

BMEVITMAB04-EN – Databases

Lecturer: Dr Levente Erős
Teaching Assistant: Dr János Varga

24 September 2020 – 1st Tutorial: ER modelling

Exercise 1. Your task is to design a database for prescription monitoring. The requirements are as follows:

- Patients are defined by a unique identity number, a name and a surname, and by a birth-date.
- Doctors are defined by a unique SSN, a name, a surname, and a birth-date while additionally they will be characterised by a work start date and a speciality.
- Pharmaceutical companies will be defined by a unique name and a telephone number.
- Medicines will be defined by a unique commercial name and their active ingredient.
- Pharmacies will be defined by a unique name, an address and a telephone number.

Additionally you should take into account the following:

- Each patient has one doctor;
- Each doctor has at least one patient;
- A doctor can prescribe certain medicines to his patients;
- Each pharmacy sells several medicines, each at a specific price;
- Each medicine can be sold by several pharmacies possibly at a different price;
- Pharmaceutical companies have contracts with pharmacies;
- Each pharmaceutical company may have contracts with several pharmacies;
- Each pharmacy may have contracts with several pharmaceutical companies;
- For each contract there is a start date, an end date, the contract contents;
- Each pharmaceutical company manufactures one or more medicines.

Note any unspecified requirements, and make appropriate assumptions to make the specification complete.

If there is no IS-A relationship above, use your imagination and come up with one!