

Design seminar 1

Conceptual and logical database design

The exercise is designed to learn how to create conceptual and logical models of a database. See explanatory information, "before seminar and laboratory work". A conceptual model does not scale if the design contains "many to many" relationship, we want to because you are developing your conceptual model into a logical model that is "buildable" in a relational database. You shall use the notation UML. You perform design seminar and all laboratory work in groups of two students.

You are expected to take with you the results printed on paper to the next lecture passport as detailed below. This is your passport to the discussions in which you discuss and validate your solutions together with another group.

CASE – Old cars

The association *Old Cars* needs a new database system, look below. Your exercise is to model a design solution in 3NF. Present the solution in the shape of an E/R model with example of data within it. Suggestions and explanations should be included in your solution.

The chairman describes the organization in following manner: *We help each other to keep a lot of old cars in shape, otherwise they should be scrap. We sell products (parts) for those old cars to different brands and models. Our primary customer group is the members, but we also sell to ordinary people. The association has a building that contains parts like doors, lamps, clutches, brakes, etc. People can phone or mail their orders (all of the parts is presented in our website). Some of the parts must be fabricated and we buy it from different suppliers around the country, then we sell it to our customers. In that way we can keep the prices low, in addition the members get 5% off on all products. We need to store information about all our customers, even if they are not members (name, phone, address, etc), and information about suppliers and the products (parts). We want to put all orders in the system to be able to send out bills. In addition we also need to address which supplier that supply which products (parts), and not least all the products (parts)...*

You need to hand in following:

- A logic model (similar to Figure 1c in the booklet, "before seminar and laboratory work" and Chapter 12, 16 and 17) which is based on UML notation. The model should be clear and legible. There must be entities, attributes and relationships. All titles / names should be understandable and necessary primary key attributes must be underlined.
- A data dictionary should be submitted for the entities and attributes in your logic model (see 16.4)
- The assumptions and other considerations for your model presented and justified.
- Solution is not being submitted for examination until the end of the course.