

PART - A

1. Introduction to Unified Modeling Language

UML is a language used for visualizing, specifying, constructing and Documenting the artifacts of a software intensive system.

Building Blocks of UML :

- ❖ Things
- ❖ Relationships
- ❖ Diagrams

Things in UML :

- ❖ Structural things
 - i. Classes
 - ii. Interfaces
 - iii. Collaborations
 - iv. Use Cases
 - v. Active Classes
 - vi. Components
 - vii. Nodes Classes
- ❖ Behavioral things
 - i. Interactions
 - ii. State machines
- ❖ Grouping things
 - i. Packages
- ❖ Annotational things
 - i. Notes

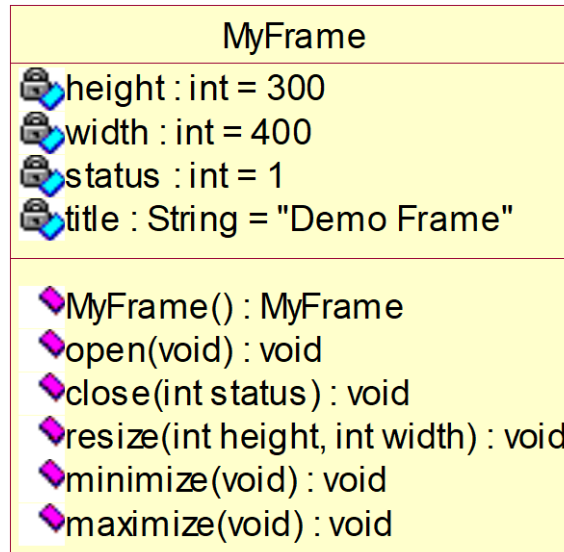
Relationships in UML :

- ❖ Dependency
- ❖ Association
- ❖ Generalization

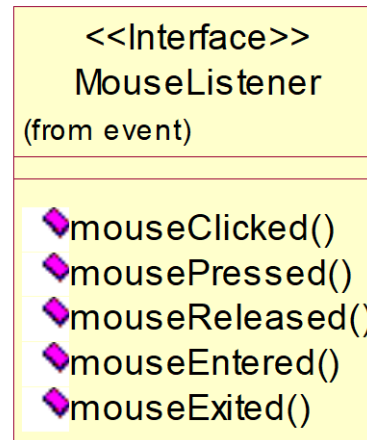
Diagrams in UML :

- ❖ Class Diagram
- ❖ Object Diagram
- ❖ Use case Diagram
- ❖ Sequence Diagram
- ❖ Collaboration Diagram
- ❖ State chart Diagram
- ❖ Activity Diagram
- ❖ Component Diagram
- ❖ Deployment Diagram

Class :



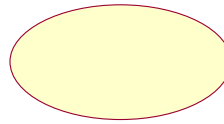
Interface :



Collaboration :

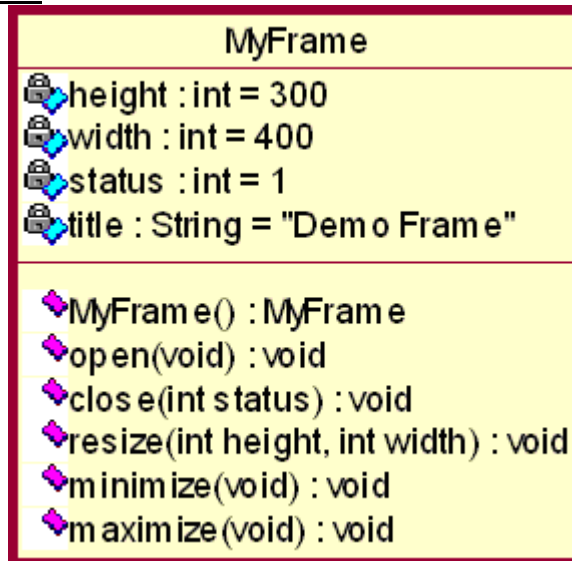


Use Case :

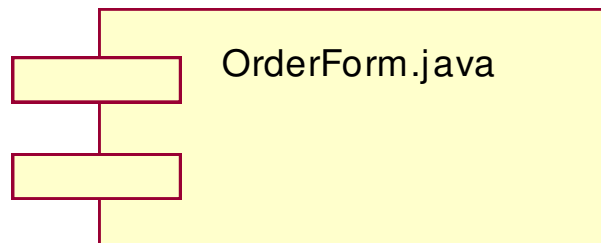


Place Order

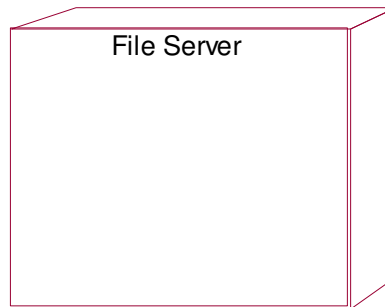
Active Classes :



Active Classes :



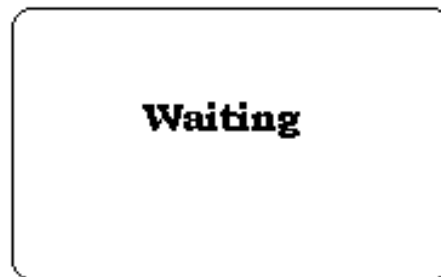
Node :



Interaction :

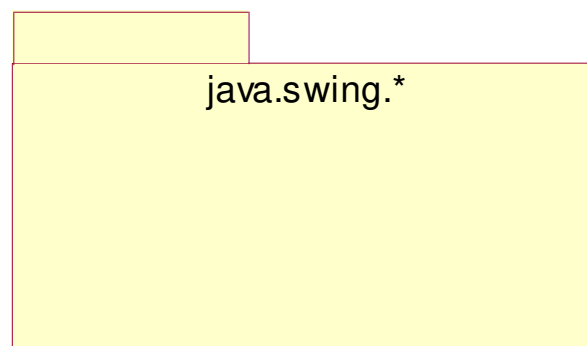


State Machine :



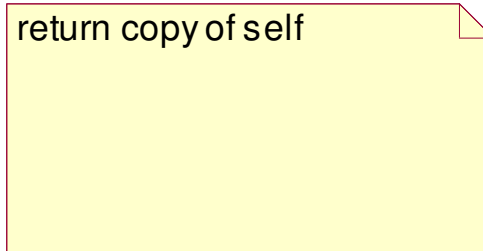
Packages :

Grouping things are the organizational parts of UML models. These are the boxes into which a model can be decomposed. In all, there is one primary kind of grouping thing, namely, Packages.



Notes :

Annotational things are the **explanatory parts** of UML Models. These are the comments you may apply to describe and illuminate about any element in a model.



Dependency :



Association :



Generalization :



Realization :

