

MODULE 11 Assignment

2.

Step 1: Arrange the FDs into groups by determinant

PatNo \rightarrow PatAge, PatZip9
PatZip9 \rightarrow PatCity
VisitNo \rightarrow VisitDate, PatNo
ProvNo \rightarrow ProvSpecialty, ProvEmail
VisitNo, ProvNo \rightarrow Diagnosis
ProvEmail \rightarrow ProvNo

Step 2: Define Tables. In the table list, the primary keys are underlined.

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

Zip (PatZip9, PatCity)

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

Provider (ProvNo, ProvSpecialty, ProvEmail)

Results (VisitNo, ProvNo, Diagnosis)
FOREIGN KEY (VisitNo) REFERENCES Visit
FOREIGN KEY (ProvNo) REFERENCES Provider

Step 3: Merge tables with the same columns. Patient and Zip tables can be merged as nine-digit zip references only one city name (FK reference for PatZip9 also removed).

Patient (PatNo, PatAge, PatCity, PatZip9)

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

Provider (ProvNo, ProvSpecialty, ProvEmail)

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

FOREIGN KEY (ProvNo) REFERENCES Provider