

Week - 10

Develop a Sample diagram for state chart diagrams.

Aim:- To develop a sample diagrams for State chart diagram.

Description:

The state chart diagram is also called the state chart or state transition diagram, which shows the order of states underwent by an object within the system. It captures the software system behavior of a class, a sub-system, a package & a complete system.

Types of state-machine diagram:

1. Behavioral State machine
2. protocol State Machine,

Notations of State Machine Diagram:

- Initial state

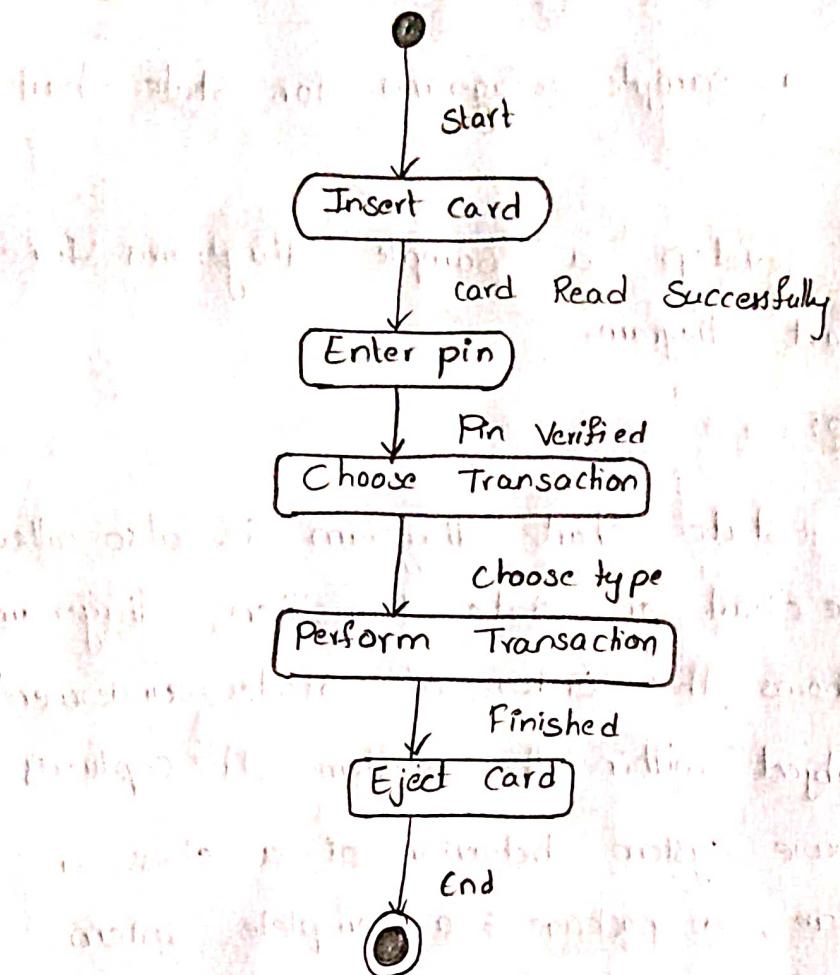


◆ Decision Box

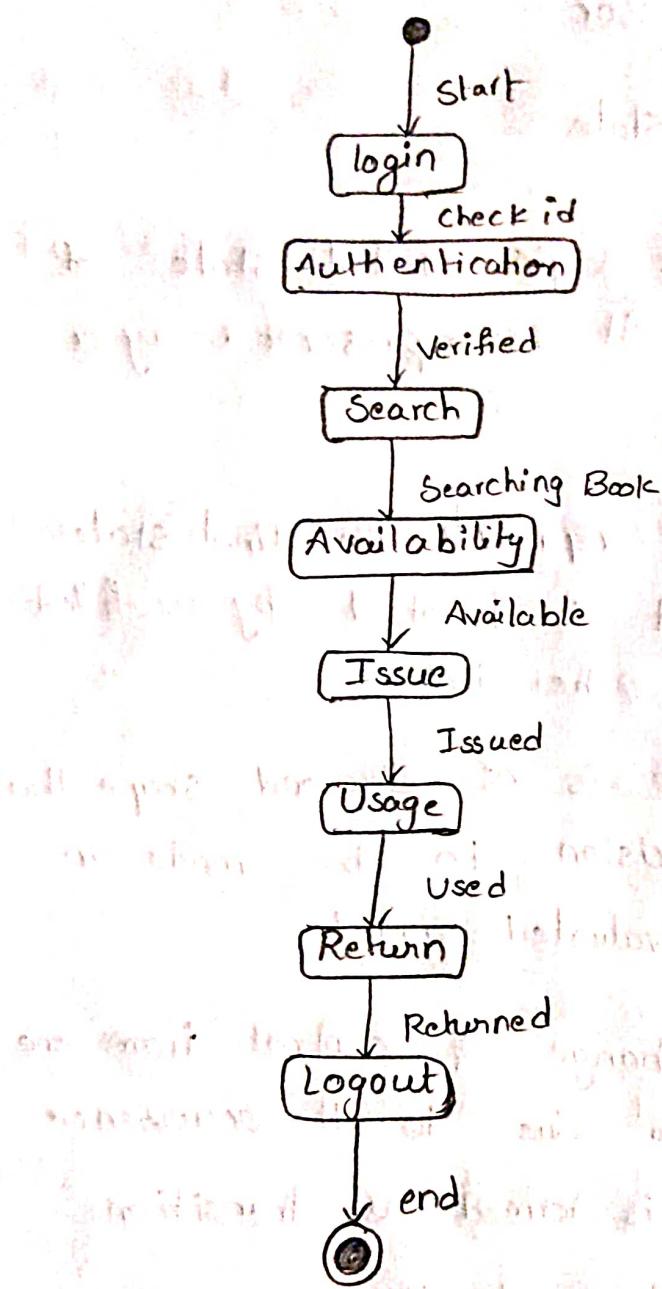
○ Final State.

