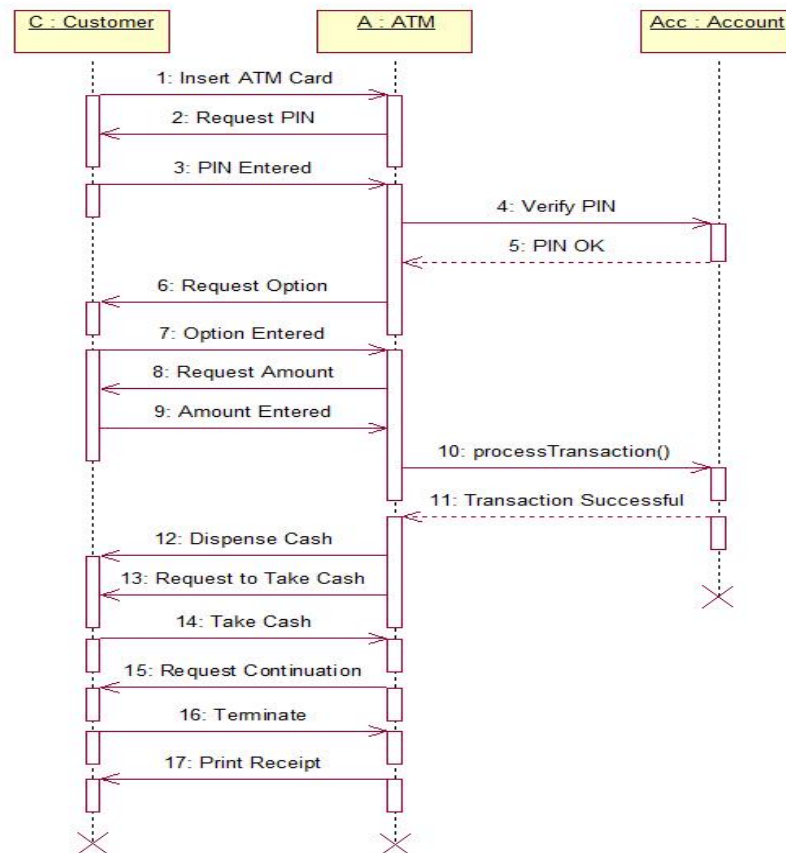

SEQUENCE DIAGRAM:

   Step1:   First An actor is created and named as user.

   Step2: Secondly an object is created for Atm.

   Step3: Timelines and lifelines are created automatically for them.

   Step4: In sequence diagram interaction is done through time ordering of messages. So appropriate
   messages are passed between user and ATM is as shown in the figure.
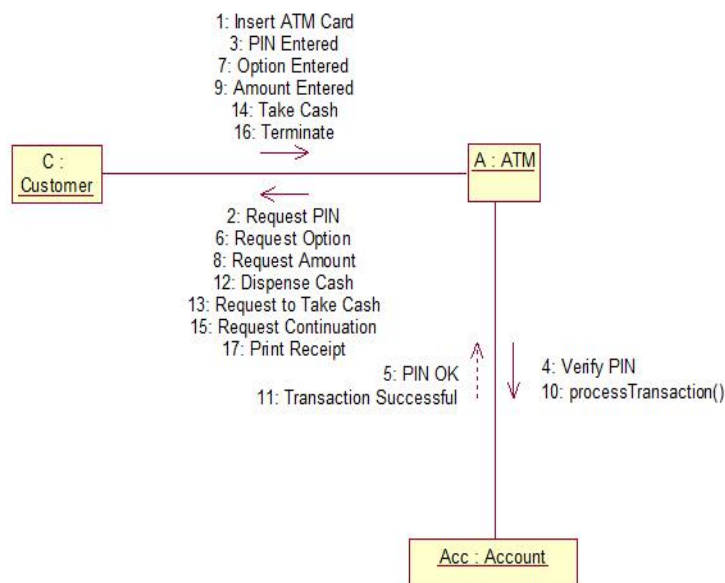
COLLABORATION DIAGRAM:

<u>**Procedure:-**</u>
Step1: First an actor is created and named as user.

