

Ex No: 5	<b>ACTIVITY DIAGRAM</b>
Date: 23/08/2021	

### **OBJECTIVE:**

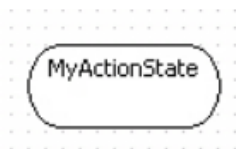
Activity diagrams are used to document workflows in a system, from the business level down to the operational level. When looking at an activity diagram, you'll notice elements from state diagrams. In fact, the Activity diagram is a variation of the state diagram where the "states" represent operations, and the transitions represent the activities that happen when the operation is complete. The general purpose of Activity diagrams is to focus on flows driven by internal processing vs. external events.

This document will clearly explain the Activity diagram for the project E-Learning platform.

### **DESCRIPTION:**

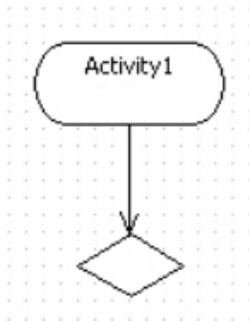
#### **Activity states:**

Activity states mark an action by an object. The notation for these states are rounded rectangles, the same notation as found in Statechart diagrams.



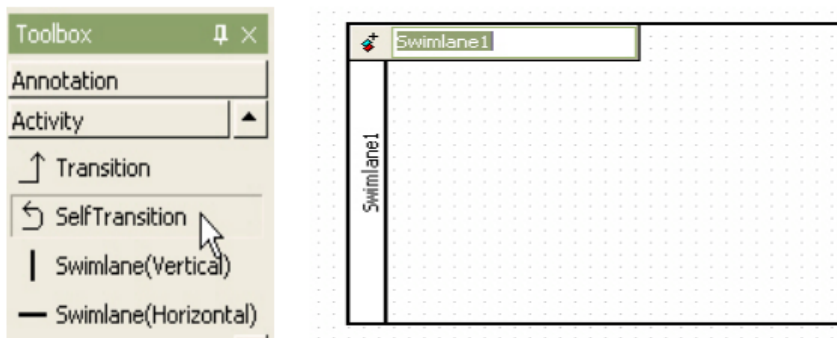
#### **Transition:**

When an Activity state is completed, processing moves to another Activity state. Transitions are used to mark this movement. Transitions are modelled using arrows.



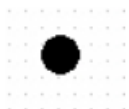
### Swimlane:

Swim lanes divide activities according to objects by objects in column format and placing activities by the object within that column. Objects are listed at the top of the column, and vertical bars separate the columns to form the swim lanes.



### Initial State:

The initial State marks the entry point and the Initial Activity State. The notation for the State is the same as in State chart diagrams, a solid circle. There can only be one Initial State on a diagram.



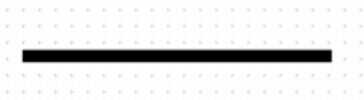
### Final State:

Final States mark the end of the modelled workflow. There can multiple Final States on a diagram, and these states are modelled using a solid circle surrounded by another circle.



### **Synchronization Bar:**

Activities often can be done in parallel. To split processing (“fork”), or to resume processing when multiple activities have been completed (“join”), Synchronization Bars are used. These are modelled as solid rectangles, with multiple transitions going in and/or out.



### **ALGORITHM:**

Step 1: Identify the operations and transformations that are triggered by the completion of an operation, which is referred as activities.

