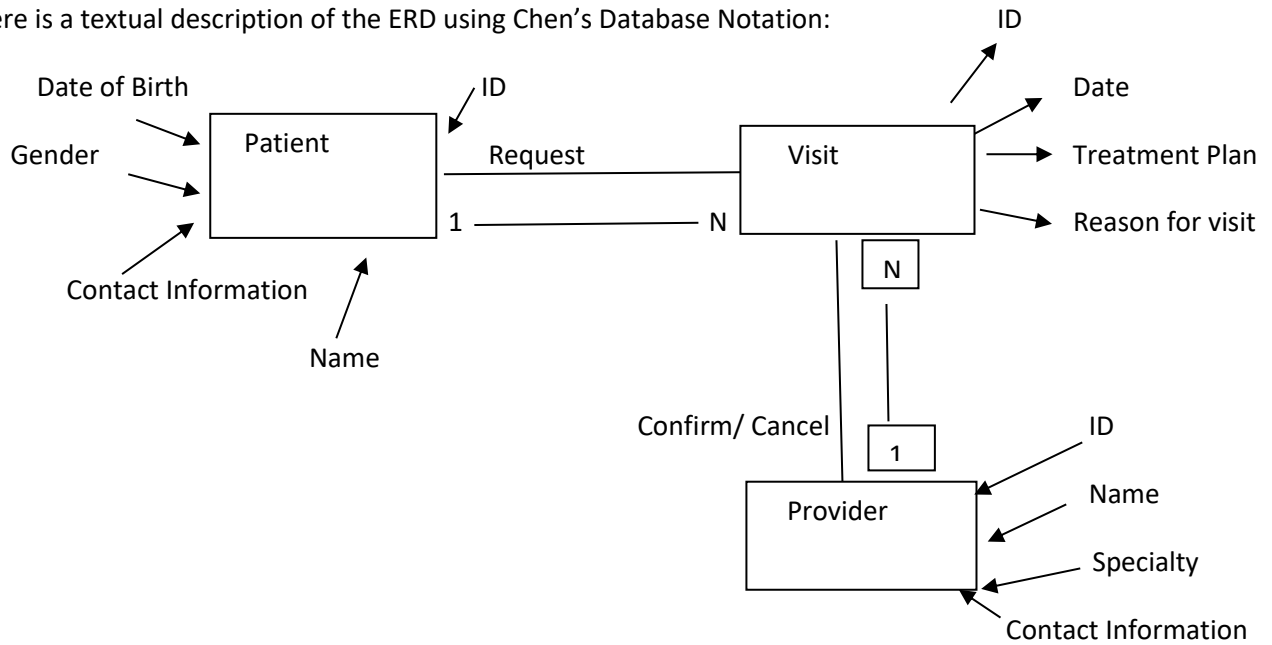


6.

In Chen's Database Notation, entities are represented by rectangles, and their attributes are represented by ellipses connected to the entity rectangle. The relationships between entities are represented by lines connecting the rectangles.

Here is a textual description of the ERD using Chen's Database Notation:

Here is a textual description of the ERD using Chen's Database Notation:



#### Entities:

Patient (Attributes: ID, Name, Date of Birth, Gender, Contact Information)

Visit (Attributes: ID, Date, Reason for Visit, Diagnosis, Treatment Plan)

Provider (Attributes: ID, Name, Specialty, Contact Information)

#### Relationships:

One-to-Many: A patient can have multiple visits (Cardinality: 1:N)

Many-to-One: A visit is associated with one provider (Cardinality: N:1)

#### Attributes:

Visit: Date, Reason for Visit, Diagnosis, Treatment Plan

Provider: ID, Name, Specialty, Contact Information

**Note:** The cardinalities mentioned above are based on the assumption that a patient can have multiple visits, and a visit is associated with one provider. The actual cardinalities may vary depending on the specific requirements of the healthcare database.

8.

Here is an example of SQL code to create the database tables observed from the ERD with all constraints:

Patient

<u>ID</u>	Name	Date of Birth	Gender	Contact Information
	Norah Nuru	06-04-2000	Female	760776193

Visit

<u>ID</u>	Patient ID	Date	Reason for Visit	Provider ID	Treatment Plan
	Null	04-02-2025	Sick	Null	Check up

Provider

<u>ID</u>	Name	Specialty	Contact Information
	David Johnstone	Optician	703181759

The ID column is the primary key Column and it automatically generates a unique value for each new record.

The foreign key constraints in the visit table ensures that the patient ID and the provider ID column reference valid records in the patient and provider tables respectively.

This helps to maintain data integrity and ensures that the relationships between the tables are consistent.