- a) Initial State:- It defines initial state of a system, and it is represented by a black filled circle.
- b) Final State:- It represents the final state of a system. It is denoted by a filled circle present in the circle.
- c) Decision Box:- It is of diamond -shape that represents the decision to be made on the basis of evaluated guard.
- d) Transition:- A change of control from one State to another due to the occurrence of some event is termed as transition.
- e) State -Box:- It depicts the conditions or circumstances of a particular object of a class at a specific point of time.

State chart Diagram for ATM :-



State chart diagram for LMS



Week - 11

Develop a detailed design using activity diagrams.

Aim: To develop a detailed design using activity diagrams.

Description

In UML, the activity Diagram is used to demonstrate the flow of control within the System rather than implementation. It models the concurrent and sequential activities.

The activity diagram helps in envisioning the workflow from one activity to another. It puts emphasis on the condition of flow and the order in which it occurs flow can be sequential branched or concurrent and to deal with such kinds of flows, the activity diagram has come up with a task, join and etc.

Components

* Activities

* Activity partition swimlane :

* Forks

* Join Nodes

* pins

a) ATM Application

It is an illustration of the ATM Management Software's behavior towards its users. This depicts the flow of the proposed capstone project from the starting point up to completing the processes. The activity diagram uses symbols to further explain the work flow of the ATM system.