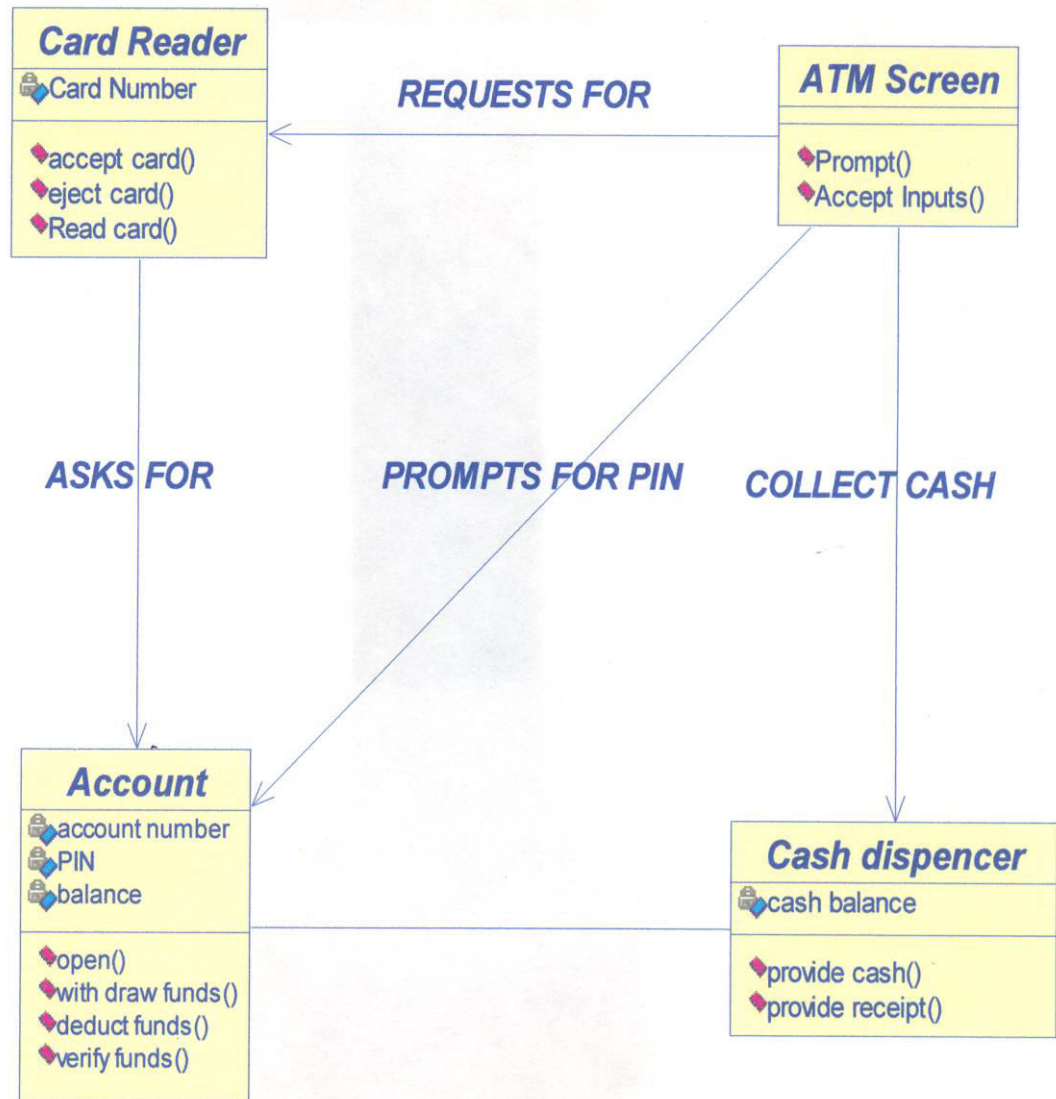


→ ATM MODEL :

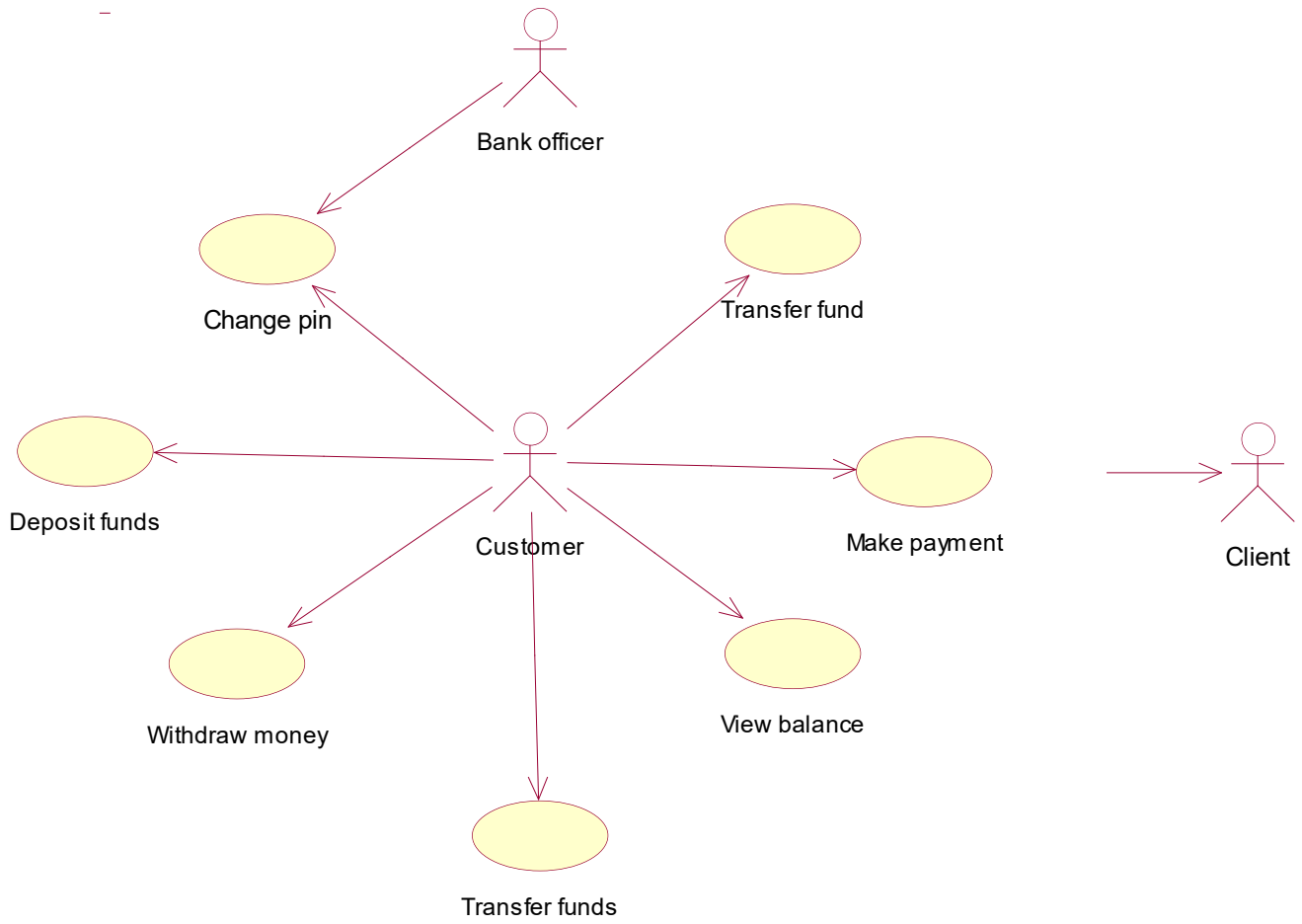
Draw the following diagrams using UML for an ATM system

- 1. Class Diagram**
- 2. Use –Case Diagram**
- 3. Activity Diagram**
- 4. Sequence Diagram**
- 5. Collaboration Diagram**
- 6. Deployment Diagram**
- 7. Component Diagram**
- 8. State Transition Diagram**

