Exercise Sheet 4

Announcement: Class Test

There will be a class test during the next week’s exercise class, on 27th October, 3pm, in the Lower Ground Floor lab. The material covered is SQL, as covered in exercise sheets 1-3.

This Exercise Sheet should be submitted in the lab session on 3 November, 2011. You should attempt to draw the E-R diagrams in the lab session. You can polish them and add multiplicities in your spare time. Please feel free to read ahead in the Lecture Handout to get a sense of how to do the modeling.

Question 9: ER modelling (from previous exam papers).

Develop (extended) entity-relationship diagrams (complete with multiplicities) to model the following real-world situations:

a. A tourist information system is to provide information about tourist attractions in British cities. For each city, the system must know about the county the city is located in. Attractions must include at least all major parks, museums, and theatres. For each attraction the system must be able to provide information about the street it is located in. It should also know about other main streets, how long they are, and which intersects with which.

b. A database is required to provide information about hotels, bed and breakfast places, and youth hostels. It should be possible to query it for the nearest airport or for any tourist attractions in the vicinity. In case a place is fully booked, the system could be used to find alternative accommodation nearby. The system should be aware of different types of room, such as “single”, “double”, etc., and typically a house will have rooms of more than one category (and its rates will depend on the category). Hotels may offer conference facilities in the form of meeting rooms. The system should be able to list those together with their capacity and daily hiring fee.