Step2: Secondly an object is created for ATM.

Step3: In collaboration diagram interaction is done through organization.

Step4: So appropriate messages are passed between user and ATM as shown in the figure.
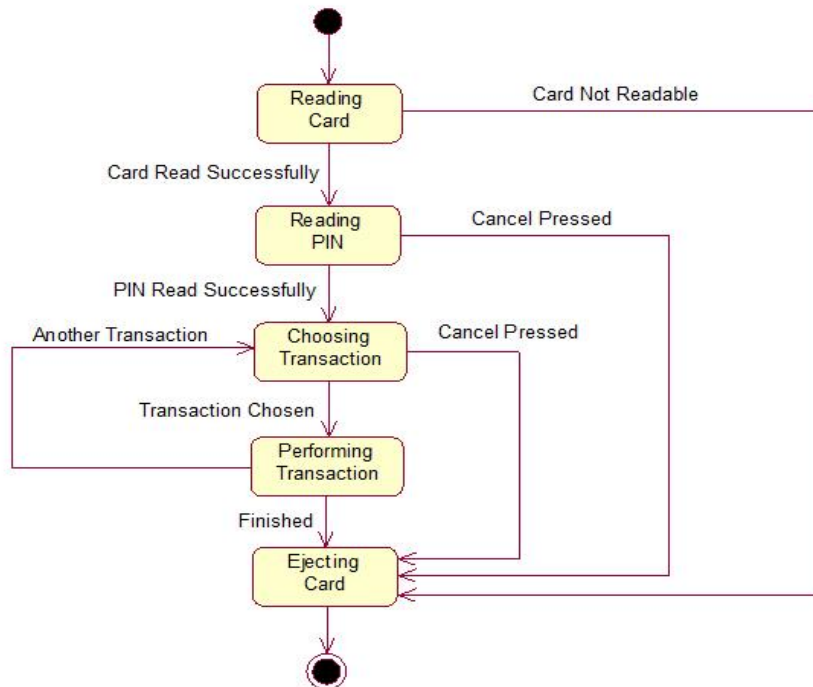
STATE CHART DIAGRAM:

Step1: First after initial state control undergoes transition to ATM screen.

Step2: After inserting card it goes to the state wait for pin.

Step3: After entering pin it goes to the state account verification.

Step4: In this way it undergoes transitions to various states and finally reaches the ATM screen state as shown in the fig.
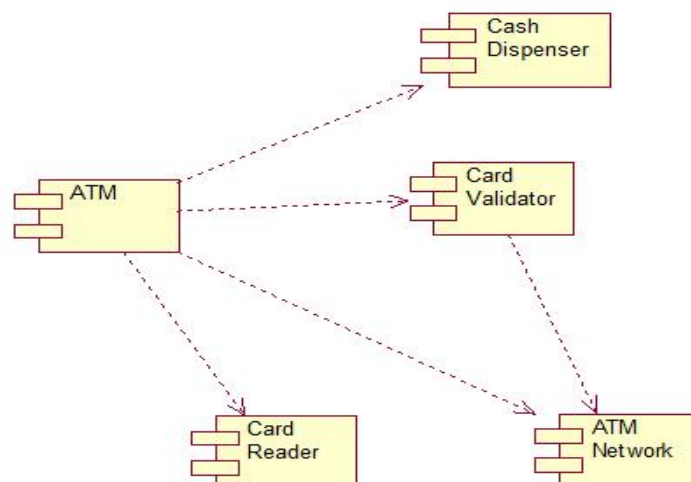

COMPONENT DIAGRAM:

Step1: First an actor is created and named as user.

Step2: Secondly an object is created for ATM.

Step3: In collaboration diagram interaction is done through organization.

Step4: So appropriate messages are passed between user and ATM as shown in the figure

ACTIVITY DIAGRAM:

Step1: First initial state is created.

Step2: After that it goes to the action state insert card.

Step3: Next it undergoes transition to the state enter pin

Step4: In this way it undergoes transitions to the various states.

Step5: Use forking and joining wherever necessary.