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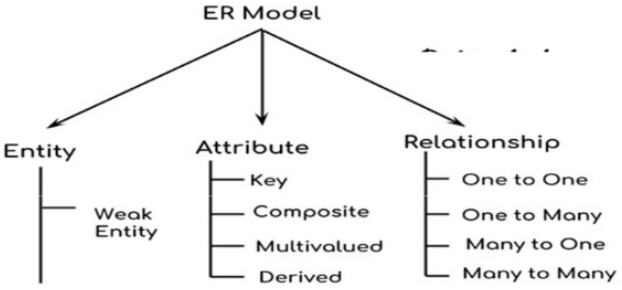
Experiment No.	**1**

AIM:	Prepare Case study and make an EER (Extended Entity Relationship) Model.
Program 1	
PROBLEM STATEMENT:	Create a EER Model of a Hospital Database System.
THEORY:	**ER Model:** An Entity–relationship model (ER model) describes the structure of a database with the help of a diagram, which is known as Entity Relationship Diagram (ER Diagram). An ER model is a design or blueprint of a database that can later be implemented as a database. The main components of E-R model are: entity set and relationship set. **What is an Entity Relationship Diagram (ER Diagram)?** An ER diagram shows the relationship among entity sets. An entity set is a group of similar entities and these entities can have attributes. In terms of DBMS, an entity is a table or attribute of a table in database, so by showing relationship among tables and their attributes, ER diagram shows the complete logical structure of a database. Let's have a look at a simple ER diagram to understand this concept.

Components of a ER Diagram:



Components of ER Diagram

Components:

1. Entity

An entity is an object or component of data. An entity is represented as rectangle in an ER diagram. There are 2 types of Entities:

1. Strong Entity
2. Weak Entity

2. Attributes

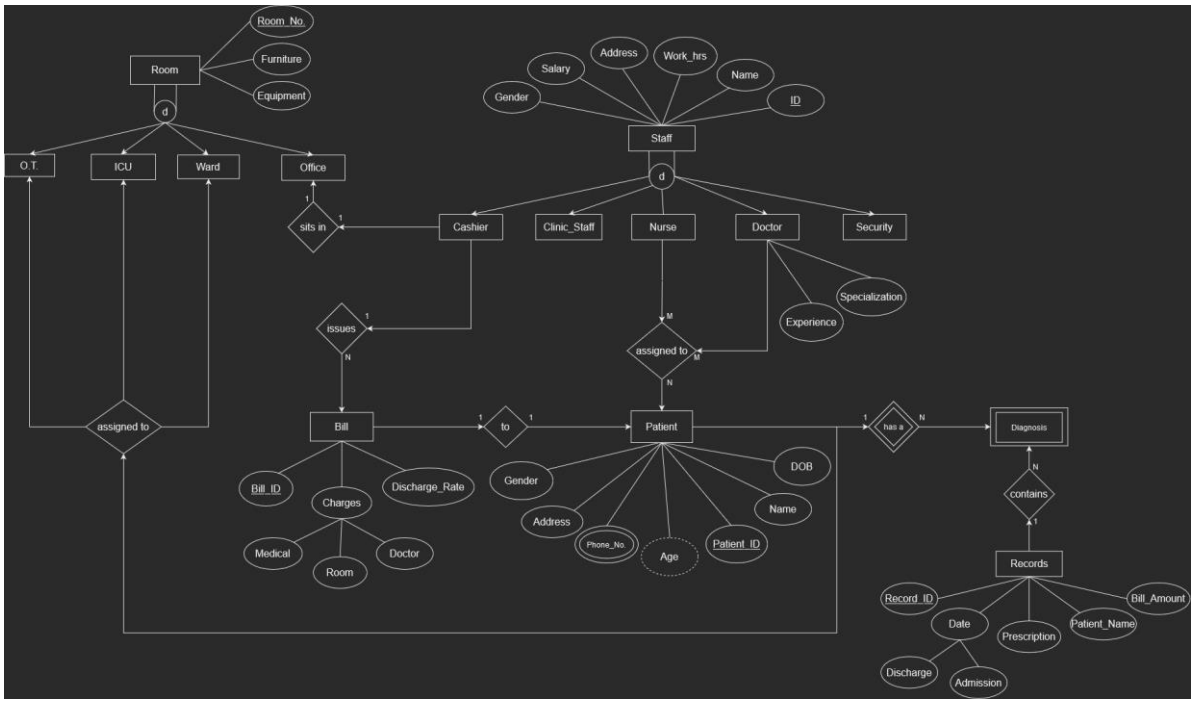
An attribute describes the property of an entity. An attribute is represented as Oval in an ER diagram. There are four types of attributes:

1. Key attribute
2. Composite attribute
3. Multivalued attribute
4. Derived attribute

3. Relationship:

The number of different entity sets participating in a relationship set is called as degree of a relationship set. There are 4 types of relationships:

a) Unary
b) Binary
c) Ternary
d) Quaternary

	4. Cardinality: Defines the numerical attributes of the relationship between two entities or entity sets. A relationship is represented by diamond shape in ER diagram, it shows the relationship among entities. There are four types of cardinal relationships: **1.** One to One **2.** One to Many **3.** Many to One **4.** Many to Many
EER MODEL: HOSPITAL DATABASE MANAGEMENT SYSTEM 	
CONCLUSION:	In this experiment, we learned how to do a case study on a particular database system and segregate the data into entities, relationships & attributes to make a sufficiently detailed and accurate EER Model to visualize the database system.