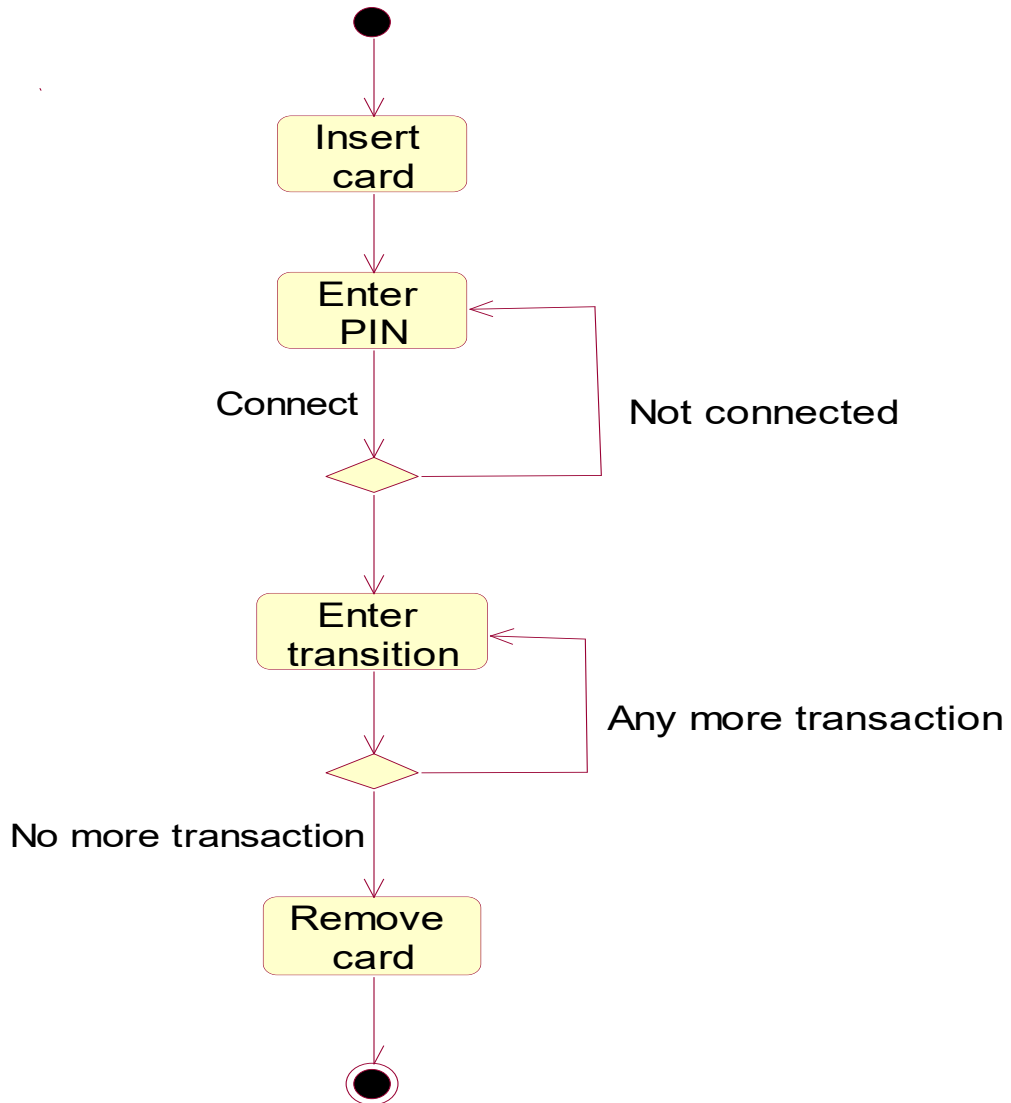
2.2.1. ATM Scenario Class Diagram



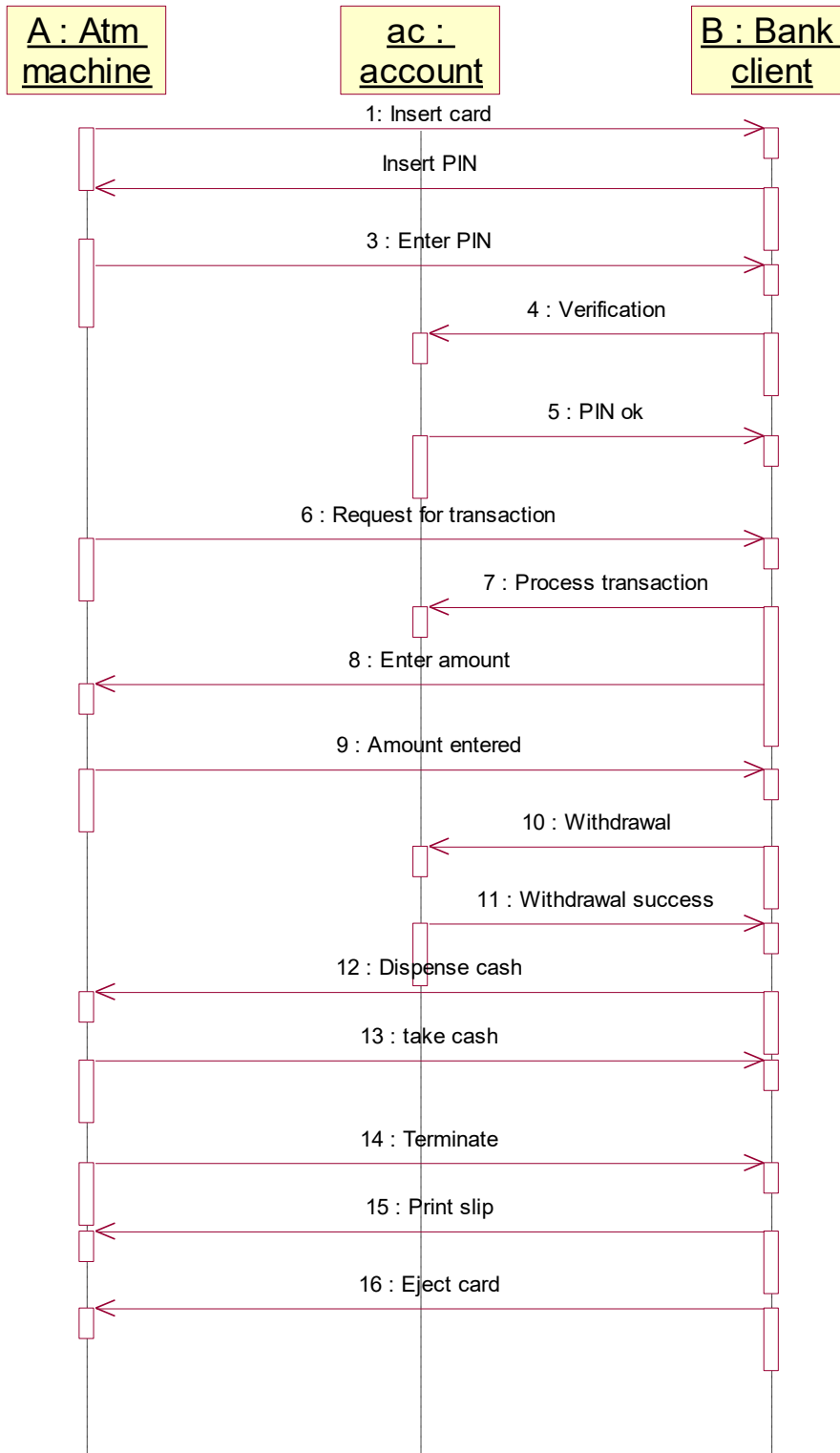
2.2.2. ATM Scenario Use –Case Diagram



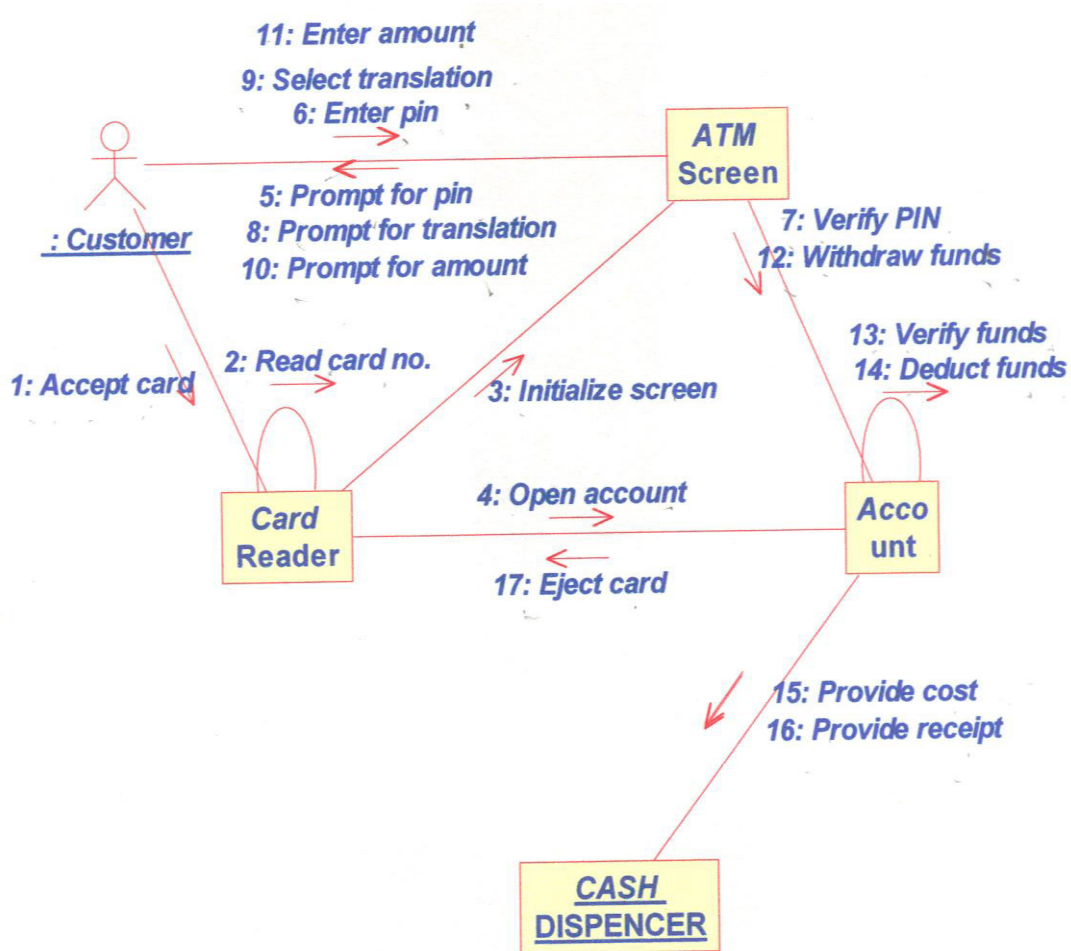
