Drug Disposal Tool

<u>Requirements</u>

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 a supervisor for each contract.

Other Requirements

xi. Each prescription must have a unique identifier (such as a prescription number) associated with it.
xii. For each prescription, the dispensing pharmacy and the pharmacist who dispensed it must be recorded.
xiii. Each doctor has a unique email address, and their email address should be recorded in the system.
xiv. Each patient has a medical record that includes their medical history and a list of all medications they are currently taking.
xv. Each prescription should have a status (such as pending, filled, or cancelled) to indicate whether it has been filled by a pharmacy or not.
xvi. The system should be able to generate reports on various aspects of the data, such as the number of prescriptions filled by a pharmacy, the number of patients seen by a doctor, and the total sales of a pharmaceutical company.

Mechanisms to be implemented .

i.   The tool should have a mechanism to flag and prevent prescription abuse or fraud, such as if a patient tries to obtain multiple prescriptions for the same drug from different doctors or pharmacies.

ii. The tool should provide information on drug interactions and potential side effects to doctors and pharmacists.

iii. The tool should allow for automatic medication reminders for patients, such as when to take medication and how much to take.

iv. The tool should have a mechanism for tracking inventory and expiration dates of drugs to prevent dispensing of expired or unusable medications.

v.   The tool should have a reporting mechanism for adverse events related to medication use, such as medication errors, adverse drug reactions, or medication-related injuries.