

Paige Rosynek

CS 3860

Dr. Magana

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Lab 2 – Data Modelling

Assumptions

- 1) BigPharma will only produce a drug with the company that the original contract was made with and will not produce the same drug on its own or with another pharmaceutical company.
- 2) A pharmaceutical company can have more than one contract with BigPharma and there is no limit to the number of contracts BigPharma can make with a company.
- 3) Each drug has a trade name, a patent date, ingredients, and a dosage.
- 4) The trade name uniquely identifies each drug.
- 5) Each drug must have a formula.
- 6) Many drugs can have the same formula.
- 7) Each drug has one or more active or inactive ingredients.
- 8) Each inactive or active ingredient has a dosage for a given drug.
- 9) Each inactive and active ingredient belongs to one category.
- 10) Many active/inactive ingredients can belong to the same category.
- 11) Each drug may have zero or more side effects.
- 12) BigPharma makes drug contracts with pharmacies.
- 13) Each pharmacy has a name, address, and phone number.
- 14) The name and the phone number uniquely identify each pharmacy.
- 15) Each contract made with a pharmacy has a contract number that cannot be repeated for any other contract in the system. The contract number uniquely identifies each contract.
- 16) Each contract between BigPharma and a pharmacy has a start date, end date, price, contact representative, and the text of the contract.
- 17) Each pharmacy buys several drugs for a price that can vary over time.
- 18) BigPharma can have multiple contracts with each pharmacy.
- 19) BigPharma makes contracts with hospitals.
- 20) Each hospital has a name and an address; the name of the hospital uniquely identifies it.
- 21) Every contract between BigPharma and a hospital has a contract number that cannot be repeated for any other contract in the system. The contract number uniquely identifies each contract.
- 22) BigPharma can have multiple contracts with each hospital.
- 23) Each contract with a hospital has a start date, end date, drug trade name, quantity, and price.
- 24) BigPharma maintains hospital statistics for drug effectiveness on a certain illness.
- 25) One or more drugs is used to treat each illness.
- 26) The success and failure measures of each drug's ability to treat certain illnesses is recorded.

Sorry for the diagram being sideways...it was the only way I could make it big enough to read it.