2.2.3. ATM Scenario Activity Diagram



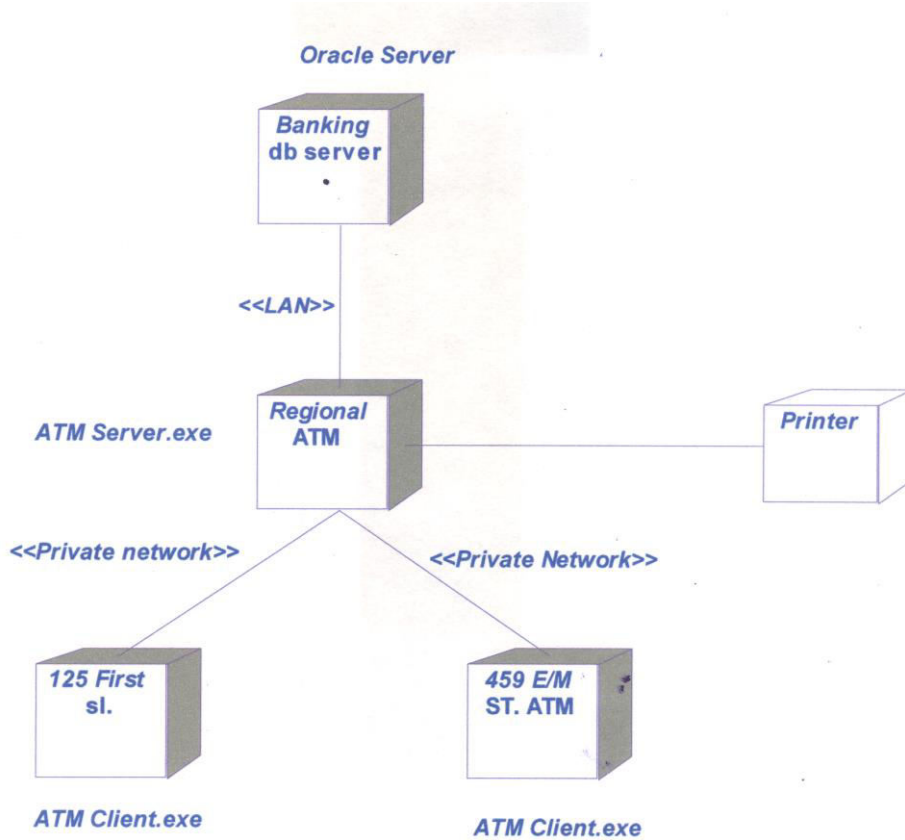
2.2.4. ATM Scenario Sequence Diagram



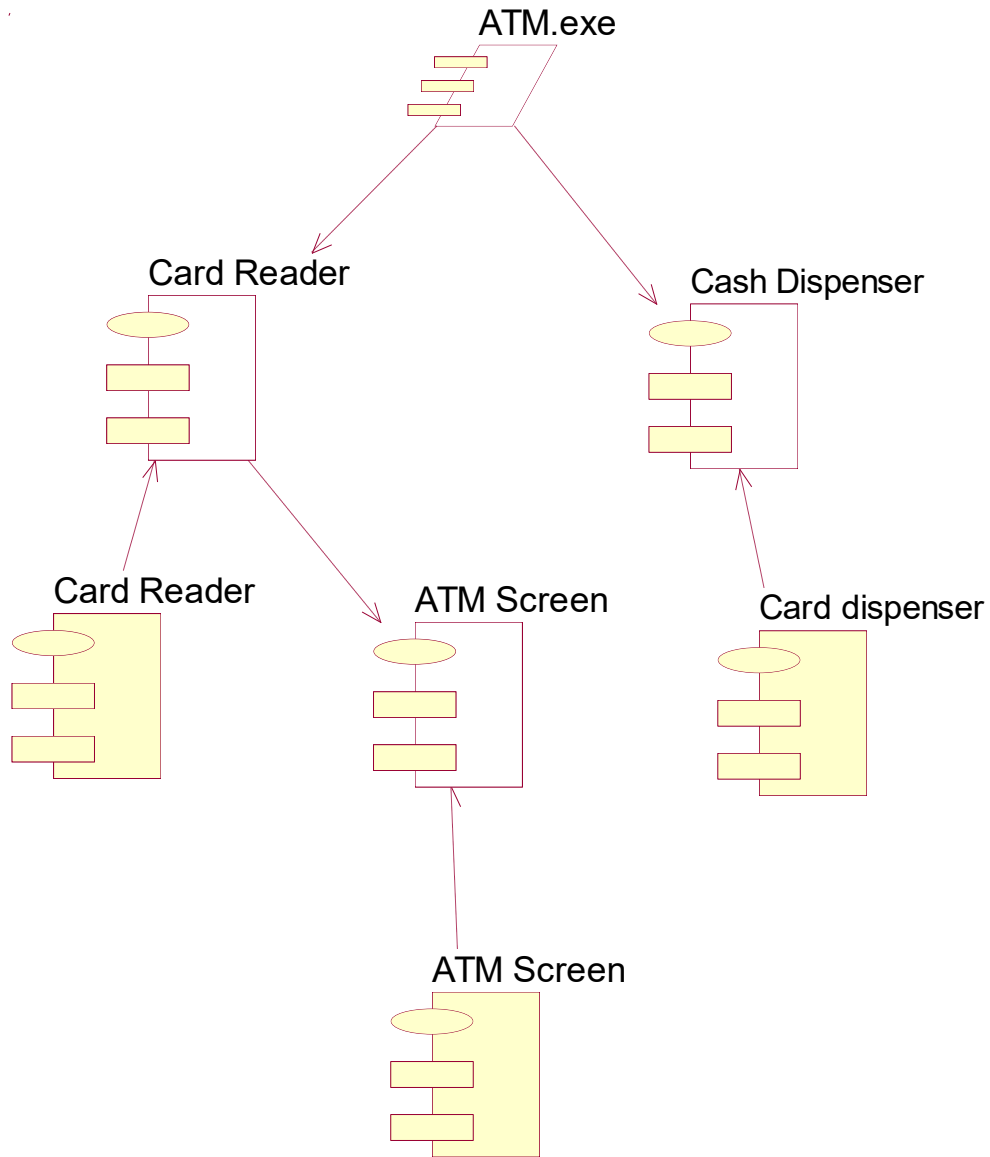
2.2.5. ATM Scenario Collaboration Diagram



