

## Requirements

- i. Patients are identified by SSN, and their names, addresses, and also ages.
- ii. Doctors are identified by an SSN, for each doctor, the name, specialty and years of experience must be recorded.
- iii. Each pharmaceutical company is identified by name and has a phone number.
- iv. For each drug, the trade name and formula must be reordered. 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.
- v. Each pharmacy has a name, address, and phone number.
- vi. Every patient has a primary physician. Every doctor has at least one patient.
- vii. 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.
- viii. 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.
- ix. Pharmaceutical companies have long-term contracts with pharmacies. A pharmaceutical company can contract with several pharmaceutical companies. For each contract, you have to store a start date, and end date, and the text of the contract.
- x. Pharmacies appoint a supervisor for each contract. There must always be a supervisor for each contract.

## Additional Requirements

- i. The following patient details are also required: gender, allergies, height, and weight. Date of birth should be used in place of age to ease the process of storing and updating age details.
- ii. The following doctor details are also required: phone number and medical license number.
- iii. As doctors make prescriptions, the following details are also required: drug name, instructions, doctor SSN (prescriber), patient SSN, and prescription number. The preferred pharmacy is optional, whereby the doctor and the patient can discuss before selection, based on availability of the drug and patient convenience, among other considerations.
- iv. Each pharmacist is identified by their SSN and the pharmacy they work for.
- v. Each supervisor is identified by their SSN, names and the pharmacy they work for.
- vi. Pharmacists are tasked with cross-checking prescription information in order to dispense drugs. A dispensation is identified by a dispensation number, prescription number, the pharmacist conducting the dispensation and the date of dispensation.
- vii. Supervisors are responsible for managing the inventory of their respective pharmacies, especially with regards to the drugs catered for under their specific contracts. A pharmacy's inventory entails the drug names, their quantities in stock, their expiration dates and the price at which the pharmacy sells the drugs.

- viii. Each user is identified by a unique identifier, password and their user type in order to access the system. These users are: patient, doctor, pharmacist, supervisor, pharmaceutical company and administrator.