Problem 2

1. Finding keys

PatNo -> PatAge, PatZip9  
PatZip9 -> PatCity  
VisitNo -> VisitDate, PatNo  
ProvNo -> ProvSpecialty, ProvEmail  
VisitNo, ProvNo ->Diagnosis  
ProvEmail -> ProvNo  
  
PatNo -> PatAge, Patzip9, PatCity (PatNo exist on RHS)  
VisitNo -> VisitDate, PatNo,PatAge,PatZip9,PatAge  
ProvNo -> ProvSpecialty,ProvEmail (ProvNo exist on RHS)  
VisitNo, ProvNo-> Diagnosis

Key : VisitNo,ProvNo

1. Normalized functional dependencies:

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

1. **Tables**
2. Patient (PatNo,PatAge,PatZip9)  
   FOREIGN KEY (patzip) REFERENCES Location
3. Location(PatZip9,PatCity)
4. Visit(VisitNo, VisitDate,PatNo,PatAge,PatZip9,PatAge)  
   FOREIGN KEY (patno) REFERENCES Patient
5. Provider (ProvNo ,ProvSpeciality,ProvEmail)
6. Diagnose (ProvNo, VisitNo, Diagnosis)  
   FOREIGN KEY (provno) REFERENCES Provider  
   FOREIGN KEY (visitno) REFERENCES Visit