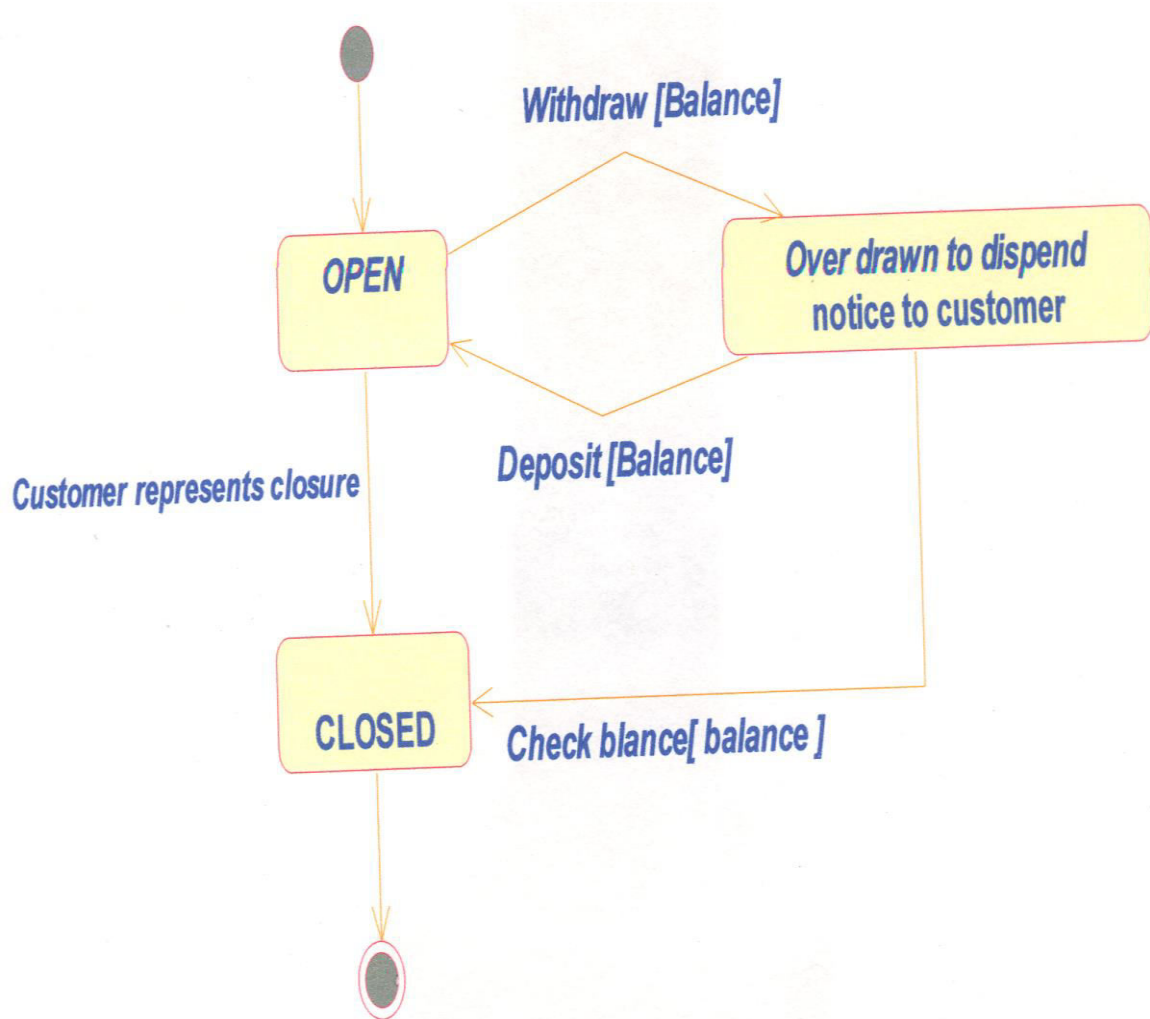
2.2.6. ATM Scenario Deployment Diagram



2.2.7. ATM Scenario Component Diagram

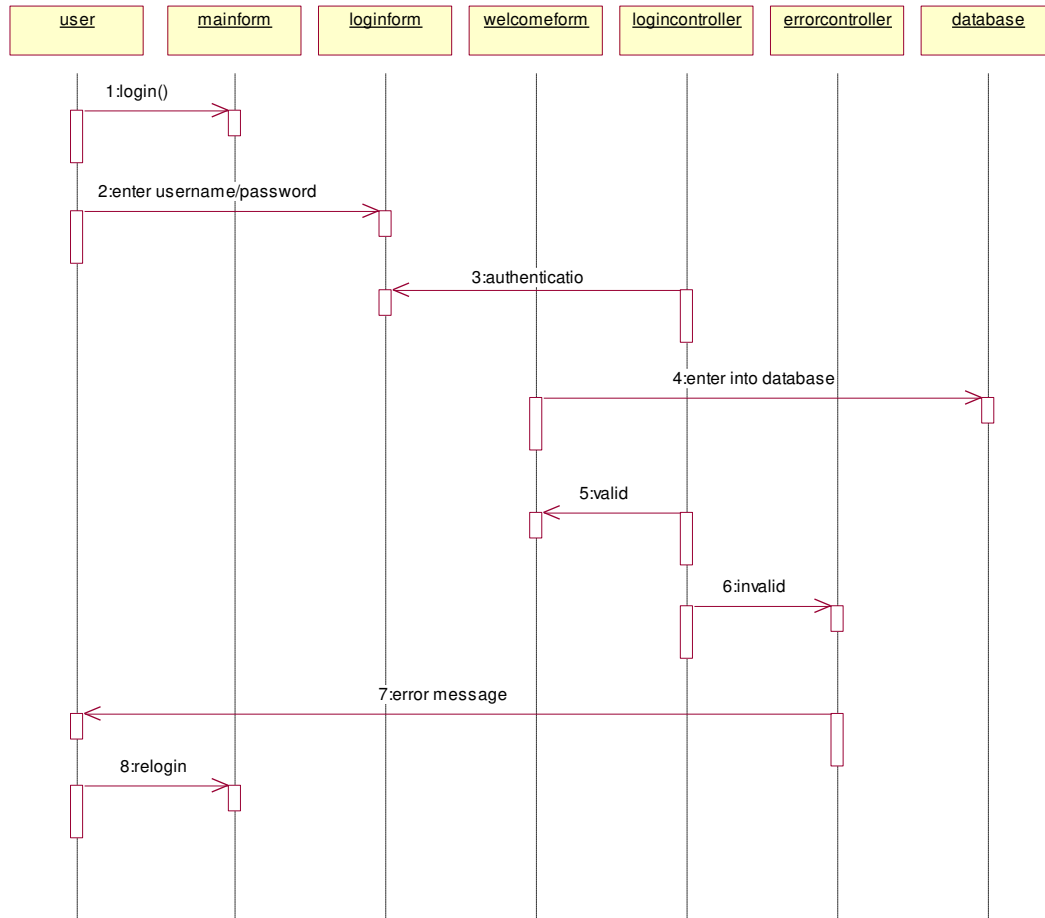


2.2.8. ATM Scenario State Transition Diagram

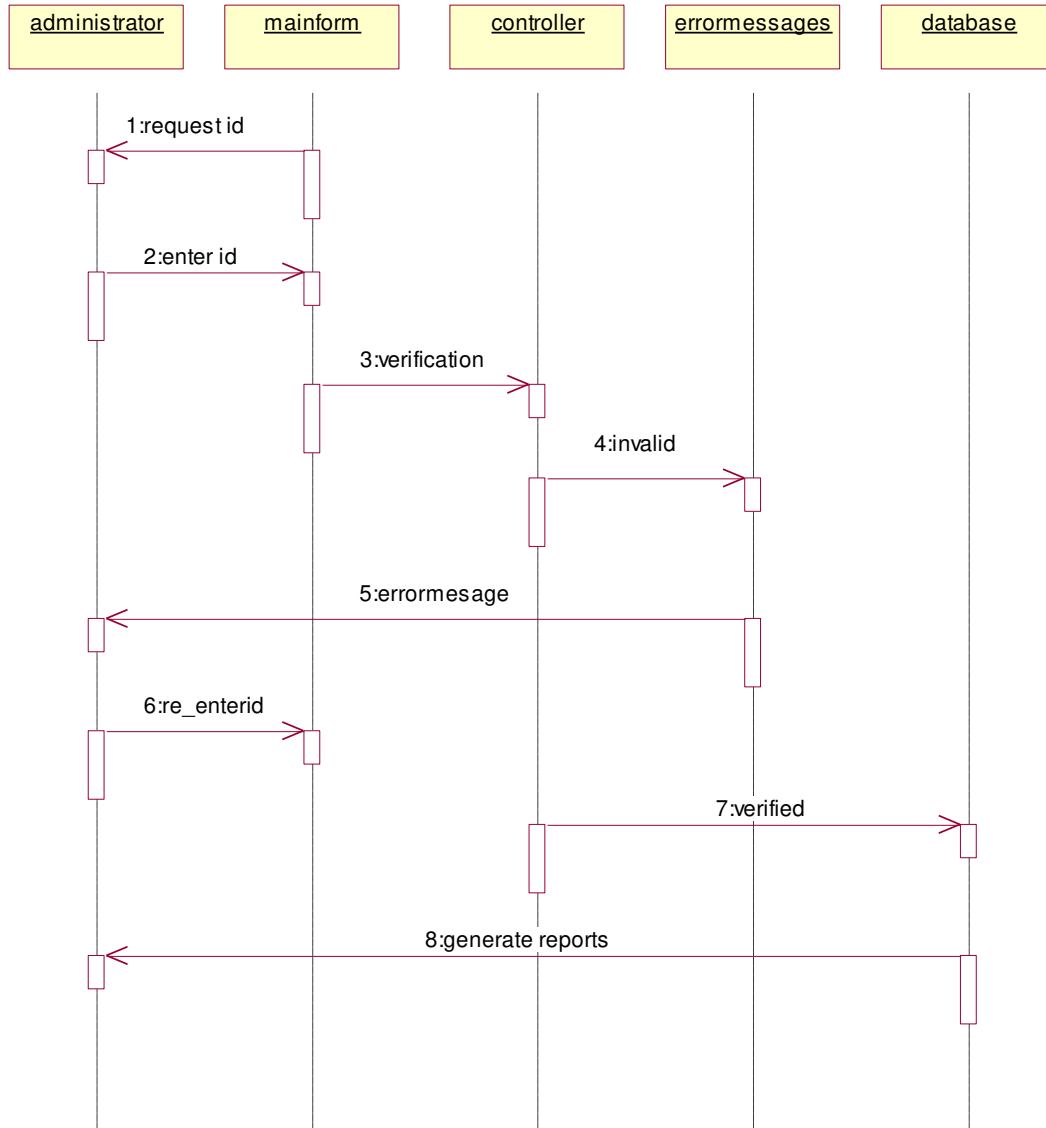


2.3. Online Bookshop :

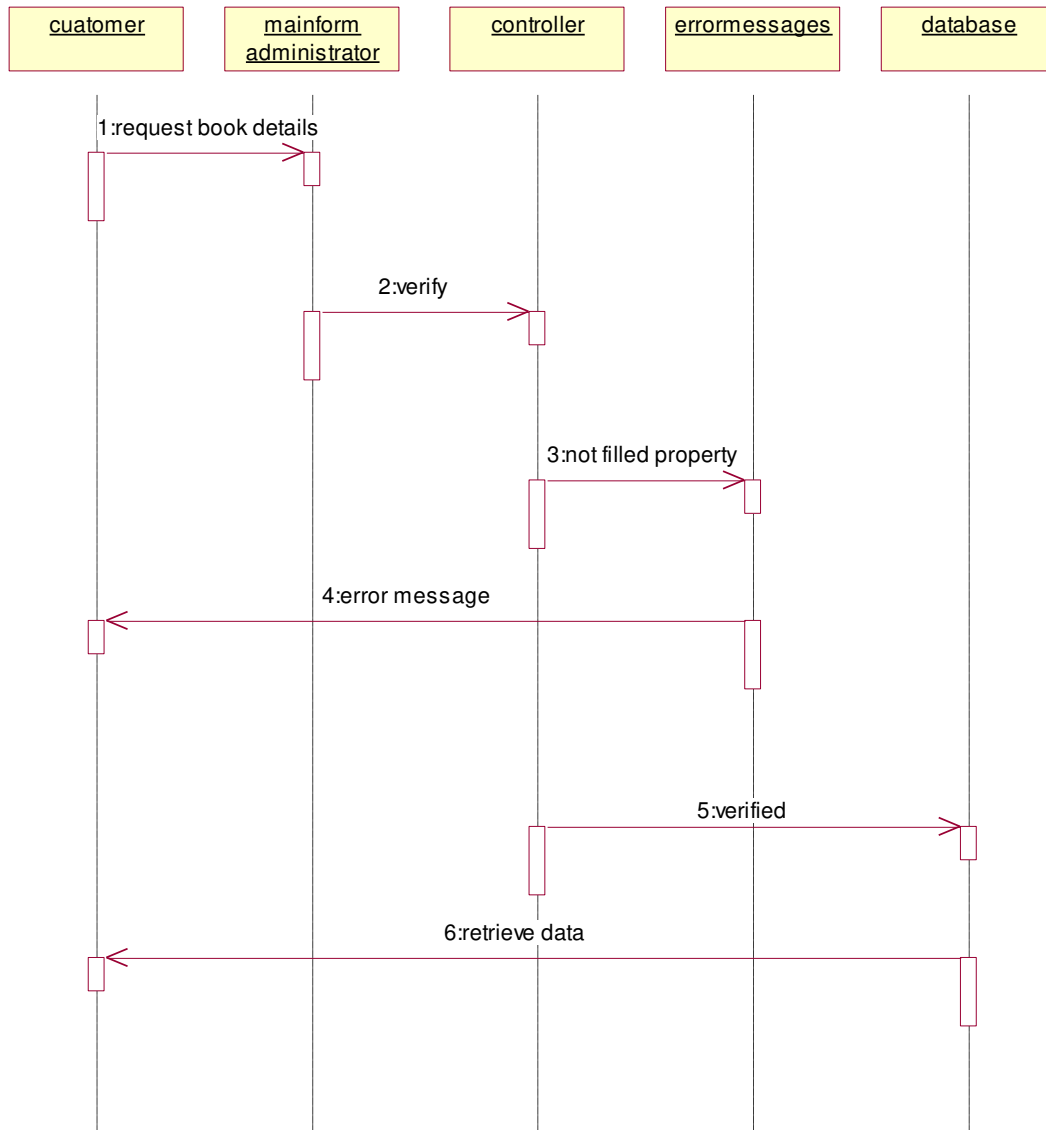
