

CS 331 (Software Engineering Lab)

Assignment 3 (Total Marks = 40)

Covering The Behavioral Aspects of the Software:

A. Use Case Diagrams

Draw UML use case diagrams for the different use cases. Follow the following steps while drawing use case diagrams for each important use case.

Step 1: Identify the use cases that need to be represented. (Examples of use cases could be user login, giving music recommendations in music playing software, etc). **[Marks = 10]**

Step 2: List the actors (external users) that interact with the system. **[Marks = 5]**

B. Sequence Diagrams

Draw UML sequence diagrams for the different important features. Follow the following steps while drawing sequence diagrams for each important feature.

Step 1: Identify the objects (internal components, modules) that participate in the interaction. **[Marks = 10]**

Step 2: Define message passing (or events) between the objects. Use **solid arrows** for synchronous calls and **dashed arrows** for asynchronous messages. **[Marks = 10]**

Step 3: Represent activation and execution: On lifelines, use activation bars (thin vertical rectangles) to indicate when an object is active and processing a request. **[Marks = 5]**

Important points:

1. Ensure clarity and avoid unnecessary complexity.
2. Use clear labels and consistent notation.
3. Make sure the sequence diagram correctly reflects system behavior.