Exercise - Pharmaceutical Supervision

The **CVS Chain of Pharmacies** has offered to give you a free lifetime supply of medicine if you design its database. Given the rising cost of health care, you agree.

- **Patients** are identified by an id, and their names, addresses, and ages must be recorded.

- **Doctors** are identified by an id. For each doctor, the name, speciality, and years of experience must be recorded.

- Each **pharmaceutical company** is identified by name and has a phone number.

- For each **drug**, the trade name and formula must be recorded. Each drug is sold by a given pharmaceutical company, and the trade name identifies a drug uniquely from among the products of that company. If a pharmaceutical company is deleted, you need not keep track of its products any longer.

- Each **pharmacy** has a name, address, and phone number.

- Every **patient** has a primary physician. Every doctor has at least one patient.

- Each pharmacy sells several drugs and has a price for each. A drug could be sold at several pharmacies, and the price could vary from one pharmacy to another.

- Doctors prescribe drugs for patients. A doctor could prescribe one or more drugs for several patients, and a patient could

obtain prescriptions from several doctors. Each prescription has a date and a quantity associated with it. You can assume that, if a doctor prescribes the same drug for the same patient more than once, only the last such prescription needs to be stored.

- Pharmaceutical companies have long-term contracts with pharmacies. A pharmaceutical company can contract with several pharmacies, and a pharmacy can contract with several pharmaceutical companies. For each contract, you have to store a start date, an end date, and the text of the contract.

- Pharmacies appoint a supervisor for each contract. There must always be a supervisor for each contract, but the contract supervisor can change over the lifetime of the contract.