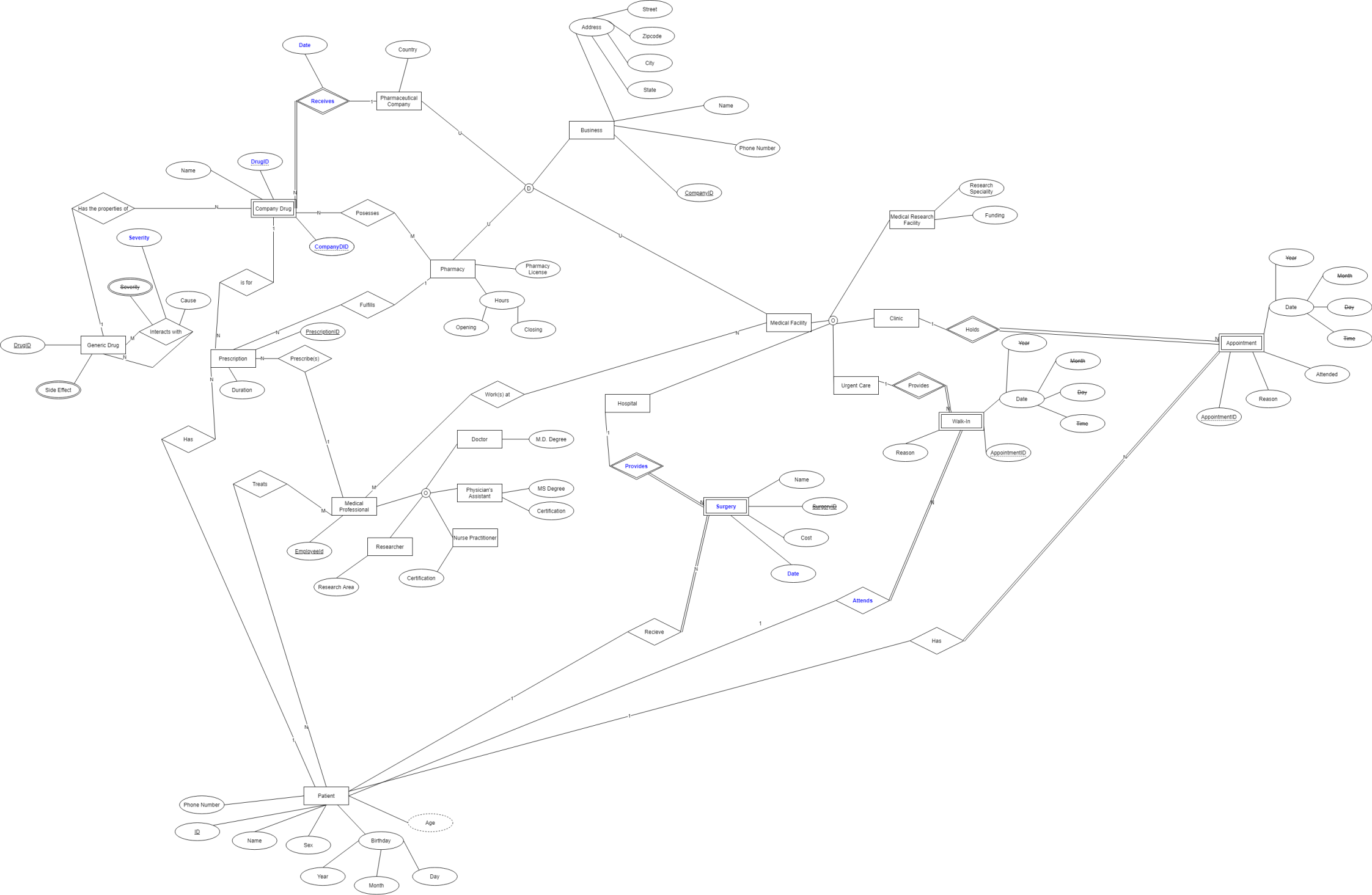
Date
Country
Receives
Pharmaceutical Company
Address
Street
Zipcode
City
State
Business
Name
Phone Number
CompanyID
Name
DrugID
Company Drug
Has the properties of
Posesses
CompanyDID
Severity
Severity
Cause
Interacts with
DrugID
Generic Drug
Side Effect
is for
Pharmacy
Pharmacy License
Hours
Opening
Closing
Fulfills
PrescriptionID
Prescription
Prescribe(s)
Duration
Has
Work(s) at
Medical Facility
Research Speciality
Funding
Medical Research Facility
Clinic
Holds
Urgent Care
Provides
Hospital
Provides
Walk-In
Reason
AppointmentID
Year
Month
Day
Time
Appointment
Year
Month
Day
Time
Attended
Reason
AppointmentID
Doctor
M.D. Degree
Physician's Assistant
MS Degree
Certification
Nurse Practitioner
Researcher
Research Area
Certification
Medical Professional
EmployeeId
Treats
Surgery
Name
SurgeryID
Cost
Date
Recieve
Attends
Has
Patient
Phone Number
ID
Name
Sex
Birthday
Year
Month
Day
Age

