

Prerequisite 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 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.
- 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

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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

Here are some of the requirements that a drug dispensing tool should meet:

1. Accuracy: The tool should be able to dispense medications accurately in the required amount and dosage as prescribed by the healthcare provider.

2. Safety: The tool should be designed with safety features to prevent medication errors such as double dosing, incorrect medications, or mixing of incompatible drugs.

3. User-Friendly: The tool should be easy to use and operate, even for users with limited training or experience. It should be designed with clear instructions and easy-to-understand user interfaces.

4. Reliability: The tool should be reliable and able to dispense medications without failure or breakdown.

5. Customization: The tool should be able to handle a variety of medication forms, including tablets, capsules, liquids, and powders. It should also be able to accommodate different sizes of medication containers.

6. Record-Keeping: The tool should have the capability to store and maintain accurate records of medications dispensed, including the date and time, medication name, dosage, and patient information.

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7. Hygiene: The tool should be designed with ease of cleaning and disinfecting in mind to prevent contamination.

8. Connectivity: The tool should have the capability to connect with other healthcare devices or systems, such as electronic health records, to facilitate seamless information sharing and coordination of care.

9. Security: The tool should have secure user access controls and encryption to ensure that patient data is protected.

10. Maintenance: The tool should be easy to maintain, with readily available replacement parts and technical support, to ensure that it is always in good working condition.