EXERCISE 3

The purpose of this exercise is to give you the opportunity to practice in creating a conceptual model of a database from a CASE. If you are unsure how to proceed you can recall the lectures and the examples we have presented and worked with. You can also find further information about relational model, conceptual modelling, E/R-modeling and normalisation in chapter 4, 16, 12 and 14, or also search for information on internet.

Exercise description

At a university, they have an IT system to grade their students on the courses that students are reading. The university teaches a teacher in a variety of courses that may be included in an educational program. A student can only read in one educational program at the same time. An educational program is in other words, a number of courses. Each course can have literature in the form of books. Some of the textbooks are used in several courses and a course may also have several books as literature. The university has several departments and each teacher is attached to one of them. The institutions are responsible for both the courses and programs included in their courses and educational programs.

An IT system presents information to employees at the university. It needs to be related to the tasks the employees perform. For example, they need employees send course offerings to students addresses, teachers need phone lists to contact their students, salary should be sent to the teacher, a teacher should be able to list the literature of a course, it should be possible to see what title an employee have, what a literature has for title and ISBN number, etc.

Your assignment is to use UML and present a normalised E/R-model that fulfils the requirements for 3NF. Be sure to underline the primary keys you choose. Show only the most basic attributes of each table you create. Write a descriptive word each connection so it is easy to understand model. Do not be too detailed in the work but try to stick to the task as described above, although some attributes you do not really apparent from the text.

When you have finished the exercise you can send in your solution and receive a proposed solution in return.