

CSC343 Worksheet 15 (final)

July 15, 2020

1. **Exercise 4.7.1:** Draw a UML diagram for the problem of Exercise 4.1.1.
2. **Exercise 4.7.2:** Modify your diagram from Exercise 4.7.1 in accordance with the requirements of Exercise 4.1.2.
3. **Exercise 4.7.3:** Repeat Exercise 4.1.3 using UML.
4. **Exercise 4.7.4:** Repeat Exercise 4.1.6 using UML.
5. **Exercise 4.7.5:** Repeat Exercise 4.1. 7 using UML. Are your subclasses disjoint or overlapping? Are they complete or partial?
6. **Exercise 4.7.6:** Repeat Exercise 4.1.9 using UML.
7. **Exercise 4.7.7:** Convert the E/R diagram of Fig. 4.30 to a UML diagram.
8. **Exercise 4.7.8:** How would you represent the 3-way relationship of Contracts among movies, stars, and studios (see Fig. 4.4) in UML?

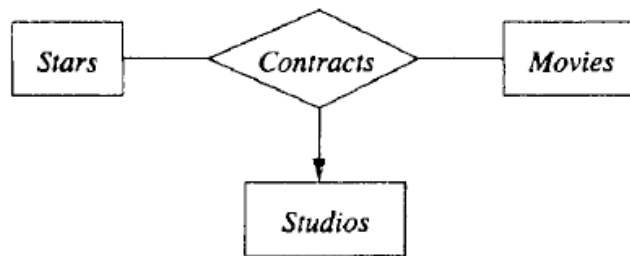


Figure 4.4: A three-way relationship

9. **Exercise 4.7.9:** Repeat Exercise 4.2.5 using UML.
10. **Exercise 4.8.1:** Convert the UML diagram of Fig. 4.43 to relations.
11. **Exercise 4.8.2:** Convert the following UML diagrams to relations:
 - a) Figure 4.37.

- b) Figure 4.40.
 - c) Your solution to Exercise 4.7.1.
 - d) Your solution to Exercise 4.7.3.
 - e) Your solution to Exercise 4.7.4.
 - f) Your solution to Exercise 4.7.6.
12. **Exercise 4.8.3:** How many relations do we create, using the object-oriented approach, if we have a three-level hierarchy with three subclasses of each class at the first and second levels, and that hierarchy is:
- a) Disjoint and complete at each level.
 - b) Disjoint but not complete at each level.
 - c) Neither disjoint nor complete.