Login sequence diagram:-



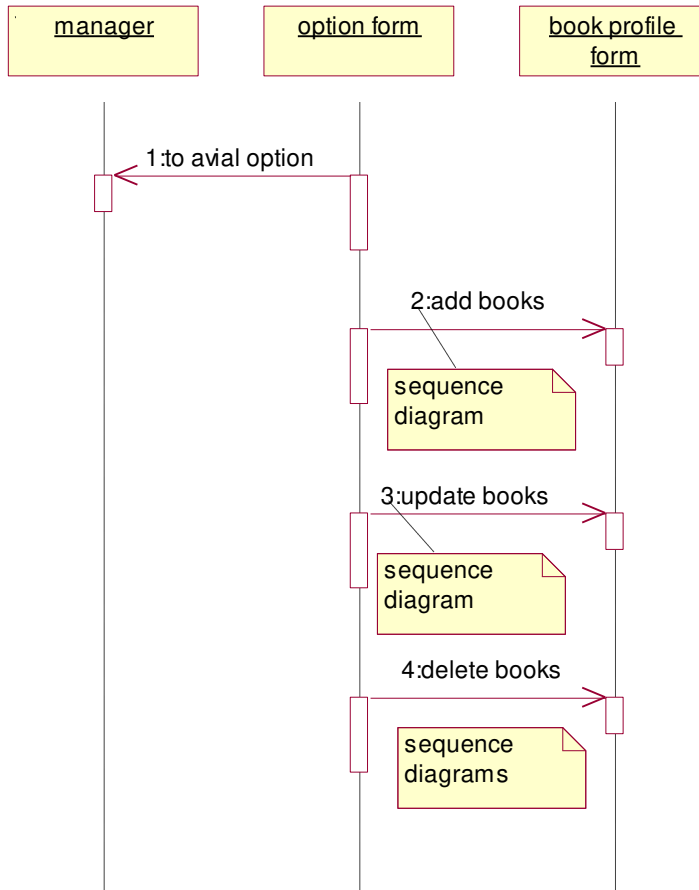
View reports sequence diagram:-



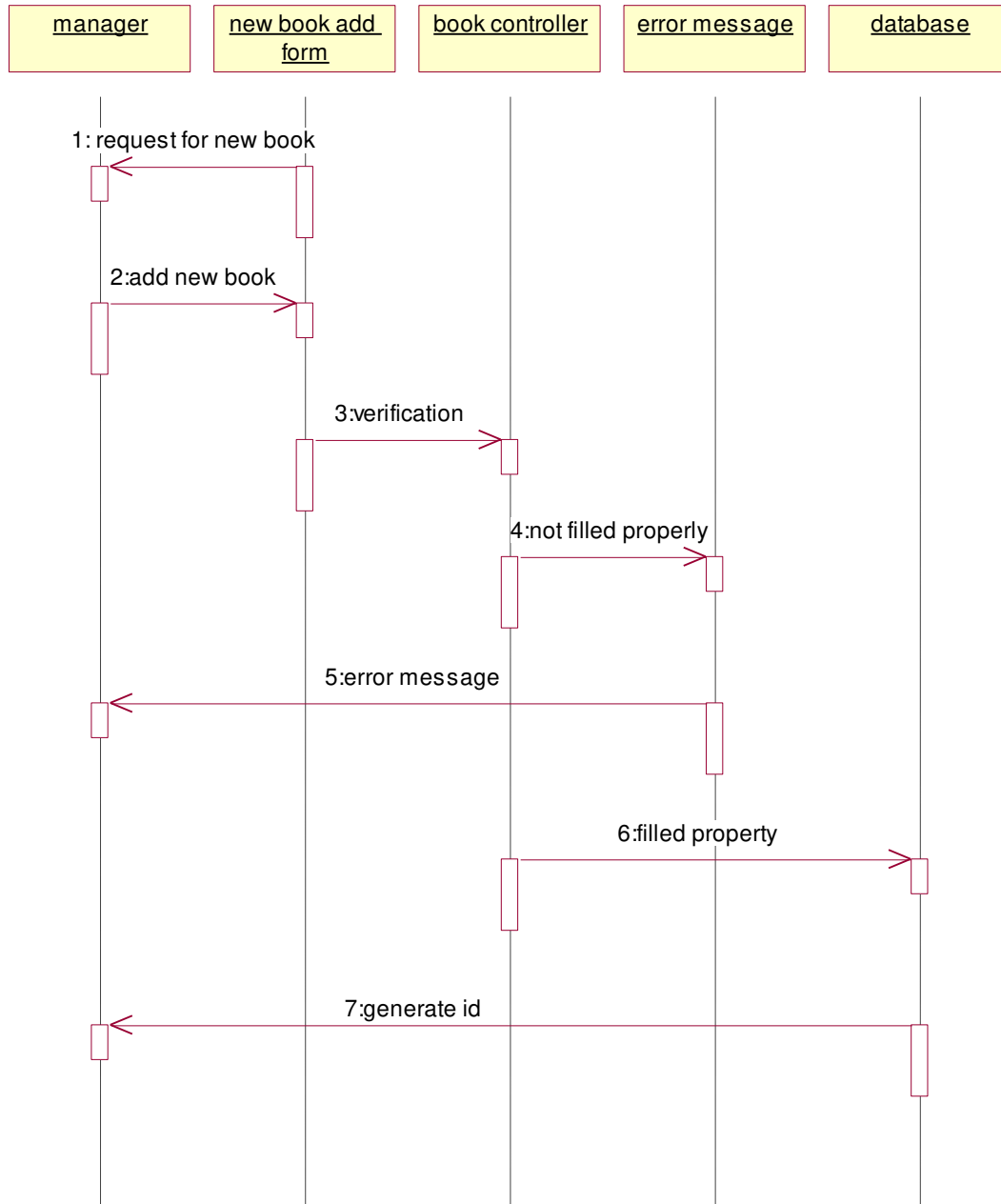
View stock sequence diagram:-



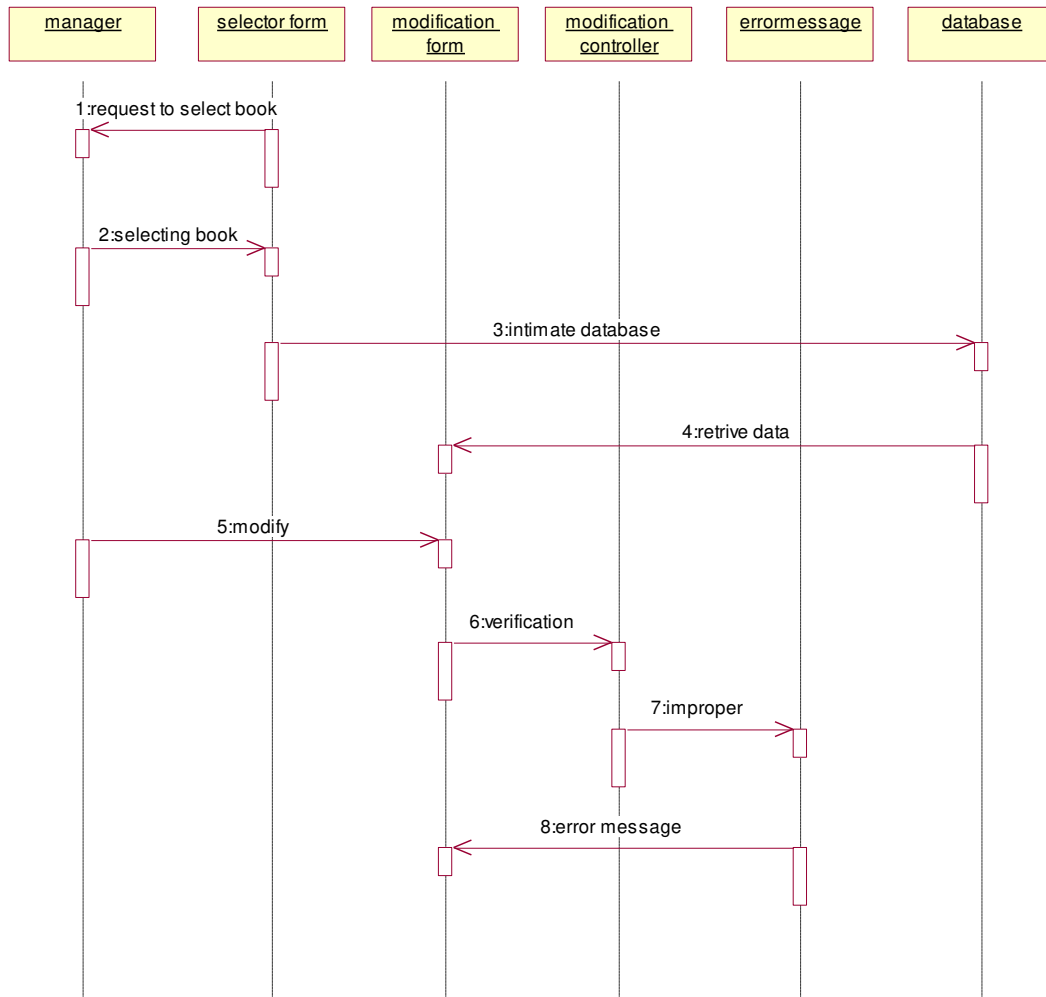
Maintain book stock sequence diagram :-



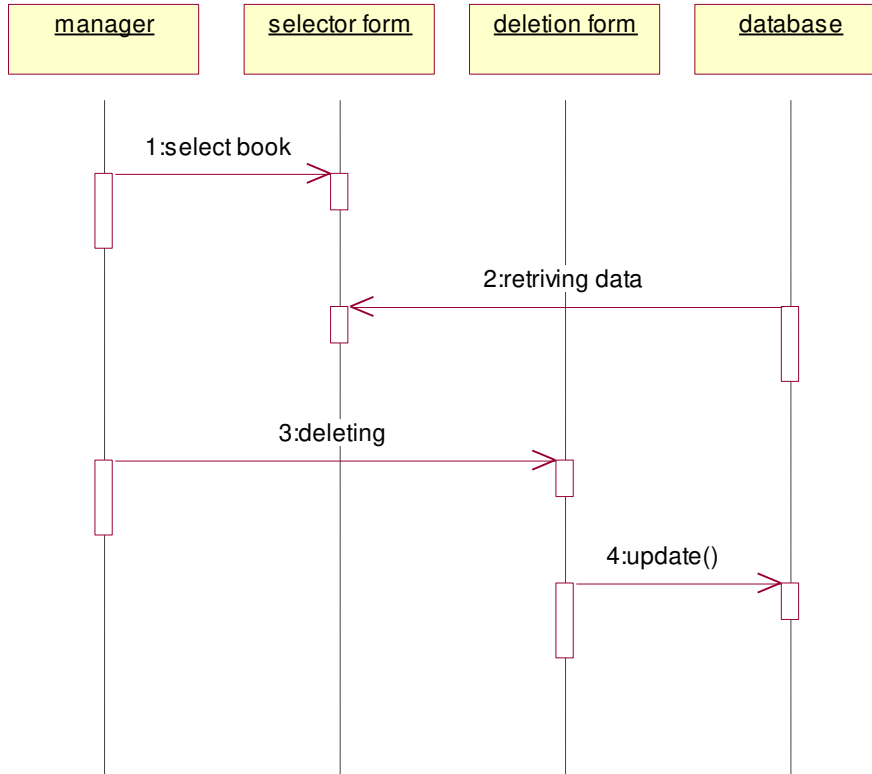
