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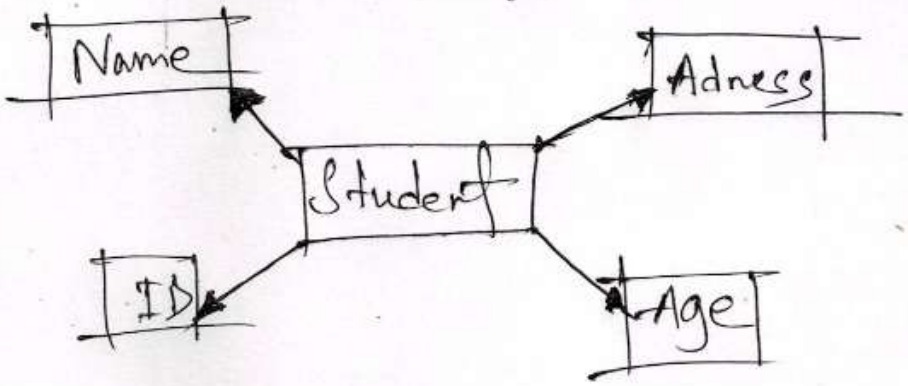
8th batch (evening) CSE

Ans to the Questions No: 1

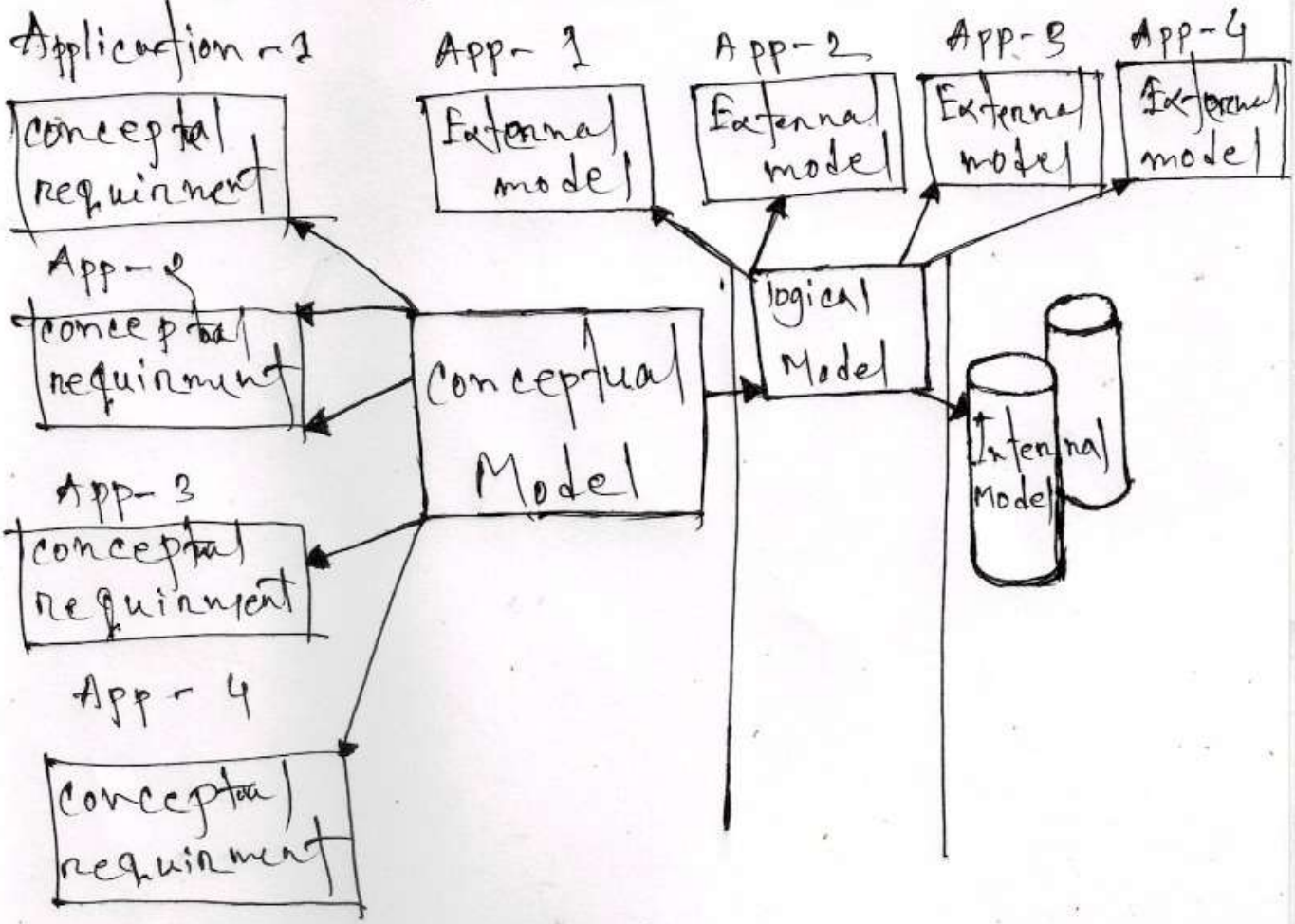
[a] Ans:

ER-Diagram



ER Diagram Example: Suppose we design a School Database, the student will be an Entity with attributes like Adress, Name, ID, Age, Etc. The Adress can be another entity with attributes like city, street name, Pin code, Etc and there will be a relationship between them.

[6] Database Design: Database design is collection of processes facilitate the designing, Development, Implemantation and maintenence of Enterprise Data management system. Propaerly designed database are easy to maintain, Improves data Consistency and are cost effective in terms of Disk storage space. The Database designer decides how the data elements connelate and what data Must be stored

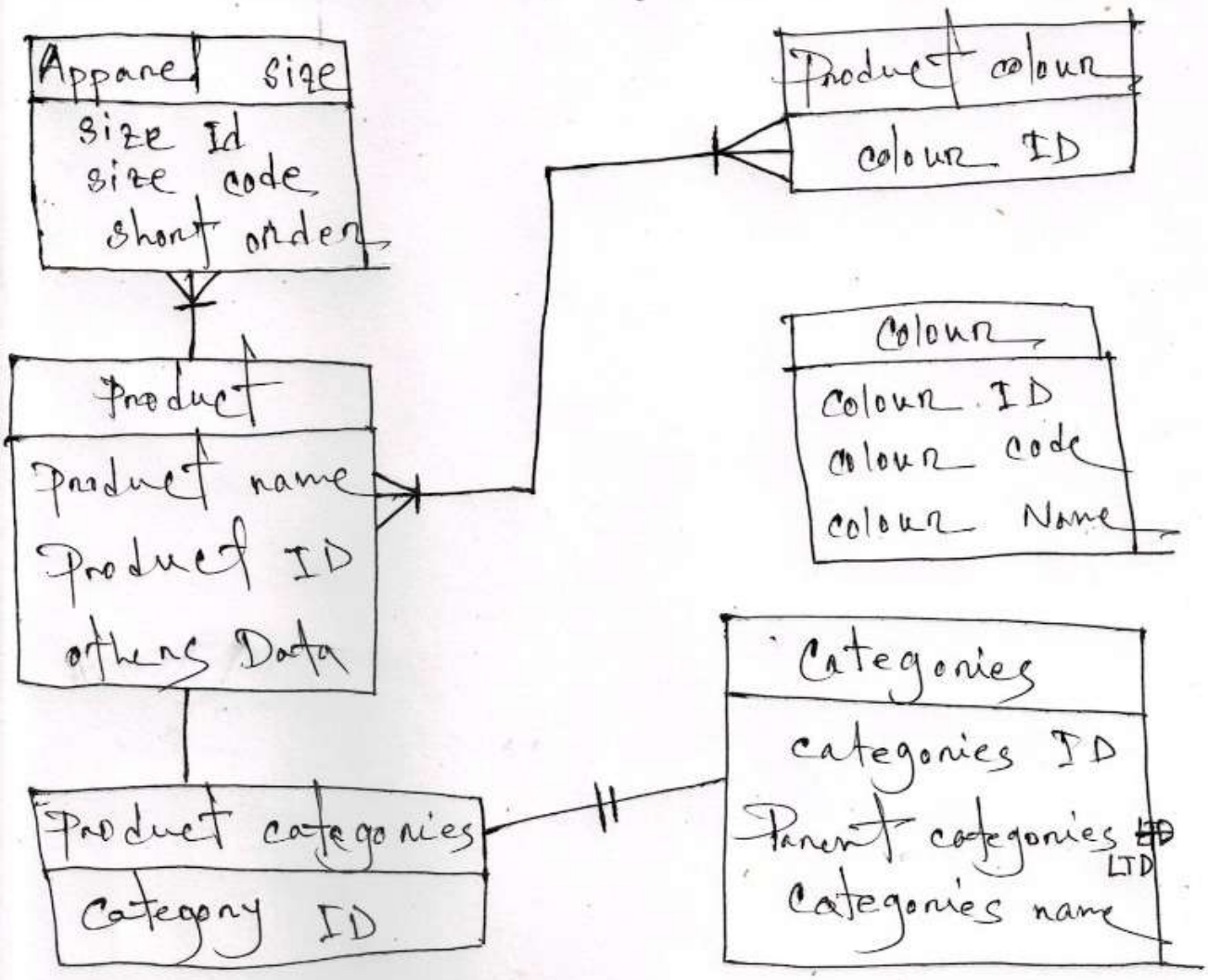


→ Database Design Process.

1

[C] Ans: Entity - Relationship Model :-

ER Diagram stands for Entity Relationship Diagram, also Known as ERD is a diagram that displays the Relationship of Entity set stored in a database. In other word, ER Diagram help to explain the logical structure of Database.



⇒ Entity Relationship model Diagram Example.

Ans to the Questions No:- 2

2

