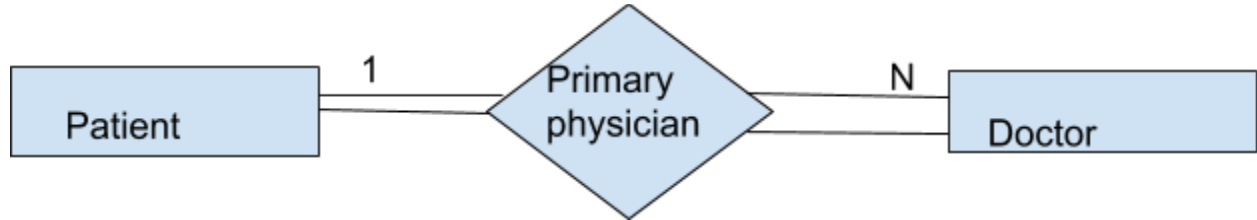


1. Find the Entity types

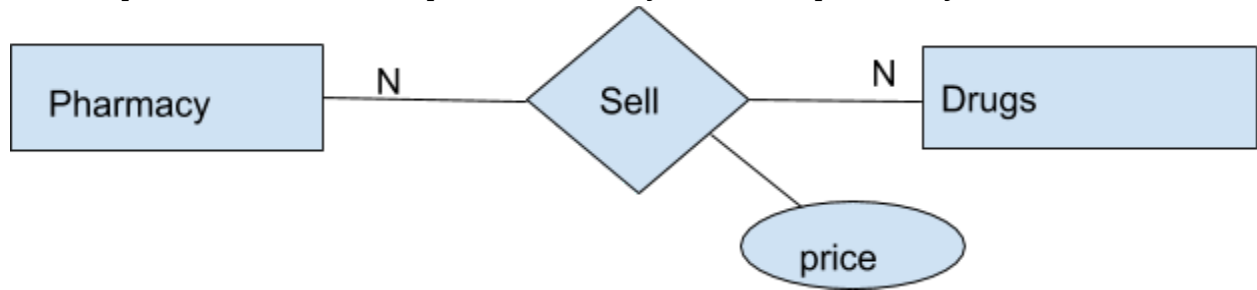
- i) Patients (SSN, names, addresses, ages)
- ii) Doctors (SSN, name, speciality, experience)
- iii) Pharmaceutical company (name, phone number)
- iv) Drug (trade name, formula)
- v) Pharmacy (name, address, phone number)

2. Draw ER diagram to each relationship separately.

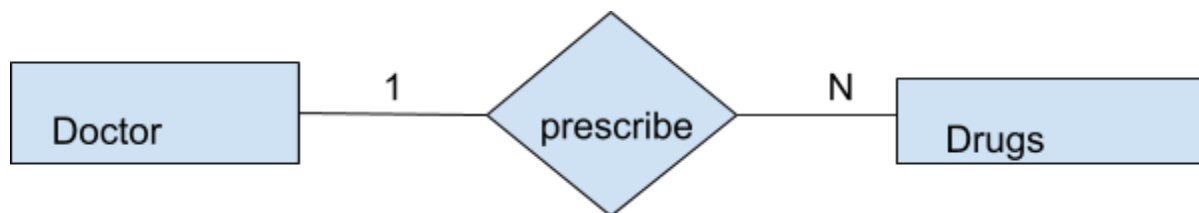
- i) Every patient has a primary physician. Every doctor has at least one patient.