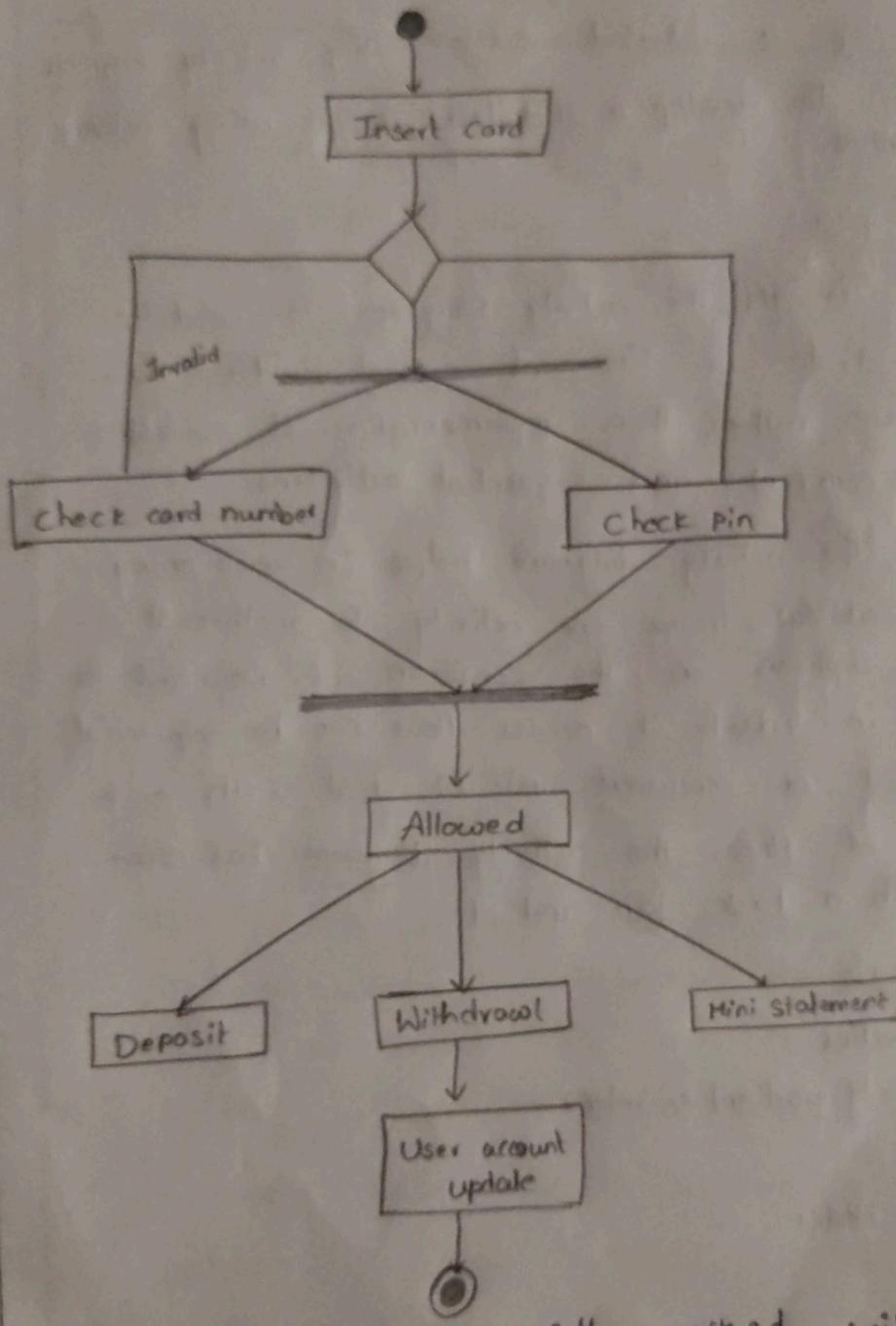
The users of this ATM management system would be the ATM card holders, or customers, and the bank admin, and they are essential in creating its activity diagram.

b) Library Management System

The activity diagram used to describe flow of activity through a series of actions. Activity diagram is a important diagram to describe the system. The activity described as a action or operation of the system.

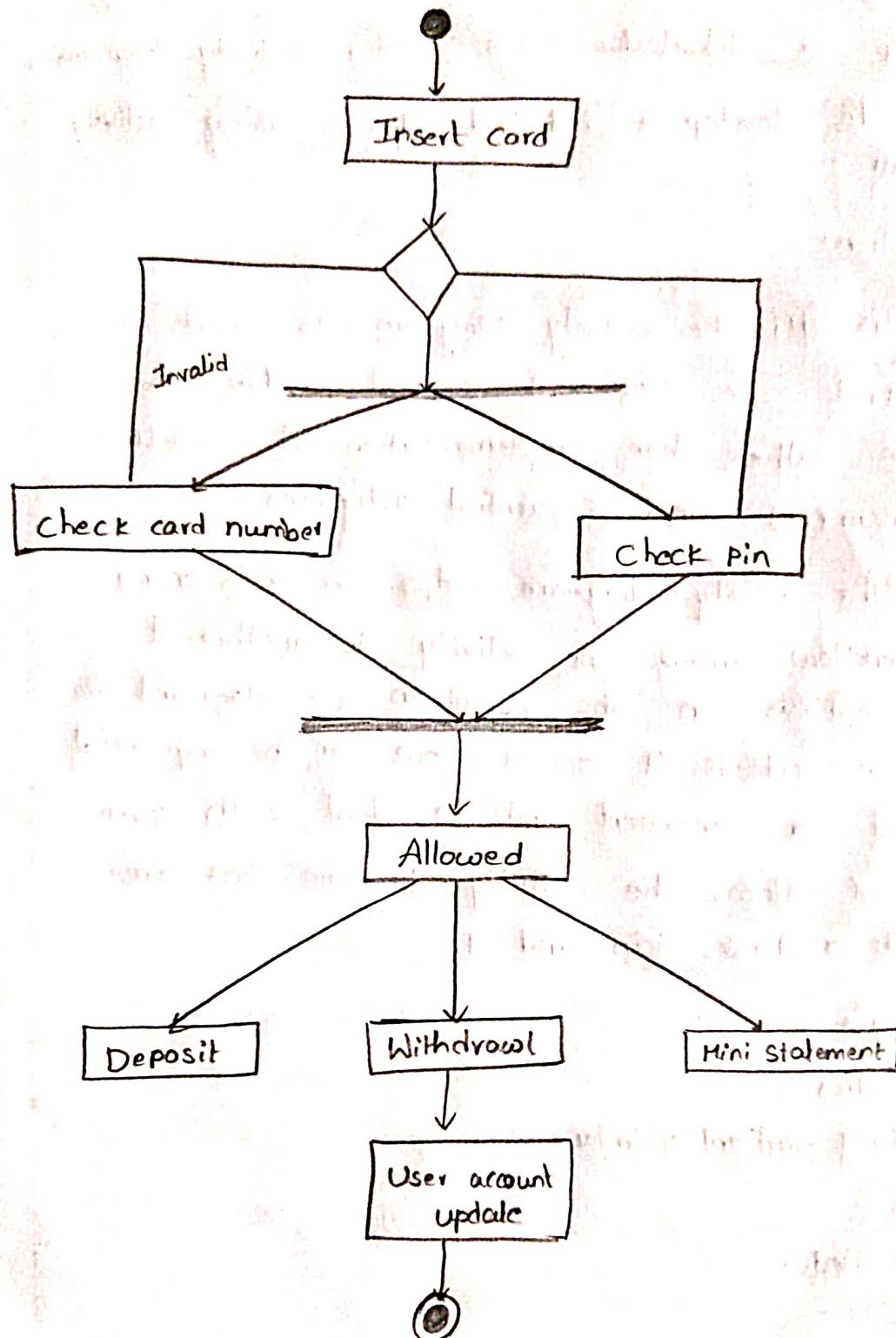
The Library System Activit Diagram is import because it allows interaction between developers and clients.