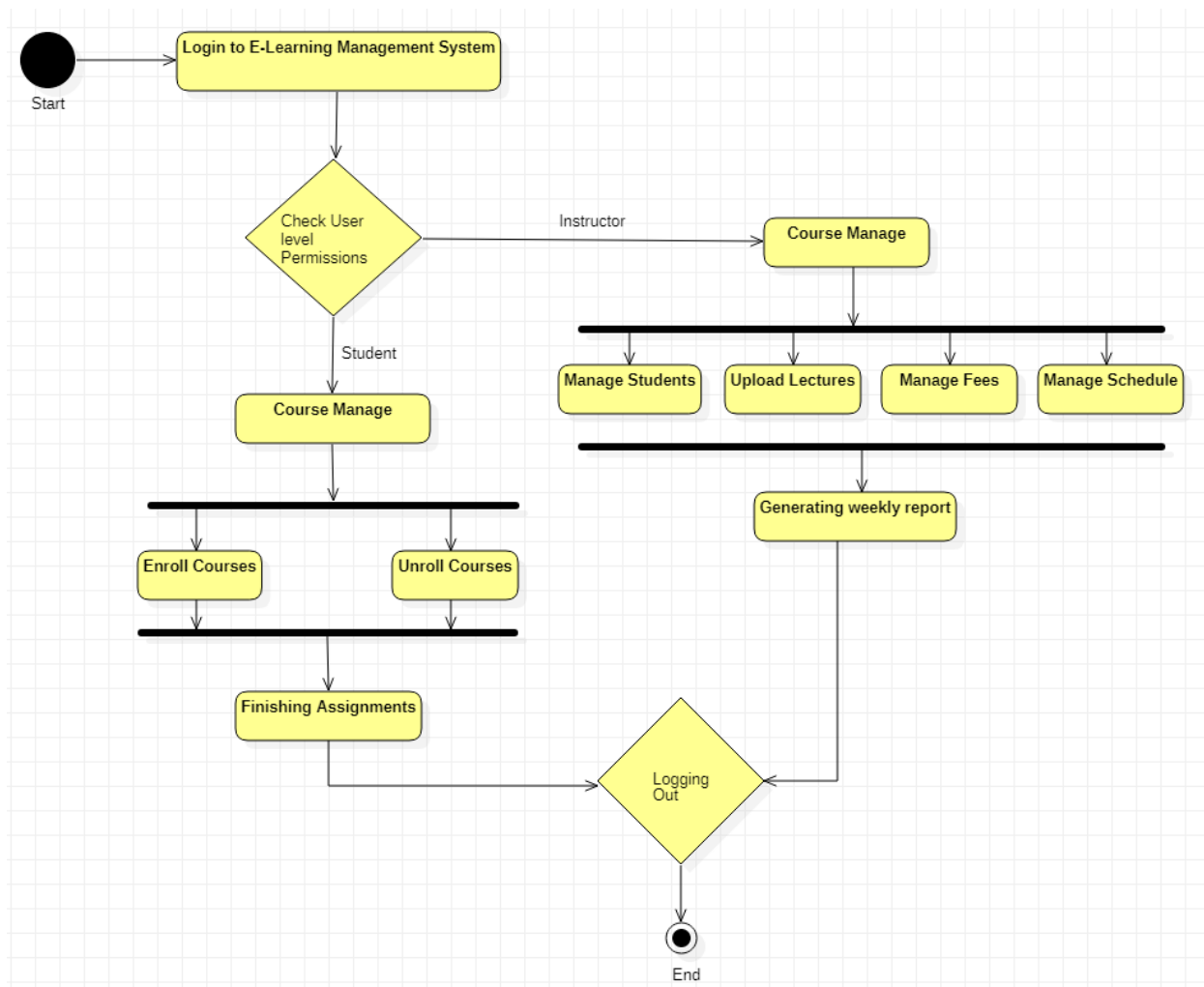
Step 2: Represent those activities by a rounded rectangle.

Step 3: Link the activities by automatic transactions, represented by arrows.

Step 4: If needed a decision which is represented by a diamond with many transitions coming out of it.

Step 5: Design the Activity diagram using the information obtained from the above steps using the tools provided.

**OUTPUT:**



**EXPLANATION:**

The E-Learning System contains two activities for the two different user of this website. The activities are, If the student is logged into the website then he/she can have the permission/access for the enrolment/unenroll from the courses that posted by the Instructor.

And the other user Instructor Can have the activities of Manage the Courses, manage the students, upload/download the lectures, manage the fees, manage the Schedules, and generating the weekly report for his/her analytics.

**RESULT:**

The activity diagrams are used in the Analysis phase of software development to articulate the high-level requirements of the system are drawn successfully.