[a] Ans: **ER Data model:** E-R data full means are Entity Relationship Data Model. The Entity relationship (ER) Data model has existed for over 35 years. It is well suited to data Modelling for use with database because it is fairly abitract and is easy to discuss and explain. ER. Model are readily translated to relations. ER model-els also called an ER schema, are nespresented by ER diagrams.

ER Modelling is based on two concepts:-

⇒ Entities, defined as tabls that hold specific information (data).

⇒ Relationships, Defined as the associations or interactions between Entities. Here is an Example of how these two concept might be combined in an ER Data model:

Prof. Ba(Entity) teaches (Relationship) the Database system course. (Entity)

represent ER-diagram

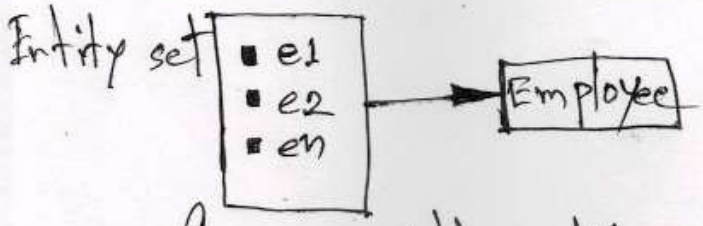
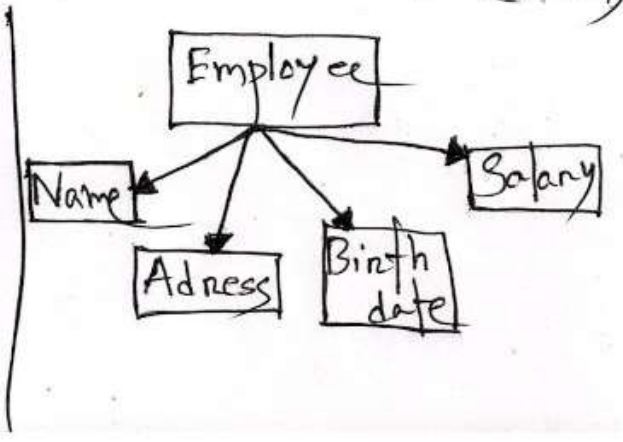


fig: EDR with entity type Employee



[b] Ans: Mapping Constraints: ⇒ A mapping constraint is a data constraint Entity can be related via a relationship set.

⇒ It is most useful in describing the relationship sets that involve more then two Entity set.

⇒ For binary relations set R on an entity set A and B there are four possible mapping cardinalities. These are as fallow :-

1. One to one (1:1)
2. One to many (1:M)
3. Many to one (M:1)
4. Many to many (M:M)

⇒ One to one: In one to one mapping, an Entity in E_1 is Associated with at most One Entity in E_1.