Add books sequence diagram :-



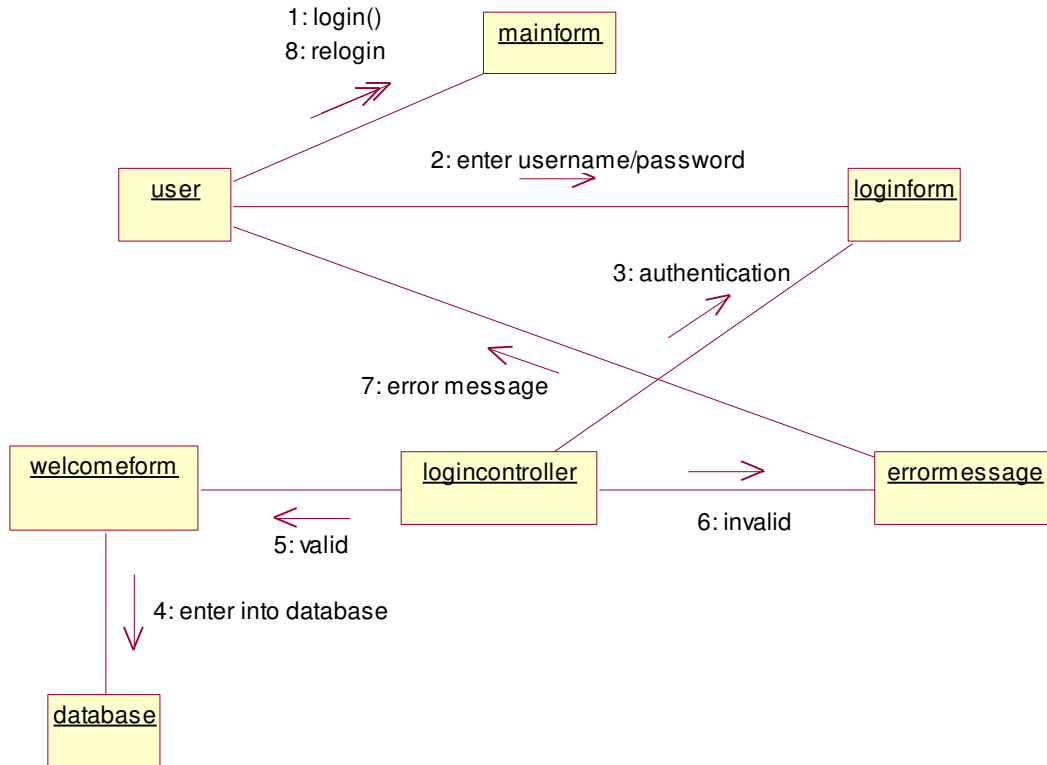
Modify books sequence diagram :-



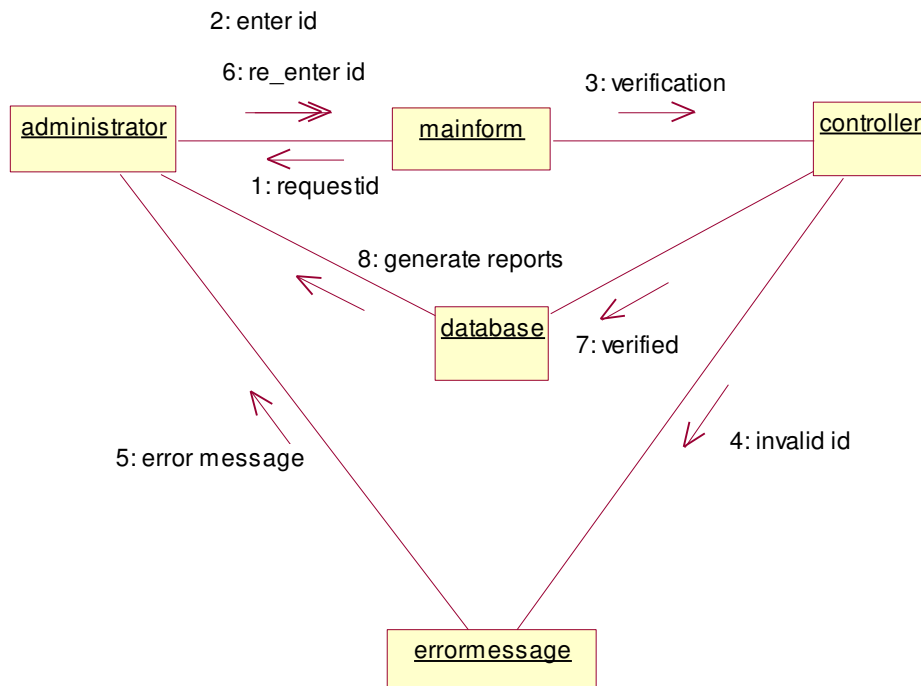
Delete books sequence diagram :-



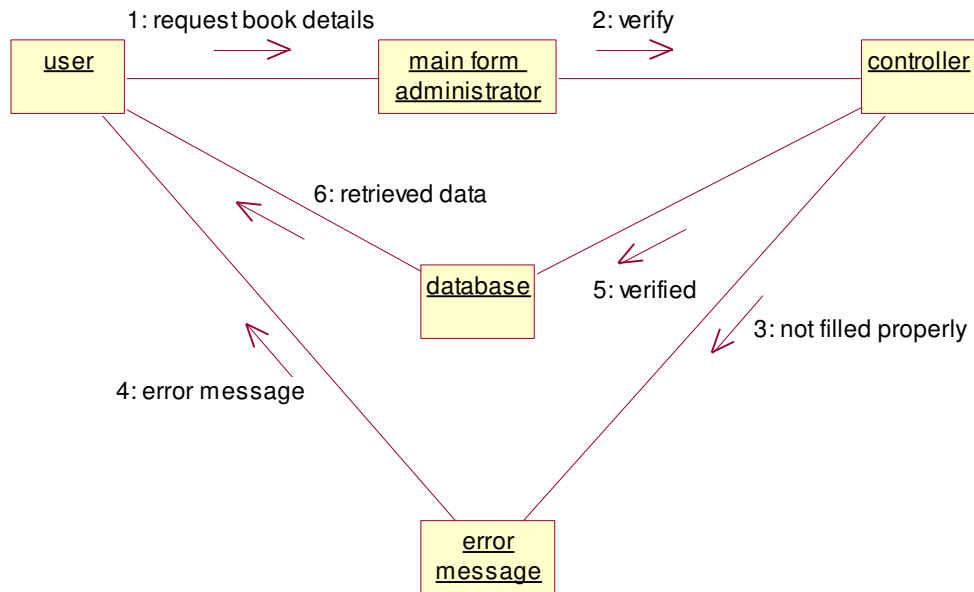
Login collaboration diagram:-



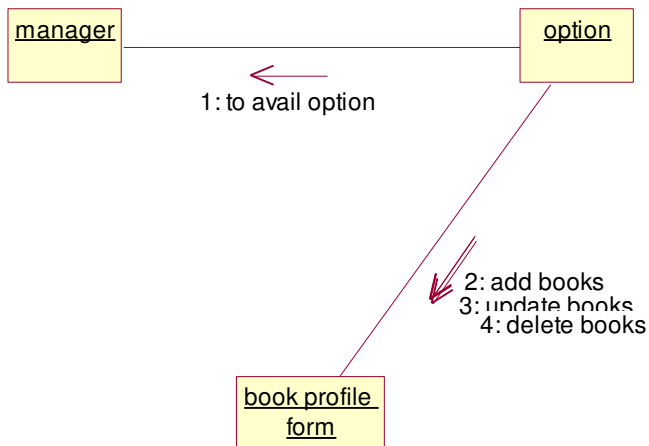
