SLIIT UNI
THE KNOWLEDGE UNIVERSITY

Faculty of Computing

Year 2 Semester 1 (2025)

SE2030 - Software Engineering — Lab Sheet 05

Lab Sheet 05: Sequence Diagram

Lab Duration: 2 Hours
Objective: In this lab, you will learn to model the flow of activities within a system by identifying actions, decisions, and parallel processes, and draw appropriate Activity Diagrams to represent the behavior of given use case scenarios.

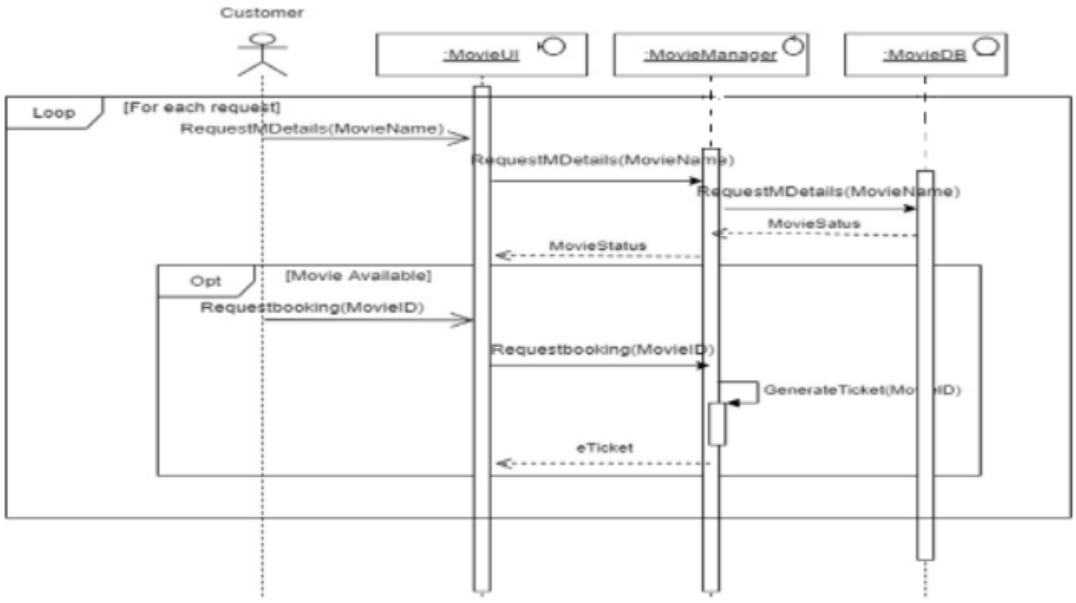
We will be using Draw.io software(accessible at `https://www.draw.io/`) to draw the activity diagrams.

Practice Activity

Develop a sequence diagram based on the following scenario using Draw.io.

"ABC" cinema has a eTicket booking system. Customer can request a particular movie details via MovieUI and the request will pass to the MovieManeger. Then MovieManager request the details from the MovieDB and pass the results to the customer. Only if the requested movie is available, the customer can request to book with MovieID and MovieManager generate the ticket and send to the customer. In the same way, customer can make any number of requests for eTickets for different movies.

Sample Answer



Group Project Task and Submission

1. Form your pre-assigned groups of 6 members.
2. Use the same project topic assigned to you in the previous lab.
3. Design and draw sequence diagrams for each main use case scenario of your project, covering all major functions. (You may use suitable boundary, control and entity classes)

   Note: Each member should design and draw his/her activity diagram for their respective main function.
4. Compile a Group Report including:
   (a) Group ID, Topic Name, and Group Members
   (b) Each member's use case scenarios (completed in the previous lab)
   (c) The corresponding individual activity diagram for each member
   (d) Repeat this structure for all members
5. Submit your report via GitHub before the deadline.
   o File Name Format: BatchNumber_GroupID_Sequence.pdf

Submission Checklist

- Group Details
- Use Case Scenarios (one per member)
- Activity diagrams
- Clear and structured report format
- File uploaded to GitHub with correct naming format

Self-Study Activity

Read the scenario and draw a sequence diagram.

"INOX Cinemas" is a big theater chain where people can book movie tickets online. Initially, user access the Registration UI and select the option he/she needs. If it is new user option, then he/she has to provide user details. Then the system will generate username and password and save it in the system and display it to the user as well. For already registered customer option, user needs to login to their e-commerce site providing his/her username and password. If the login is valid, the system will display the success message and directs to the booking user interface.

For valid login, the user has to select the movie theater he/she prefers. Then the system will list down all the available movies with the details. The system allows people to book tickets for more than one movie show. For each movie show, he/she directs to the bookingUI. Then he/she submit movie name with the number of tickets to the system. Then the system checks for vacant seats. If there are vacant seat, system issues the e-ticket to the customer and increases the seat count. For invalid logging, system ask to re-enter details.

Hint: You may use suitable boundary, control, and entity classes in your answer.