**NATIONAL UNIVERSITY OF COMPUTER AND**

**EMERGING SCIENCES**

**SL-2002 – Software Design &amp; Architecture Lab**

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**Lab 06**

**Activity Diagram:**

An activity diagram is a type of behavioral diagram in the Unified Modeling Language (UML).

**Use Of Activity Diagram:**

Activity Diagram is used to visualize the steps in a Usecase or Scenario.

**Steps For Creating Activity Diagram:**

1. Identify Actors: Determine the actors involved in the usecase/scenario. These could be users, external systems, or other entities interacting with the system.
2. Identify Activities: List all the activities or steps involved in the usecase/scenario. These should represent the actions taken by the actors or the system.
3. Draw Start and End Points: Draw the starting point and ending point of the process. Usually, the starting point is triggered by an external event, and the ending point is the completion of the process or achievement of the goal.
4. Draw Initial Diagram Structure: Use a tool or paper to sketch out the initial structure of the activity diagram. Place the starting point at the top and the ending point at the bottom. Draw boxes for each activity and connect them with arrows to represent the flow of activities.
5. Refine the Diagram: Use decision points (diamond shapes) to represent conditions that determine the flow of the process.
6. Add Swimlanes (Optional): If multiple actors or roles are involved, you can use swimlanes to organize activities by actor. This helps clarify responsibilities and interactions between different actors.
7. Review and Validate: Review the diagram to ensure it accurately represents the usecase/scenario and all necessary activities. Validate the diagram with stakeholders or subject matter experts to ensure it aligns with their understanding of the usecase/scenario.
8. Finalize the Diagram: Once validated, finalize the activity diagram by adding any additional comments necessary for understanding. Ensure that the diagram is clear, concise, and easy to follow.
9. Document and Share: Document the activity diagram according to your organization's standards and share it with relevant stakeholders. It should serve as a useful reference for understanding and analyzing the usecase/scenario.

Let’s take an example;

**Use Case Name:** Create A Document

**Actors:** User

**Basic Flow Of Events:**

1. Open the word processing package.
2. Create a file.
3. Save the file under a unique name.
4. Type the document.
5. If graphics are necessary, open the graphics package
6. If a spreadsheet is necessary, open the spreadsheet package
7. Save the file.
8. Print a hard copy of the document.
9. Exit office suite

**Alternative Flows:** None