Activity Diagram for ATM



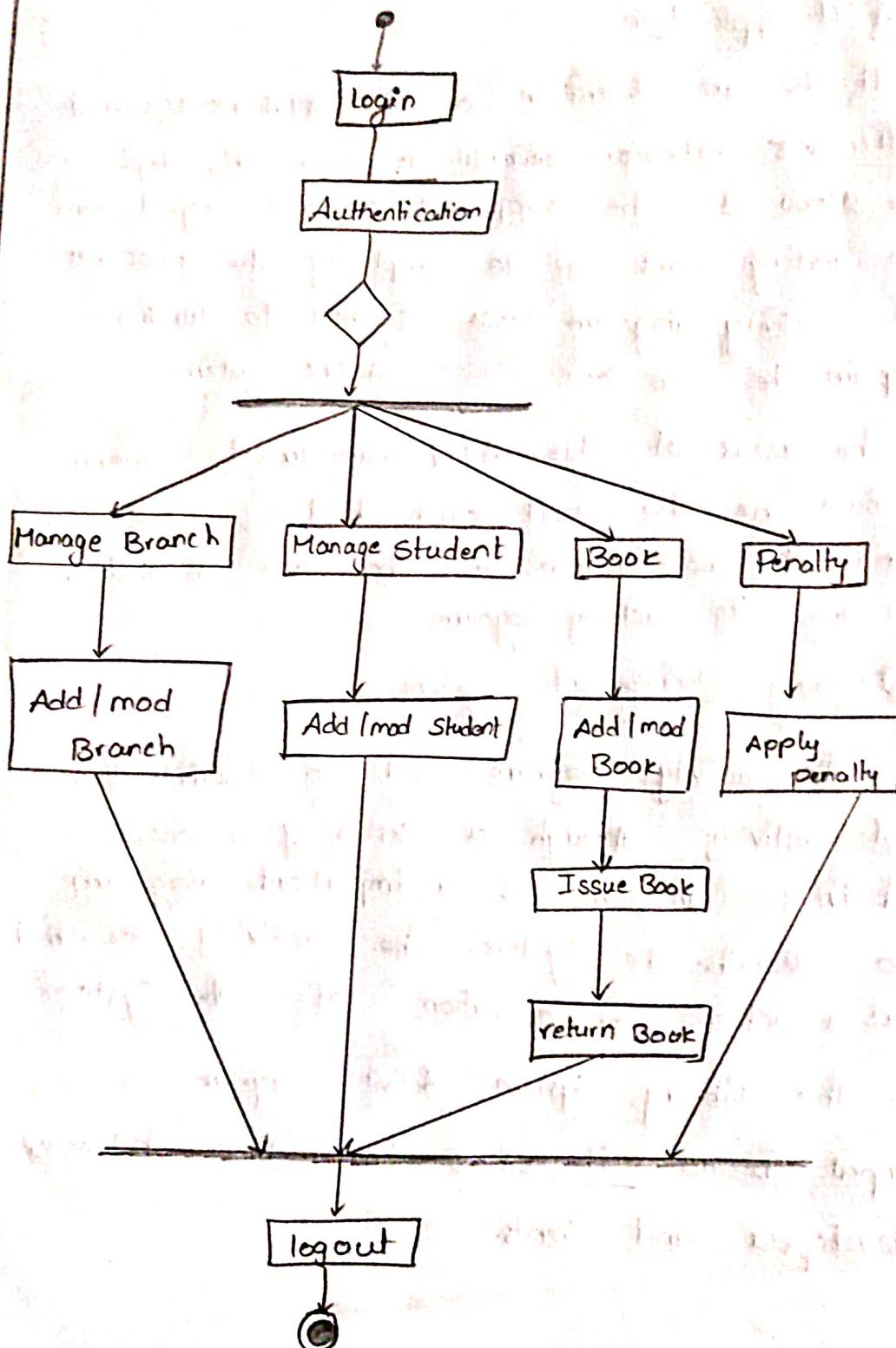
Result :- We have successfully worked with the Unified ATM activity diagram for ATM application.

