The Relational Model

A diagram of a company

Description automatically generated

1. GovernmentRegualtorReports:

Functional Dependencies:

**Attributes**: ReportID, RegulatorID

ReportID, RegulatorID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Report:

Functional Dependencies:

**Attributes**: ReportID, ReportType, GenerateDate

ReportID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. HealthProvider:

Functional Dependencies:

**Attributes**: ProviderID, Availability, Specialty, Name

ProviderID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. GovernmentRegulator:

Functional Dependencies:

**Attributes**: RegulatorID, Name, Position

RegulatorID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Regulator\_Access\_HealthRecord:

Functional Dependencies:

**Attributes**: RegulatorID, RecordID

RegulatorID, RecordID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. HealthRecord:

Functional Dependencies:

**Attributes**: RecordID, TypeOfIncident, DateOfIncident, Details, AppointmentID, PatientID, ProviderID

RecordID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. ReportGeneration:

Functional Dependencies:

**Attributes**: NotificationID, ProviderID, ReportID

NotificationID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. InsuranceCompany:

Functional Dependencies:

**Attributes**: InsuranceID, CompanyName, Email, Phone

InsuranceID → {all attributes}

CompanyName → {all attributes}

Email → {all attributes}

Phone → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies. (in this relation, all attributes are candidate keys, but we choose the InsuranceID as a primary key)

1. InsuranceCompanyPackages:

Functional Dependencies:

**Attributes**: InsuranceID, PackageID

InsuranceID, PackageID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Package:

Functional Dependencies:

**Attributes**: PackageID

PackageID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. PackageDetails:

Functional Dependencies:

**Attributes**: PackageID, IllnessType, Percentage

PackageID, IllnessType, Percentage → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. HealthProviderAppointments:

Functional Dependencies:

**Attributes**: ProviderID, AppointmentID

ProviderID, AppointmentID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Appointment:

Functional Dependencies:

**Attributes**: AppointmentID, EmergencyStatus, Time, TypeOfIllness, PaymentAmount, PaymentMethod, PatientID

AppointmentID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Patient:

Functional Dependencies:

**Attributes**: PatientID, Name, PhoneNo, NationalID, InsuranceStatus, Birthdate, Gender, Email, Age, InsuranceID, PackageID

PatientID → {all attributes}

NationalID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Notification:

Functional Dependencies:

**Attributes**: NotificationID, Message, NotificationType, Date, PatientID, InsuranceID, AppointmentID

NotificationID → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Card:

Functional Dependencies:

**Attributes**: CardNumber, ExpirationDate, CardHolderName, CardType, BankName, PatientID

CardNumber → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. Caregiver:

Functional Dependencies:

**Attributes**: PatientID, Name, Relationship, Phone, Email

PatientID, Name, Relationship → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.

1. CaregiversNotification:

Functional Dependencies:

**Attributes**: NotificationID, PatientID, Name, Relationship

NotificationID, PatientID, Name, Relationship → {all attributes}

Normalization:

**BCNF**: All attributes are determined by a superkey and there are no transitive dependencies.