**Problem 2**

**Step 1: Having Same LHS into same group:**

PatNo -> PatAge,PatZip9

PatZip9 -> PatCity

VistiNo -> VisitDate,PatNo

ProvNo -> ProvSpeciality,ProvEmail

VisitNo,ProvNo -> Diagnosis

ProvEmail -> ProvNo

6 FD Groups are there

**Step 2: For each FD group, make table and set PK and FK.**

**Primary Keys are underlined. Table Name is in Italic,Bold.**

***Patient***(PatNo, PatAge, PatZip9

FOREIGN KEY(PatZip9) REFERENCES ***PatientZip***)

***PatientZip***(PatZip9, PatCity)

***Visit***(VisitNo, VisitDate, PatNo

FOREIGN KEY(PatNo) REFERENCES ***Patient***)

***Provider***(ProvNo, ProvSpeciality, ProvEmail

FOREIGN KEY(ProvEmail) REFERENCES ***ProviderEmail***)

***ProvVisit***( ProvNo, VisitNo, Diagnosis

FOREIGN KEY(ProvNo) REFERENCES ***Provider***

FOREIGN KEY(VisitNo) REFERENCES ***Visit)***

***ProviderEmail***(ProvEmail,ProvNo

FOREIGN KEY(ProvNo) REFERENCES ***Provider)***

**Step 3: Merge tables:**

**Merge *Provider* and *ProviderEmail* and Unique(**ProvEmail**)**

***Patient***(PatNo,PatAge,PatZip9)

FOREIGN KEY(PatZip9) REFERENCES ***PatientZip***

***PatientZip***(PatZip9, PatCity)

***Visit***(VisitNo, VisitDate, PatNo)

FOREIGN KEY(PatNo) REFERENCES ***Patient***

***Provider***(ProvNo,ProvSpeciality,ProvEmail)

UNIQUE(ProvEmail)

***ProvVisit***(**ProvNo, VisitNo,** Diagnosis)

FOREIGN KEY(ProvNo) REFERENCES ***Provider***

FOREIGN KEY(VisitNo) REFERENCES ***Visit***