Problem 2

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| --- |
| 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 → PatNo, VisitDate

ProvNo → ProvEmail, ProvSpeciality

ProvEmail → ProvNo

VisitNo, ProvNo → Diagnosis

**Step 2: For each FD group, make a table with the determinant as the primary key.**

Patient (PatNo, PatAge, PatZip9) FOREIGN KEY (PatZip9) REFERENCES Patient

PatZip (PatZip9, PatCity) FOREIGN KEY (PatCity) REFERENCES Patient

Province (ProvNo, ProvEmail, ProvSpeciality) FOREIGN KEY (ProvEmail) REFERENCES ProvEmail

ProvEmail (ProvEmail, ProvNo) FOREIGN KEY (ProvEmail) REFERENCES Province

Visit (VisitNo, PatNo, VisitDate) FOREIGN KEY (PatNo) REFERENCES Patient

ProvienceVisit (VisitNo, ProvNo, Diagnosis) FOREIGN KEY (VisitNo) REFERENCES Visit

FOREIGN KEY KEY (ProvNo) REFERENCES Province

**Step 3: Merge tables with the same columns.**

Patient (PatNo, PatAge, PatZip9, PatCity)

Proovince (ProvNo, ProvEmail, ProvSpeciality)

UNIQUE(ProvEmail)

Visit (VisitNo, PatNo, VisitDate)

FOREIGN KEY (PatNo) REFERENCES Patient

ProvVisit (VisitNo, ProvNo, Diagnosis)

FOREIGN KEY (VisitNo) REFERENCES Visit

FOREIGN KEY (ProvNo) REFERENCES Province