

Step 1:

Arrange the FDs into groups by determinant

PatNo -> PatAge, PatZip

PatZip -> PatCity

VisitNo -> VisitDate, PatNo

ProvNo -> ProvSpeciality, ProvEmail

VisitNo, ProvNo -> Diagnosis

ProvEmail -> ProvNo

Step 2:

For each FD group, make a table with the determinant as the primary key. In the table list, the primary keys are underlined.

Patient(PatNo, PatAge, PatZip)

FOREIGN KEY PatZip REFERENCES Location(PatZip)

Location(PatZip, PatCity)

Visit(VisitNo, VisitDate, PatNo)

FOREIGN KEY PatNo REFERENCES Patient(PatNo)

ProvDetail(ProvNo, ProvSpeciality, ProvEmail)

FOREIGN KEY ProvEmail REFERENCES ProvEmail(ProvEmail)

Diagnosis(VisitNo, ProvNo, Diagnosis)

FOREIGN KEY VisitNo REFERENCES Visit(VisitNo)

FOREIGN KEY ProvNo REFERENCES ProvDetail(ProvNo)

ProvEmail(ProvEmail, ProvNo)

FOREIGN KEY ProvNo REFERENCES ProvDetail(ProvNo)

Step 3:

Merge tables with the same columns. The ProvDetail and ProvEmail tables are merged.

UNIQUE constraint is added for ProvEmail.

ProvDetail(ProvNo, ProvSpeciality, ProvEmail)

UNIQUE ProvEmail