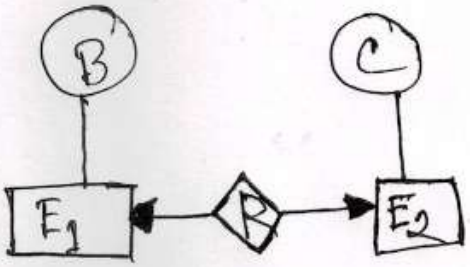
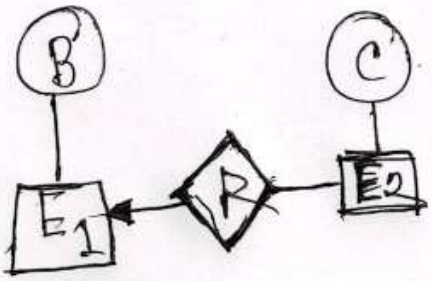


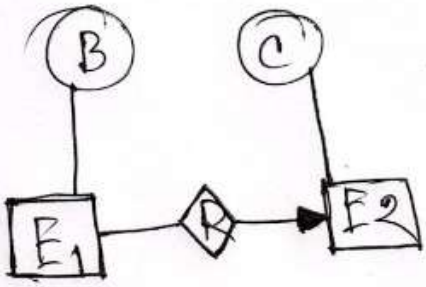
Fig: One to one (1:1)

2|b|

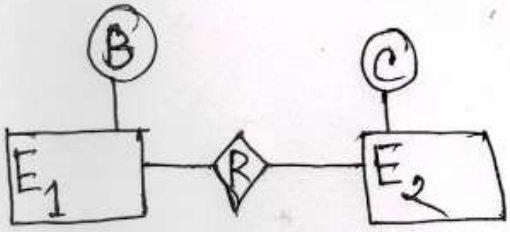
⇒ One to many: One to many mapping an Entity in E_1 is associated with many number of Entities in E_2 is associated with at most One Entity in E_1:



⇒ Many to one:



⇒ Many to many: In many to many mapping an Entity in E_1 is associated with any number of Entites in E_2, and an Entity in E_L is associated with any number of Entitys in.



Ans to the Question No - 3

3 [a]

Ans: Normalization: Normalization is a database design technique that reduces data redandancy and eliminate Undesirable characteristics like Insertion, Update and Deletion anomalies Normalization rules divides larger table in to samaller tables and links them useing relationship. The Purpose of Normalistion in SQL is to Eliminate Redundant (Repetitive) data. and Ensure data is stored logically.

Database Normalization Example can be easily understood with help of a case study. Assume a video library maintence a data base of movies Rented Out.

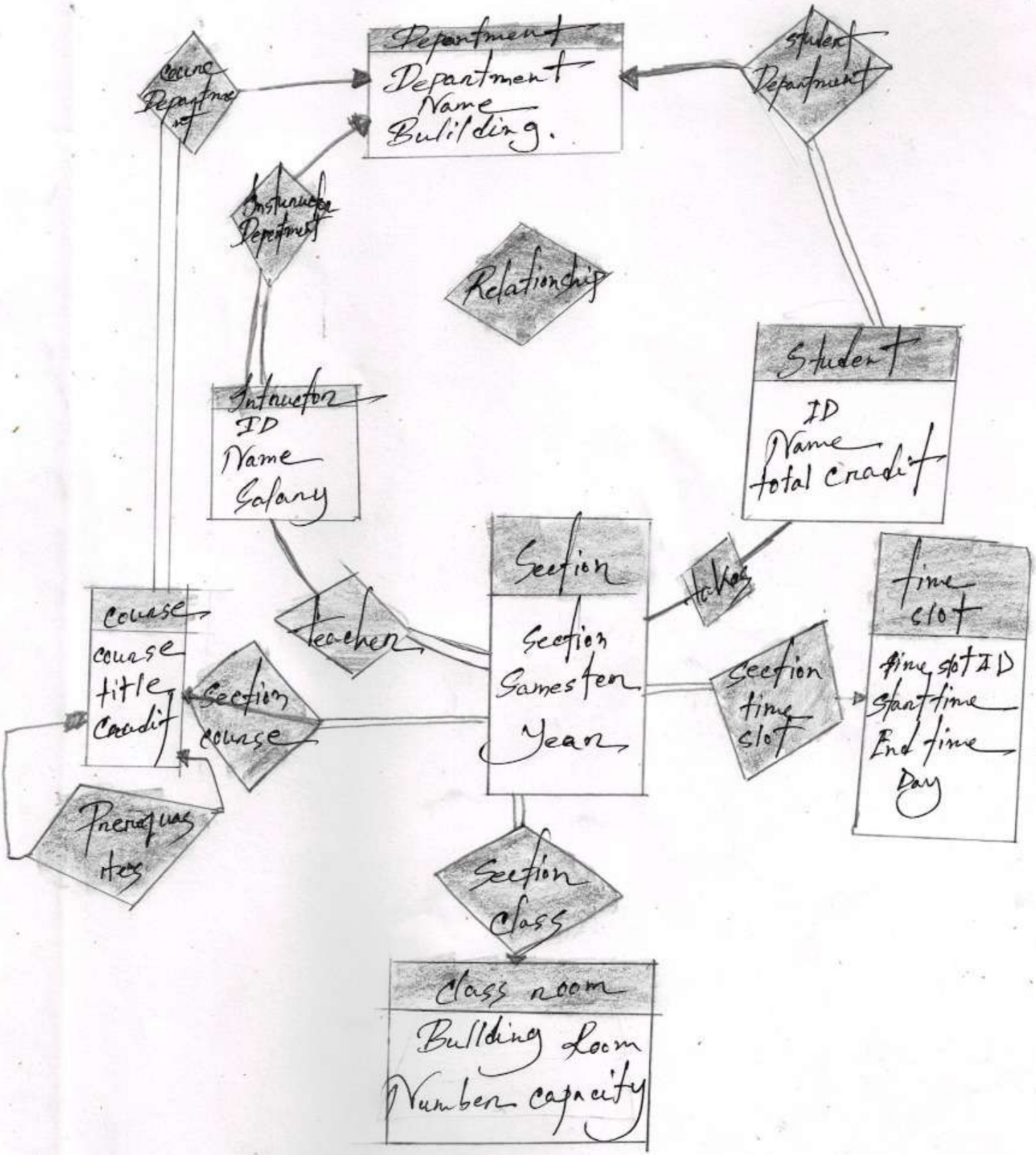
Full name	Physical Adress	Movies Ranted	Salutation
Janet Jones	First street Plot No:04	Pirates of the caribbean, clash of titans	Ms.
Robert phil	3rd Street 34	Forgetting sarah Marsha, Daddy's little girls	Mr.
Robert Phill	5th Avenue	clash of titans	Mr.

