Functional Dependencies and Normalisation

1. **Patient** :
   R = (**Email**, Password, Name, Address, Gender)
   FDs:
   a. Email -> Password
   b. Email -> Name
   c. Email -> Address
   d. Email -> Gender

   Table is in 1NF

   since all attributes are atomic.

   Table is in 2NF since there is no partial dependency.

   Table is in 3NF due to absence of any transitive dependency.

2. **Medical History** :
   R = (**id**, Date, Conditions, Surgeries, Medication)
   FDs:
   a. id -> Password
   b. id -> Date
   c. id -> Conditions
   d. id -> Surgeries
   e. id -> Medication

   Table is in 1NF since all attributes are atomic.

   Table is in 2NF since there is no partial dependency.

   Table is in 3NF due to absence of any transitive dependency.

3. **Doctor** :
   R = (**email**, gender, password, name)
   FDs:
   a. email -> gender
   b. email -> password
   c. email -> name

   Table is in 1NF since all attributes are atomic.

Table is in 2NF since there is no partial dependency.

Table is in 3NF due to absence of any transitive dependency.

4. **Appointment:**
   R = (**id**, date, start time, end time, status)
   FDs:
   a. id -> date
   b. id -> start time
   c. id -> end time
   d. id -> status

   Table is in 1NF since all attributes are atomic.

   Table is in 2NF since there is no partial dependency.

   Table is in 3NF due to absence of any transitive dependency.

5. **PatientsAttendAppointments:**
   R = (**patient, appointment**, concerns, symptoms)
   FDs:
   a. (patient, appointment) -> concerns
   b. (patient, appointment) -> symptoms

   Table is in 1NF since all attributes are atomic.

   Table is in 2NF since there is no partial dependency.

   Table is in 3NF due to absence of any transitive dependency.

6. **Schedule:**
   R = (**id, start time, end time, break time, day**)

Since entire table is the key, it does not have partial and transitive dependencies. It also has atomic attributes.

Hence it is in 3NF.

7. **PatientsFillHistory:**
   R = (Patient, **History**)
   FDs:
   a. History -> Patient

   Table is in 1NF since all attributes are atomic.

   Table is in 2NF since there is no partial dependency.

   Table is in 3NF due to absence of any transitive dependency.

8. **Diagnose:**
   R = (**appointment, doctor,diagnosis, prescription**)
   FDs:

   a. (appointment, doctor) -> diagnosis

   b. (appointment, doctor) -> prescription

   Table is in 1NF since all attributes are atomic.

   Table is in 2NF since there is no partial dependency.

   Table is in 3NF due to absence of any transitive dependency.

9. **DoctorViewsHistory:**
   R = (**history, doctor**)
   Since entire table is the key, it does not have partial and transitive dependencies. It also has atomic attributes.
   Hence it is in 3NF.