

EXPERIMENT 2

Aim :

Define Classes in the Logical View associated with each Use Case and define their Structure.

Theory :

What is Activity Diagram?

The Unified Modelling Language (UML) includes several subsets of diagrams, including structure diagrams, interaction diagrams, and behaviour diagrams. Activity diagrams, along with use case and state machine diagrams, are considered behaviour diagrams because they describe what must happen in the system being modelled.

Stakeholders have many issues to manage, so it's important to communicate with clarity and brevity. Activity diagrams help people on the business and development sides of an organization come together to understand the same process and behaviour. We'll use a set of specialized symbols – including those used for starting, ending, merging, or receiving steps in the flow – to make an activity diagram.

Benefits of Activity Diagram:

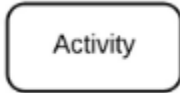
- It demonstrates the logic of an algorithm.
- It describes the steps performed in a UML use case.
- It illustrates a business process or workflow between users and the system.
- It simplifies and improves any process by clarifying complicated use cases.
- It models software architecture elements, such as method, function, and operation.

What are the Components of Activity Diagram?

- **Action:** A step in the activity wherein the users or software perform a given task.
- **Decision Node:** A conditional branch in the flow that is represented by a diamond. It includes a single input and two or more outputs.
- **Control Flows:** Another name for the connectors that show the flow between steps in the diagram.
- **Start Node:** Symbolizes the beginning of the activity. The start node is represented by a black circle.
- **End Node:** Represents the final step in the activity. The end node is represented by an outlined black circle.

Activity Diagram Symbols and Notation:
Symbol
Name

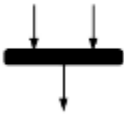

Start Symbol



Activity Symbol



Connector Symbol



Joint Symbol



Fork Symbol



Decision Symbol



Note Symbol



Send Signal Symbol



Receive Signal Symbol



Shallow History Pseudo State Symbol



Option Loop Symbol



Flow Final Symbol

[Condition]

Condition Text



End Symbol

Logical View for Library Management System :