

Software Engineering Workshops

Worksheet 5: Class Diagrams (Part 2–Relationships)

Objective

The objective of today's session is to understand how to model relationships in class diagrams. Upon the completion of this session, you should be able to use the UML to:

- Model dependency relationship
- Model association relationship
- Model generalization relationship

Exercise 1:

Through the following system description, find the classes and capture the relationships that exist among them:

Part of the University Record System

The system should keep information about **students**, including both **graduate** and **undergraduate**. All students have name, id and GPA. However, graduate students have also research interests.

Students **can enroll in 3 to 6 courses** and **each course would have 1 to 40** students.

Graduate students **can register for 1 to 3 seminars** and each seminar has 1 to 60 graduate students.

Show the name and attribute compartments in student-related classes and only the name in other classes. (hints: you will have 5 classes and you will need generalization and association relationships).