Fig: Goals Normalization.

9

[b] Ans:

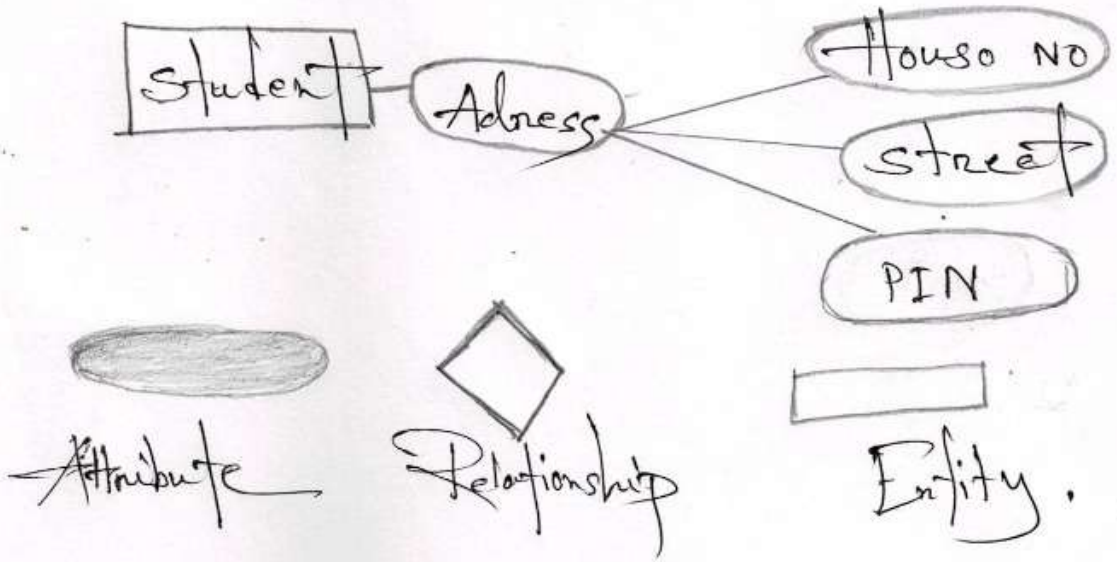
ER Model Diagram for University Database



Ans to the Question No: 4

4

[a] Ans: Composite Attribute: In this article, we will learn about composite Attribute in DBMS. Sometime and Attribute Entity may be further broken into smaller attributes and all attributes can be genanalized into a common Attribute.



→ Key Attributes

→ Multi - Value Attributes

→ Drived Attributes.

4/ b Ans:

Schema Diagram for University Database