Member:

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Database Concept

Entity	Relation	Attribute	Data Type	Constraint
Patient	One to Many	PatientID (PK)	int	11
		DoctorID (FK)	int	11
		PatientName	varchar	100
		PatientDOB	date	-
		PatientGender	char	2
Doctor	Many to One	DoctorID (PK)	int	11
		DoctorName	varchar	100
		DoctorLicense	int	11
Diagnose	One to One	DiagnosisID (PK)	int	11
		PatientID (FK)	int	11
		DoctorID (FK)	int	11
		DiagnosisDate	date	-
		DiagnosisDescription	MEDIUMTEXT	200
Room	Many to One	RoomID (PK)	int	11
		PatientID (FK)	int	11
		RoomType	varchar	6
Payment	One to One	PayID (PK)	int	11
		PatientID (FK)	int	11
		PayTotal	int	11

1. Patient (One to Many)
   Each patient can have many relationships with other entities, the primary key patient entity is PatientID. A many-to-many relationship is appropriate because there can be multiple associations between patients and each of the related entities.
   The relationship is:
   - Patient – Doctor: A patient can consult with one doctor, and a doctor can treat multiple patients.

   Meanwhile, the attributes are:
   - PatientName: this attribute stores the name of the patient to be treated at the hospital.
   - PatientDOB: this attribute stores the date of birth of the patient.
   - PatientGender: this attribute stores the gender of the patient (Female/Male).

2. Doctor (Many to One)
   Cardinality is a one-to-many relationship with another entity. The relationship is:
   - Doctor – Patient: A doctor can have multiple patients, while each patient is associated with only one doctor.

   Meanwhile, the attributes are:

   - DoctorID (PK): this attribute is Primary Key.
   - DoctorName: this attribute stores the name of the doctor.
   - DoctorLicense: this attribute stores the license information of the doctor, such as their medical license number.
3. Diagnose (One to One)
   Entity Diagnose: This entity represents the patient's diagnosis. The attributes we use include DiagnosisID (Primary Key), PatientID (Foreign Key), DoctorID (Foreign Key), DiagnosisDate, and DiagnosisDescription. With relationship:
   - Diagnosis – Patient: There is a relationship between the diagnosis entity and the Patient entity. A patient can have many diagnoses, and each diagnosis is associated with a specific patient.

   The attributes include:

   - DiagnosisDate: The DiagnosisDate represents the date of diagnosis made for a specific patient. This's very important information because it helps track the timeline of medical conditions and provides insight into disease progression.
   - DiagnosisDescription: The DiagnosisDescription represents the textual diagnosis. It provides additional details about the medical condition, its characteristics, symptoms, or other relevant information related to the diagnosis.
4. Room (Many to One)
   Entity Room: The room entity represents the physical space inside a medical facility, such as a hospital or clinic. The attributes we use include RoomID (Primary Key), PatientD (Foreign Key), and Room Type. With Relationship:
   - Room – Patient: There is a relationship between the Room entity and the Patient entity. A patient can be assigned to a specific room, and each room can accommodate multiple patients. This relationship is usually a one-to-many relationship, because one room can have many patients, but each patient is only assigned to one room.

   The Attributes Include:
   - Room Type: In the context of a hospital, there are several types of rooms that generally exist. Several types of rooms can be found in a hospital including:
     - Mabel Room: This room is used to treat patients who need long-term care or intensive monitoring.

- Catez Room: This room is used to carry out physical examinations, blood sampling, or other diagnostic procedures.
- Sisca Room: This room is used to perform medical procedures or actions that require a special room.
- Shock Room: This room is used to provide immediate medical care to patients who experience emergencies or accidents.
- etc.

5. Payment (One to One)

   The one-to-one relationship between “Payment” and “Patient” suggests that each payment is specific to a single patient and each patient has one associated payment record. The relationship is:

   - PayID (PK): This attribute uniquely identifies each payment in the “Payment” entity. It references or tracking numbers to uniquely identify and differentiate individual payments in a payment system or database.
   - PatientID (FK): This attribute is used to establish a connection between the “Payment” entity and the “Patient” entity. It represents the patient associated with the payment and acts as a foreign key referencing the primary key of the “Patient” entity.
   - PayTotal: This attribute stores the total amount of the payment.

Entity Relationship Diagram