Activity Diagram for ATM



Result :- We have successfully worked with the Unified ATM, activity diagram for ATM application.

Activity Diagram for LMS



Result :- We have successfully worked with Activity diagram for LMS

Week:-12

Develop Sample diagrams for other UML diagrams
Component diagrams and deployment diagram

- a) ATM Application
- b) Debitry Management System

Aim:- To develop Sample diagram for other UML
diagram - component diagrams and deployment
diagram.

Description:-

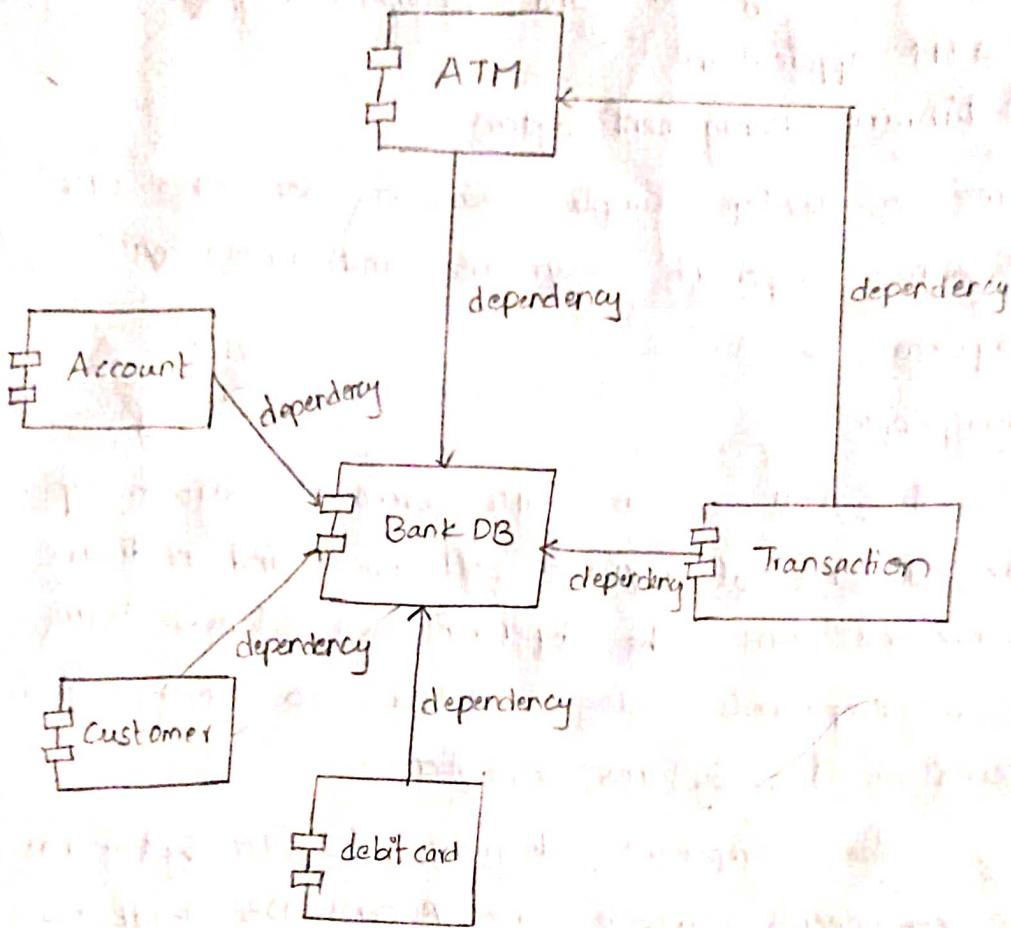
The ATM system UML component diagram explains
the sketch of required software and hardware
Components and the dependencies between them.
These components are labeled to clarify their
part in the System's operation.