ENTITY DICTIONARY:

Entity: Appointment
Description: A scheduled time for a patient to have when attending a clinic
Attributes:

- Attended: Boolean, a value to see if the person is going to the appointment
- AppointmentID: Varchar(16) a unique identification number, Weak Key
- Date: date, A year, month, day, and time
- Reason: Varchar(100), brief description for the appointment

Entity: Business
Description: An organization that will interact with the medication.
Attributes:

- Address: Varchar(100), a street, Zip code, city, and state
- CompanyID: Varchar(16), a unique identification number, Primary Key
- Name: Varchar(50), a name of the Company
- Phone Number: varchar(10), a 10-digit long number

Entity: Clinic
Description: A medical facility that holds appointments with patients
Attributes:

- No attributes

Entity: Company Drug
Description: A drug that is a variation of a generic drug
Attributes:

- CompanyID: Varchar(16), a unique identification number, Weak Key
- DrugID: Varchar(16), a unique identification number, Weak Key
- Name: Varchar(40), a name to identify the drug

Entity: Doctor
Description: A medical professional that has acquired a MD Degree
Attributes:

- MD Degree: Varchar(40), specifies the type of degree obtained.

Entity: Generic Drug
Description: The base form of a drug
Attributes:

- DrugID: Varchar(16), a unique identification number, Primary Key
- Side Effect: Varchar(100), a brief description of the possible side effects

Entity: Hospital

Description: A Medical Facility that provides Surgery
Attributes:

- No Attributes

Entity: Medical Facility
Description: A business that provides varying options of medical assistance
Attributes:

- No Attributes

Entity: Medical Professional
Description: An individual that provides healthcare services.
Attribute:

- EmployeeID: Varchar(16), a unique identification number, Primary Key

Entity: Medical Research Facility
Description: A facility in which scientific test are run to understand new Medicines and Diseases.
Attributes:

- Research Specialty: Varchar(50), the research type
- Funding: int, the amount of money received for research

Entity: Nurse Practitioner
Description: A Nurse who can treat patients without direct supervision of a doctor
Attributes:

- Certification: Varchar(40), specifies the type of certification

Entity: Patient
Description: An individual seeking medical assistance
Attributes:

- ID: Varchar(16), a unique identification number, Primary Key
- Phone Number: varchar(10), a 10-digit long number
- Name: Varchar(20), the name of the individual
- Sex: Varchar(1), The biological sex of the individual being: F or M
- Birthday: Varchar(8), The date, month, and year they were born
- Age: int, the age of the individual

Entity: Pharmaceutical Company
Description: A company that creates drugs.
Attribute:

- Country: Varchar(2), a 2-letter abbreviation of the country of operation

Entity: Pharmacy
Description: A location that people can purchase the drugs from
Attributes:

- Pharmacy License: Varchar(16), A unique license number
- Hours: Varchar(30), opening and closing times displayed

Entity: Physician's Assistant
Description: A person who assists a physician with their clinical procedures.
Attributes:

- MS Degree: Varchar(40), specifies the type of degree obtained.
- Certification: Varchar(40), specifies the type of certification

Entity: Prescription
Description: A document that has a duration for a company drug to a patient
Attributes:

- Duration: int, establishes a period of time for the use of the drug
- PrescriptionID: Varchar(16), a unique identification number, Primary Key

Entity: Researcher
Description: An individual tasked with the further understanding a specific area
Attributes:

- Research Area: Varchar(20), the research topic

Entity: Surgery (Changed to a Weak Entity)
Description: A intensive medical procedure that a patient will receive that
Attributes:

