

## **Data Modeling**

### **Pharmacy Information Store**

Below is the description of a Pharmacy Information Store (PES) System.

1. Patients are identified by a patient ID. Patient name, address, and age must be recorded.
2. Doctors are identified by a physician ID. Physician name, specialties (can be more than one specialty), and year of experience must be recorded.
3. Each physician has at least 10 patients.
4. Each pharmaceutical company is identified by name, and it has a telephone number.
5. Each pharmacy has a name and fax number.
6. Each patient has a primary physician.
7. For each drug, the trade name must be recorded.
8. Each drug is sold by one pharmaceutical company. The trade name of the drug identifies the drug uniquely among products of that company
9. Each pharmacy sells several drugs, and it has a price for each.
10. A drug can be sold at several pharmacies, and the price may vary from one pharmacy to another.
11. Doctors prescribe drugs for patients by prescriptions. A prescription includes a date and a quantity.

### **Question:**

Design a representation of the data in terms of entities, attributes, and relationships between entities:

1. Construct an ERD diagram to depict this representation.
2. Show the cardinalities using (min, max) notation.

**Solution:****Entity-Relationship Diagram**