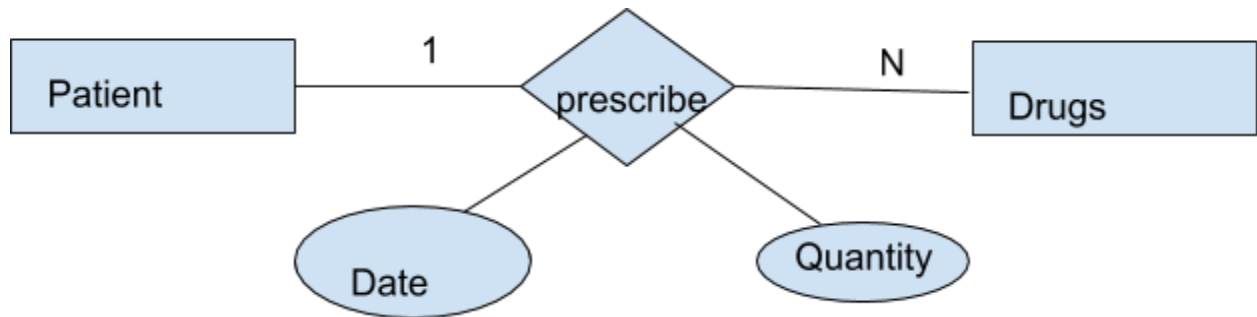


- ii) Each pharmacy sells several drugs and has a price for each. A drug could be sold at several pharmacies, and the price could vary from one pharmacy to another.



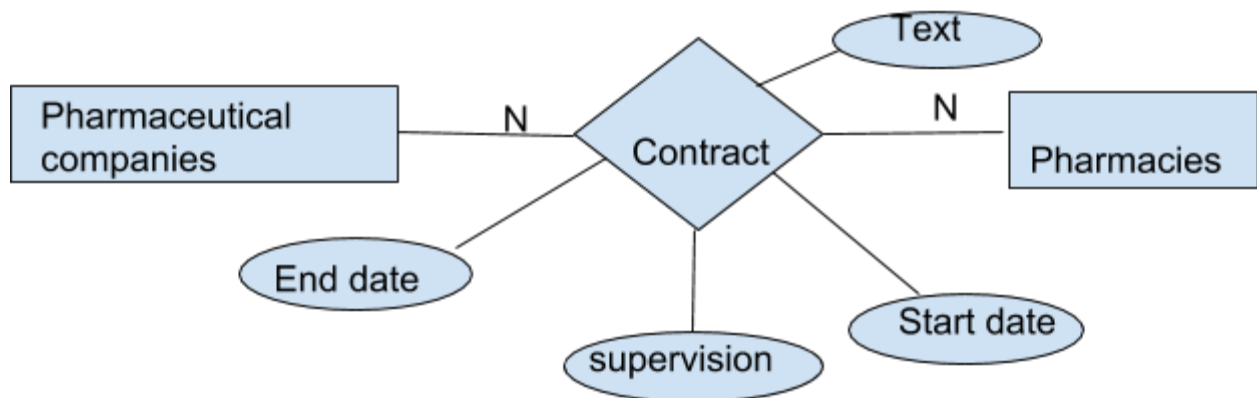
- iii) Doctors prescribe drugs for patients. A doctor would prescribe one or more drugs for several patients, and a patient could obtain prescriptions from several doctors. Each prescription has a date and a quantity associated with it. You can assume that if a doctor prescribes the same drug for the same patient more than once, only the last such prescription needs to be stored.





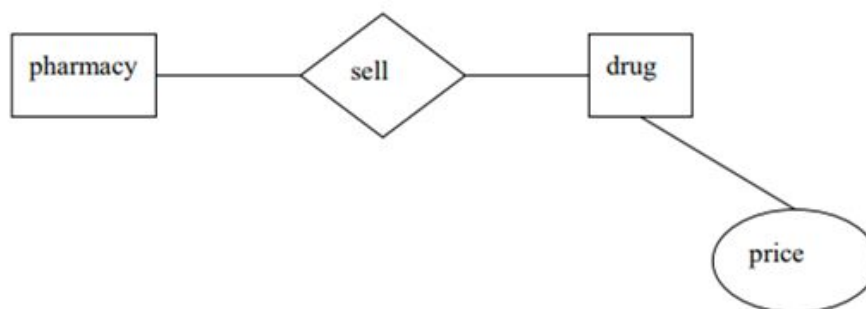
iv) Pharmaceutical companies have long-term contracts with pharmacies. A pharmaceutical company can contract with several pharmacies, and a pharmacy can contract with several pharmaceutical companies. For each contract, you have to store a start date, an end date, and the text of the contract.

v) Pharmacies appoint a supervisor for each contract. There must always a supervisor for each contract.



3. Draw a ER diagram that captures the above information.  
(attached)

4. How would your design change if each drug must be sold at a fixed price by all the pharmacies?



5. How would your design change if the design requirements change as follows: If a doctor prescribes the same drug for the same patient more than once, several such prescriptions may have to be stored separately?

