

Insert Name Here Database Proposal: Pharmaceuticals

This database will work on a mini world of pharmaceuticals. This mini world contains businesses, medical professionals, patients, drugs, and prescriptions. The businesses in this world are split into three distinct types, pharmaceutical companies, pharmacies, and medical facilities and all businesses have a phone number, name, address, and unique companyID. A pharmaceutical company has a country or origin and creates company drugs. Every pharmaceutical company can create multiple company drugs, but each company drug can only be created by 1 pharmaceutical company. A company drug has a name and cannot exist without a pharmaceutical company to create it. A company drug also has the properties of a generic drug. A generic drug has a side effect and a unique drugID. Generic drugs can also interact with other generic drugs. These interactions have a severity and a cause. Every generic drug can interact with many other generic drugs, but each interaction is unique. A pharmacy has a pharmacy license and store hours. A pharmacy also possesses company drugs. Each pharmacy has many different company drugs and each company drug can be held in many different pharmacies. A pharmacy also fulfills prescriptions. A prescription has a duration and a unique prescriptionID. Each pharmacy can fulfill many prescriptions, but every prescription can only be fulfilled by a single pharmacy. A company drug is used for prescriptions. A company drug can be part of many prescriptions, but each prescription can only have one company drug. Medical facilities exist in four different types, medical research facilities, clinics, hospitals, and urgent cares. A medical facility can be more than one type of facility. A medical research facility has a research speciality and funding. A clinic holds appointments. These appointments can not exist without a clinic. Each appointment has a date, a reason for the appointment, and a Boolean flag of whether the appointment was attended or not. A clinic can hold many appointments, but each appointment can only be held at one clinic. A hospital provides surgeries. A surgery has a name, a cost, and a unique surgeryID. Every hospital can provide many different surgeries, but a surgery can only be provided at one hospital. An urgent care provides walk-ins. Walk-ins have a date and a reason for the walk-in. An urgent care can provide many walk-ins, but each walk-in is provided at one urgent care. Medical professionals work at medical facilities. A medical professional has a unique employeeID and can be four types of professional, doctor, physician's assistant, nurse practitioner, and researcher. A medical professional can be more than one type of professional. A doctor has a M.D. degree. A physician's assistant has a MS degree and a certification. A nurse practitioner has a certification. A researcher has a research area. A medical professional can work at many medical facilities and medical facilities have many different medical professionals working there. Medical professionals also prescribe prescriptions. Every medical professional can prescribe many prescriptions, but each prescription can only be prescribed by one doctor. Medical professionals also treat patients. A patient has an age, birthday, sex, name, phone number, and a unique patientID. A medical professional treats many patients and a patient can be treated by many doctors. A patient has prescriptions. Each patient can have many prescriptions, but each prescription is unique to the patient. A patient also receives surgery. A patient can receive many surgeries, but each surgery is unique to the patient. A patient also has appointments at the

clinic. Each patient can have multiple appointments, but each appointment is unique to a patient.