The component diagram of ATM system has
6 components which are Account-DB, Bank-DB,
Transaction-DB, ATM, Customer-DB, Debit Card.

Components of ATM application component diagram

- * Account-DB,
- * Bank-DB
- * ATM
- * Customer-DB

Component Diagram for ATM Application



Result:-

We have successfully worked with unified ATM application, component diagram for ATM application in component.

b) Library Management System:

Aim: To develop sample diagram for other UML diagrams- component diagrams and deployment diagrams.

Description:

This is a component diagram of library Management System which shows components, provided and required interfaces, ports and relationships between the LMS-DB, Member, Book, Search, transactions, Student and Staff.

Library Management System UML component diagram, describes the organisation and writing the physical components in a system.

Components of UML Component Diagram:

- LMS-DB component
- Member Component
- Search Component
- Book Component
- Student Component
- Staff Component

b) Library Management System:

Aim: To develop sample diagram for other UML diagrams- component diagrams and deployment diagrams.

Description:

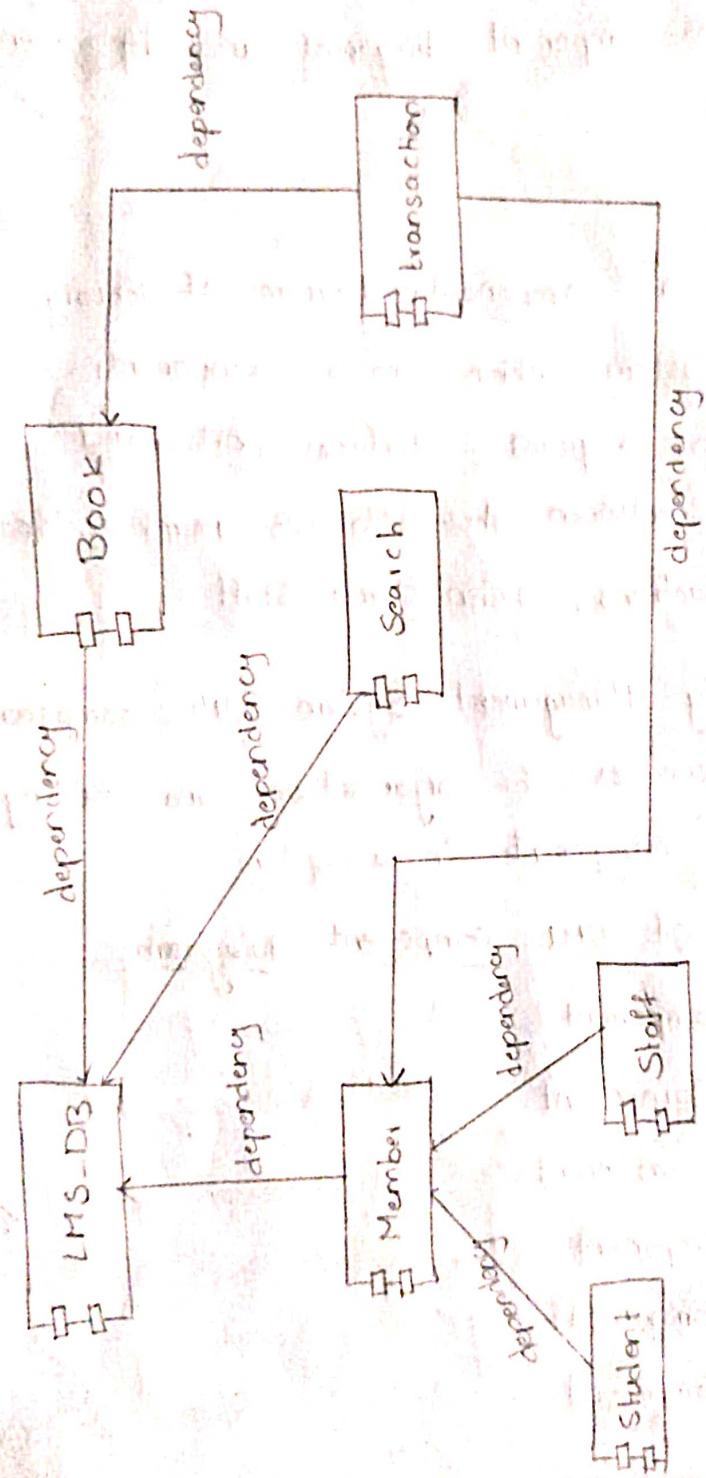
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Components of UML Component Diagram:

- LMS-DB component
- Member Component
- Search Component
- Book Component
- Student Component
- Staff Component

Component diagram for Library Management System



Result:

We have successfully worked with unified library Management System, component diagram for library management system in Component

Deployment diagram of ATM Application :

Deployment diagram represents the deployment view of a system. It is related to the Component diagram because the components are deployed using the deployment diagrams. It consists of nodes. Nodes are nothing but physical hardware used to deploy the application. Relationship among nodes also plays a major role.