- Cost: int, the dollar amount of the surgery
- Date: date, the day, month, year, and time of the surgery
- Name: Varchar(20), the name of the surgery
- ~~SurgeryID: Varchar(16), a unique identification number, Primary Key~~

Entity: Urgent Care
Description: A medical facility that provide walk-in availability for medical examination.
Attributes:

- No attributes

Entity: Walk-In
Description: A doctor appointment that does not require pre-existing scheduling
Attributes:

- AppointmentID: Varchar(16) a unique identification number, Weak Key
- Date: date, the day, month, year, and time of the walk in
- Reason: Varchar(100), brief description for the appointment

Relation Dictionary

Relationship: Creates
Description: A patient attends a walk-in visit. Walk-in appointments are attended by patients. **Entities:** Patient, Walk-In
Cardinality: 1:N

~~**Relationship:** Creates~~
~~**Description:** A pharmaceutical company can create many company drugs. Many company drugs are created by a pharmaceutical company.~~
~~**Entities:** Company Drug, Pharmaceutical Company~~
~~**Cardinality:** 1:N~~

Relationship: Fulfills
Description: A pharmacy can fulfill many prescriptions. Many prescriptions are fulfilled by a pharmacy.
Entities: Pharmacy, Prescription
Cardinality: 1:N

Relationship: Has
Description: A patient can have many prescriptions. There are many prescriptions that can be owned by a patient.
Entities: Prescription, Patient
Cardinality: 1:N

Relationship: Has
Description: A patient can have many appointments. There are many appointments that a single patient can have.
Entities: Patient, Appointment
Cardinality: 1:N

Relationship: Has the properties of
Description: Many company drugs have the property of a generic drug. A generic drug can have the properties of many company drugs.
Entities: Company Drug, Generic Drug
Cardinality: 1:N

Relationship: Holds
Description: A clinic facility holds many appointments. There are many appointments that are held by a clinic.
Entities: Clinic, Appointment
Cardinality: 1:N

Relationship: Interacts with
Description: A generic drug interacts with many generic drugs. Many generic drugs interact with a generic drug.
Entities: Generic Drug, Generic Drug
Cardinality: 1:N
Attributes:

- Severity: int, a number 1 to 10 describing the severity
- Cause: Varchar(20), describes the cause

Relationship: Is for
Description: A company drug is for many different prescriptions. There are several prescriptions that are for a company drug.
Entities: Company Drug, Prescription
Cardinality: 1:N

Relationship: Possesses
Description: Many pharmacies can be in possession of many different drugs. Many company drugs can be possessed by many different companies.
Entities: Pharmacy, Company Drug
Cardinality: M:N

Relationship: Prescribe(s)
Description: A medical professional can prescribe many prescriptions. Many prescriptions are prescribed by a medical professional.
Entities: Prescription, Medical Professional
Cardinality: 1:N

Relationship: Provides (Changed to a Weak Relationship)
Description: A hospital can provide many surgeries. There are many surgeries that are provided by a hospital.
Entities: Hospital, Surgery
Cardinality: 1:N

Relationship: Provides
Description: An urgent care facility can provide many walk-ins. There are many walk-ins that are provided by an urgent care facility.
Entities: Urgent Care, Walk-in
Cardinality: 1:N

Relationship: Receive
Description: A patient can receive many surgeries. There are many surgeries that can be received by a single patient.

Entities: Patient, Surgery
Cardinality: 1:N
Attribute:

- Date: date, the day, month, year

Relationship: Receives (Changed to a Weak Relationship)
Description: A pharmaceutical company can receive many company drugs. Many company drugs are sent to a pharmaceutical company.
Entities: Company Drug, Pharmaceutical Company
Cardinality: 1:N
Attribute:

- Date: date, the day, month, year

Relationship: Treats
Description: There are many medical professionals that treat many different patients. Many patients can be treated by many medical professionals.
Entities: Medical Professional, Patient
Cardinality: N:M

Relationship: Work(s) at
Description: There can be many medical professionals that work at different medical facilities. There are many medical facilities where many medical professionals work.
Entities: Medical Professional, Medical Facility
Cardinality: N:M

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 **receives company drugs. The relationship 'receives' has a date that it occurred on.** 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. **It also has a CompanyDrugID as a primary key and a weak key called DrugID.** 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.~~ **A surgery has a name, cost and date, and cannot exist without a hospital to perform it at.** 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.