# Experiment 6: Modeling UML Class Diagrams

Objective:  
To model the structural and behavioral aspects of the system using UML Class Diagrams.

Theory:  
A Class Diagram is one of the most important UML diagrams used to describe the structure of a system. It shows classes, their attributes, methods, and relationships such as association, inheritance, and aggregation.

Elements of a Class Diagram:  
• Classes: Represent the main entities in the system.  
• Attributes: Define the properties of the class.  
• Methods: Define the operations or functions of the class.  
• Relationships: Define how classes are connected (association, aggregation, composition, inheritance).

Steps:  
1. Identify the main classes and their responsibilities.  
2. Define attributes and methods for each class.  
3. Identify the relationships among the classes.  
4. Draw the class diagram with proper notations.

Conclusion:  
UML Class Diagrams help in understanding the system’s structure by representing relationships among various classes, making it easier to design and implement object-oriented systems.