Components

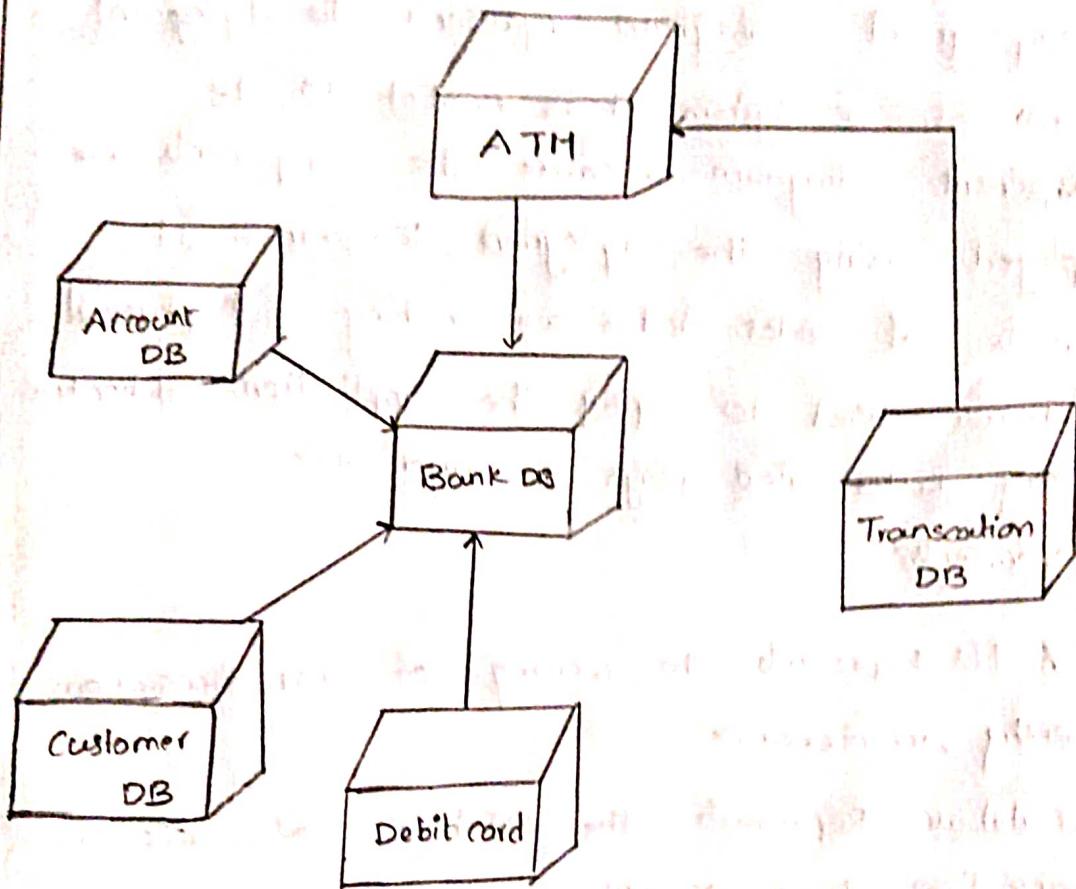
1, ATM: Represents the working of ATM transactions, working, maintenance.

2, Database: Represents the databases of customer, transactions, bank, account.

3, Cards: It represents the cards which the users use to conduct the transactions.

The deployment diagram shows how the different components are distributed across nodes. It demonstrates the physical arrangement and connections between these components to ensure the proper functioning.

Deployment Diagram for ATM Application



Result:

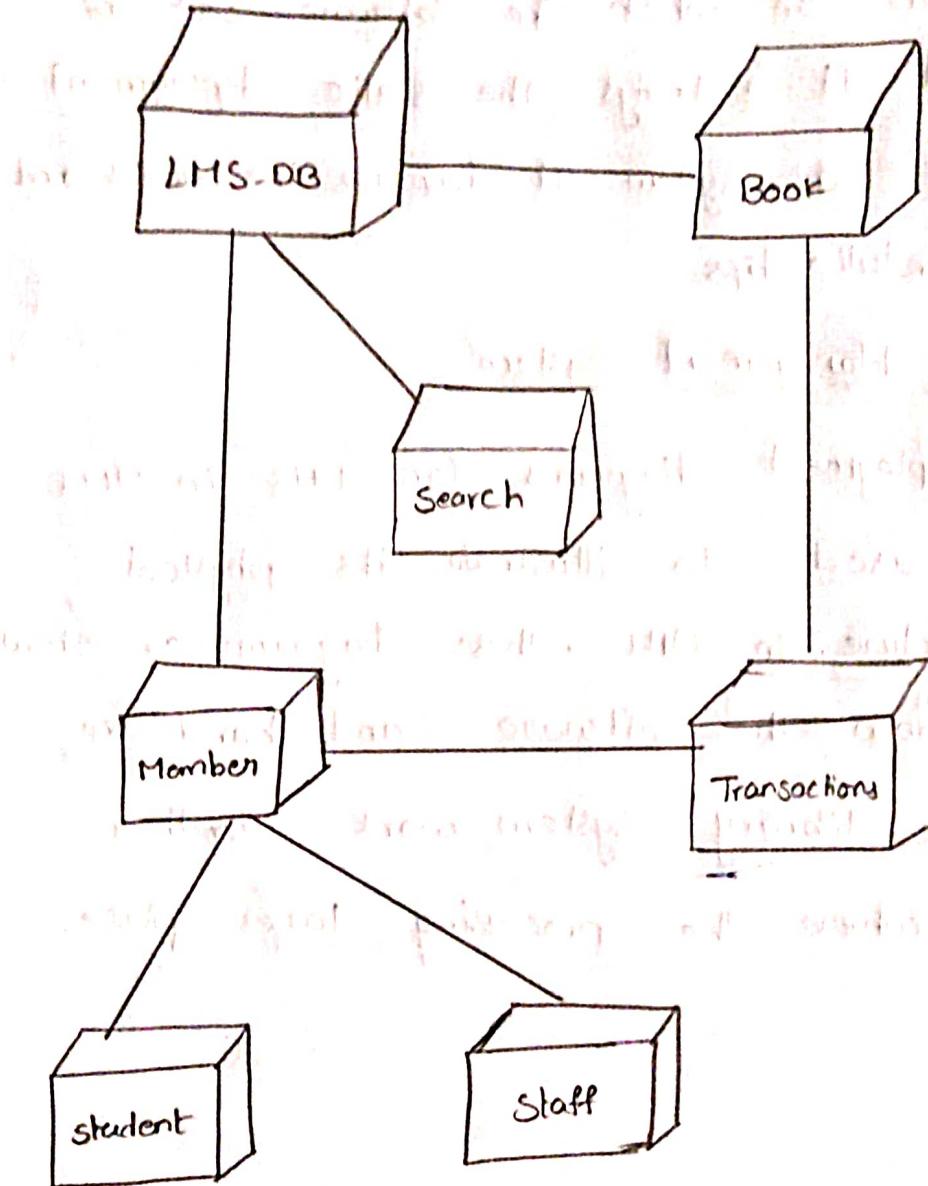
We have successfully worked with the Unified ATM application, for deployment diagram for ATM application.

The deployment diagram visualizes the physical hardware on which the software will be deployed. It portrays the static deployment view of a system. It involves the nodes and their relationships.

Library Management System

Deployment diagrams for LMS in UML are used to illustrate its physical architecture. In UML, these diagrams can show you how the software and hardware of the library system work together and where the processing takes place.

Deployment diagram for LMS:



Result :- We have successfully worked with the Unified LMS. Deployment diagram for LMS in deployment

Week :- 9

9. Develop Detailed Sequence Diagrams / communication diagrams for each use case showing interactions among all the three-layer objects.

Aim:- To develop detailed sequence Diagrams / Communication diagrams for each use case showing interactions among all the three-layer objects

- a, ATM application
- b, Library Management System

Description:-

The sequence diagram represents the flow of messages in the system and is also termed as an event diagram.

Notations of Sequence Diagram

* Lifeline

* Actor

+ Activation

+ Messages

* Notes

a, ATM Application

The UML Sequence Diagram for ATM depicts the sequence of messages or events between objects in the management system. It aids in defining the sequence of messages exchanged between

the actors and entities. Sequence diagrams can also explain how the ATM system should control the structures between objects.

b. Library Management System

LMS is created with the UML that depicts the flow of messages between objects in a scene. It is made up of objects connected by lifelines as well as the messages they exchange overtime during the interaction.

The Sequence Diagram for LMS represents the scenario and the messages that must be passed between objects. This is done for the scenario's functionality to be realized. It's an interaction diagram that shows how activities are carried out, including when and how messages are sent.