View reports collaboration diagram:-



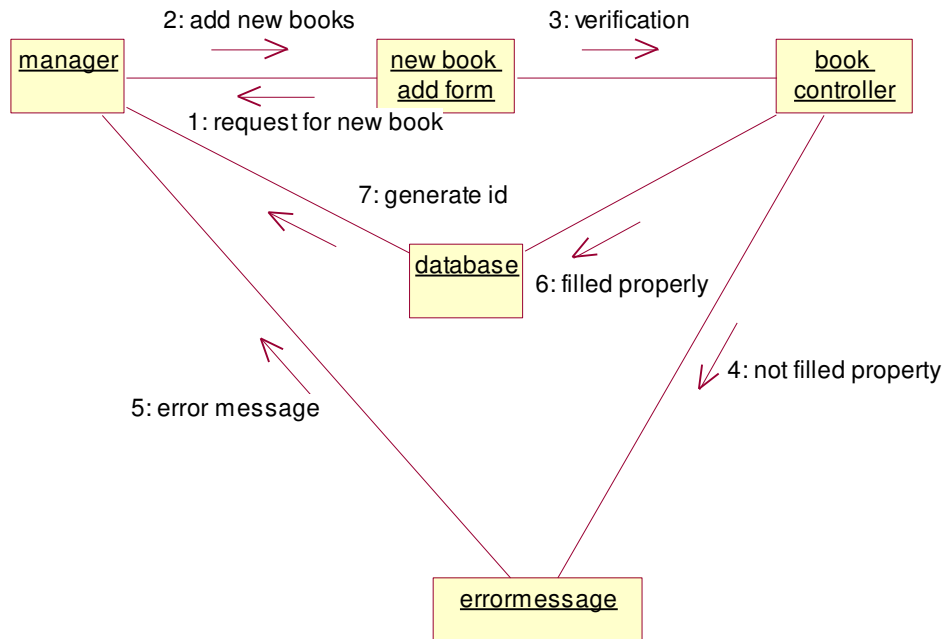
View stock collaboration diagram:-



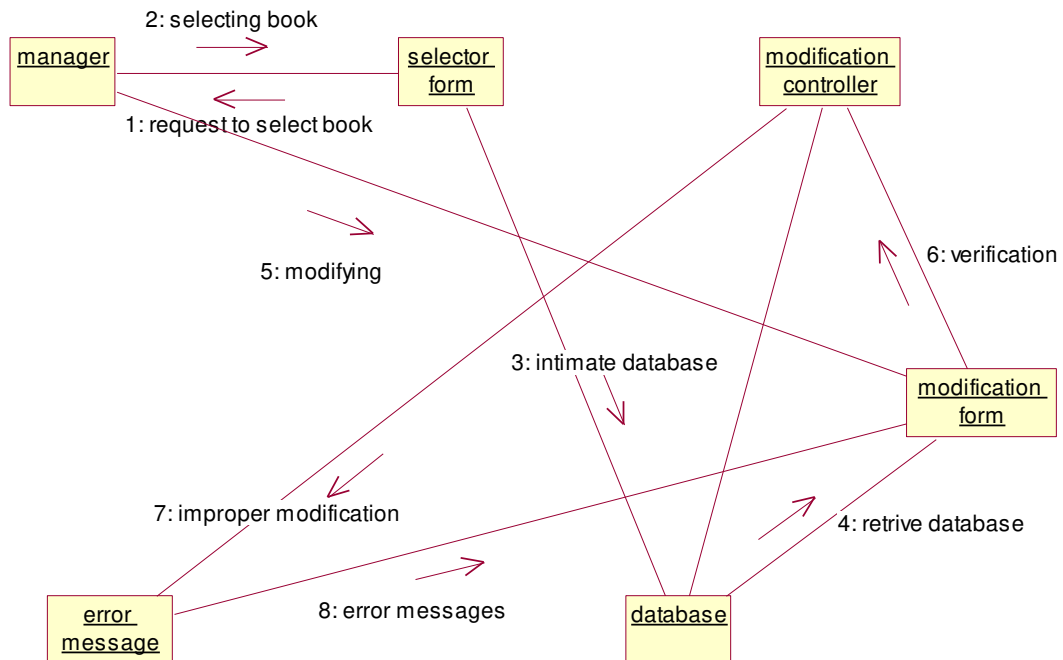
Maintain book stock :-



Add books collaboration diagram:-



Modify collaboration diagram:-



Delete collaboration diagram:-

