|  |
| --- |
| PatNo → PatAge |
| PatZip9 → PatCity |
| VisitNo → VisitDate  PatNo → PatZip9  ProvNo → ProvSpecialty |
| VisitNo → PatNo |
| VisitNo, ProvNo → Diagnosis  ProvNo → ProvEmail  ProvEmail → ProvNo |

Step 1: Arrange the remaining FDs into groups by determinant

PatNo -> PatAge, PatZip9

PatZip9->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, PatZip9)

FOREIGN KEY(PatZip9) REFERENCES Address

Address(PatZip9,PatCity)

Visit(VisitNo, VisitDate, PatNo)

FOREIGN KEY(PatNo) REFERENCES Patient

Prov(ProvNo ,ProvSpeciality, ProvEmail)

FOREIGN KEY(ProvEmail) REFERENCES ProvDetails

Result(VisitNo, ProvNo , Diagnosis)

FOREIGN KEY(VisitNo) REFERENCES Visit

FOREIGN KEY(ProvNo) REFERENCES Prov

ProvDetails(ProvEmail, ProvNo)

FOREIGN KEY(ProvNo) REFERENCES Prov

Step 3: Merge tables with the same columns

Patient(PatNo, PatAge, PatZip9)

FOREIGN KEY(PatZip9) REFERENCES Address

Address(PatZip9,PatCity)

Visit(VisitNo, VisitDate, PatNo)

FOREIGN KEY(PatNo) REFERENCES Patient

Prov(ProvNo ,ProvSpeciality, ProvEmail)

FOREIGN KEY(ProvEmail) REFERENCES ProvDetails

UNIQUE(ProvEmail)

Result(VisitNo, ProvNo , Diagnosis)

FOREIGN KEY(VisitNo) REFERENCES Visit

FOREIGN KEY(ProvNo) REFERENCES Prov