

* Laboratory Practice - IV (OOMD) - Experiment Number - 4.

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Activity Diagrams

Problem Definition :-

Draw activity diagrams to display either business flow or like flow charts.

Prerequisite :-

Software Analysis Skills, Object Orientation and its development, Software Development life cycle, Types of diagrams.

Software and Hardware Requirements :-

Visual Paradigm 17.0 / Star UML

Windows 7 or above any version or Linux

RAM - 4Gb and more, ROM - 128Gb and more

Learning Objectives :-

To learn and draw activity diagram.

Outcomes :-

- ① We will understand the concept of activity diagram.
- ② We will learn to draw the activity diagram for any system.

Theory :-

Activity diagrams can be used in all stages of software development and for various purposes. And because they are a lot similar to flowcharts, they are generally more popular than other UML diagram types.

A UML activity diagram helps to visualize a certain use case at a more detailed level. It is a behavioral diagram that illustrates the flow of activities through a system.

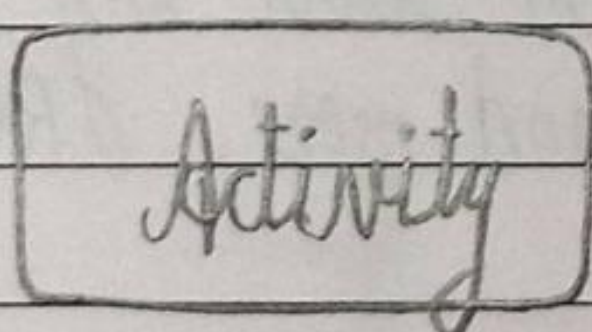
UML activity diagram can also be used to depict a flow of events in a business process. They can be used to examine business processes in order to identify its flow and requirements.

Activity Diagram Symbols :-



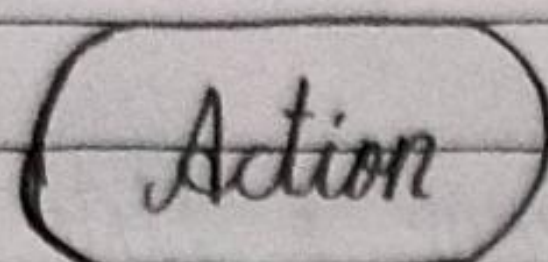
- Start / Initial Node

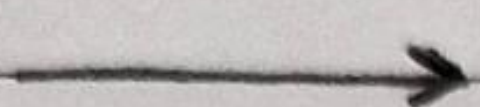
- Used to represent the starting point or the initial state of an activity.

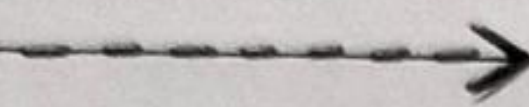



- Activity / Action State

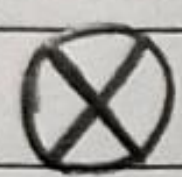
- Used to represent the activities of the process.

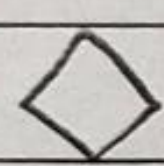
 - Action - Used to represent the executable sub-areas of an activity.

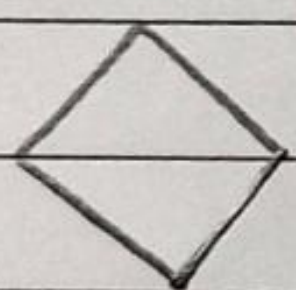
 - Control Flow/Edge - Used to represent the flow of control from one action to the other.

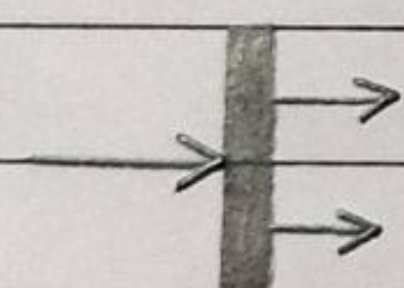
 - Object Flow/Control Edge - Used to represent the path of objects moving through the activity.

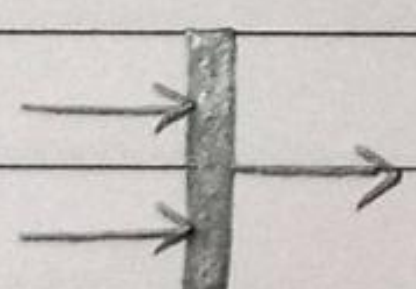
 - Activity Final Node - Used to mark the end of all control flows within the activity.

 - Flow Final Node - Used to mark the end of a single control flow.

 - Decision Node - Used to represent a conditional branch point with one input and multiple outputs.

 - Merge Node - Used to represent the merging of flows. It has several inputs, but one output.

 - Fork - Used to represent a flow that may branch into two or more parallel flows.

 - Merge - Used to represent two inputs that merge into one output.

Conclusion:-

In this way, we learned how to draw a state and activity diagram with an example of ATM system.