**Business Processes**

Rules describing the relationships of these entities are as follows:

1. A **patient** is someone who is being treated by the **physician**.
2. A **physician** is someone who treats a **patient.**
3. A **diagnosis** is something that a **patient** has and the **physician** treats.
4. A **facility** is one of two physical therapy buildings where the **patient** gets treated by the **physician.**
5. An **insurance** is a company who may pay a **patient**’s **bill**.
6. A **bill** is how much a **patient** needs to pay.
7. An **appointment** is when a **patient** visits for consultation from a **physician** in a **facility**.

Relationship Rules

1. A **patient** may consult with one or more **physician.**
2. A **physician** may have one or more **patient**.
3. A **patient** can make one or more **appointments**.
4. An **appointment** may be done by a **patient**.
5. An **appointment** must have one **physician**.
6. A **physician** must attend one or more **appointments**.
7. A **physician** must belong to one of two **facilities**.
8. A **facility** must have one or more **physicians**.
9. An **appointment** may yield one or more **diagnoses**.
10. A **diagnoses** may result from an **appointment**.
11. An **appointment** may create one or more **bills**.
12. A **bill** may result from an **appointment**.
13. An **insurance** may pay one or more **bills**.
14. A **bill** must be paid by the **insurance**.

Attribute Rules

1. A **patient** must have firstName, lastName, phoneNumber, birthDate, streetAddress, City, State, Zipcode, and patientID.
   1. firstName: nvarchar(50)
   2. lastName: nvarchar(50)
   3. patientID: int
   4. phoneNumber: bigint
   5. birthDate: Date
   6. streetAddress: nvarchar(60)
   7. City: nvarchar(60)
   8. State: nvarchar(60)
   9. Zipcode: int
2. A **physician** must have physicianID, firstName, lastName, birthDate, streetAddress, State, City, Zipcode, and phoneNumber.
   1. physicianID: int
   2. firstName: nvarchar(50)
   3. lastName: nvarchar(50)
   4. birthDate: Date
   5. phoneNumber: bigint
   6. streetAddress: nvarchar(60)
   7. City: nvarchar(60)
   8. State: nvarchar(60)
   9. Zipcode: int
3. A **facility** must have a facilityID, facilityName, streetAddress, City, State, and Zipcode.
   1. facilityID: int
   2. facilityName: nvarchar(50)
   3. streetAddress: nvarchar(60)
   4. City: nvarchar(60)
   5. State: nvarchar(60)
   6. Zipcode: int
4. An **appointment** must have appointmentDate, Issue, and appointmentID.
   1. appointmentDate: Date
   2. Issue: nvarchar(50)
   3. appointmentID: int
5. A **diagnosis** must have diagnosisID, treatment, and category.
   1. diagnosisID: int
   2. Treatment: nvarchar(75)
   3. Category: nvarchar(50)
6. A **bill** must have billID, Amount, issuedDate, and dueDate.
   1. billID: int
   2. Amount: int
   3. issuedDate: Date
   4. dueDate: Date
7. An **insurance** must have insuranceID, companyName, streetAddress, City, State, Zipcode, phoneNumber, and Category.
   1. insuranceID: int
   2. companyName: nvarchar(60)
   3. streetAddress: nvarchar(60)
   4. City: nvarchar(60)
   5. State: nvarchar(60)
   6. Zipcode: int
   7. phoneNumber: bigint
   8. Category: nvarchar(60)