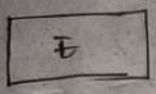
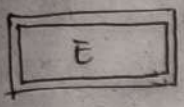
ER Diagram symbols :-



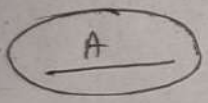
→ Entity



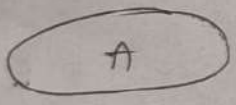
→ Weak Entity

→ Relationship

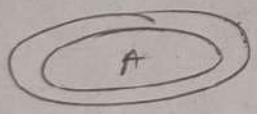
→ Weak Relationship



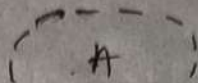
→ Primery key attribute



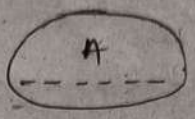
→ Attribute



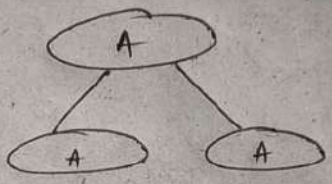
→ Multi valued attreibute



→ Derived attribute

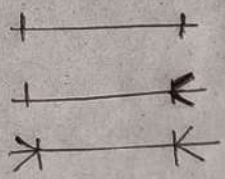


→ Discriminating attribute of weak entity set.



→ Composite attribute

→ Generalization or Specialization


one to one
one to many
many to many

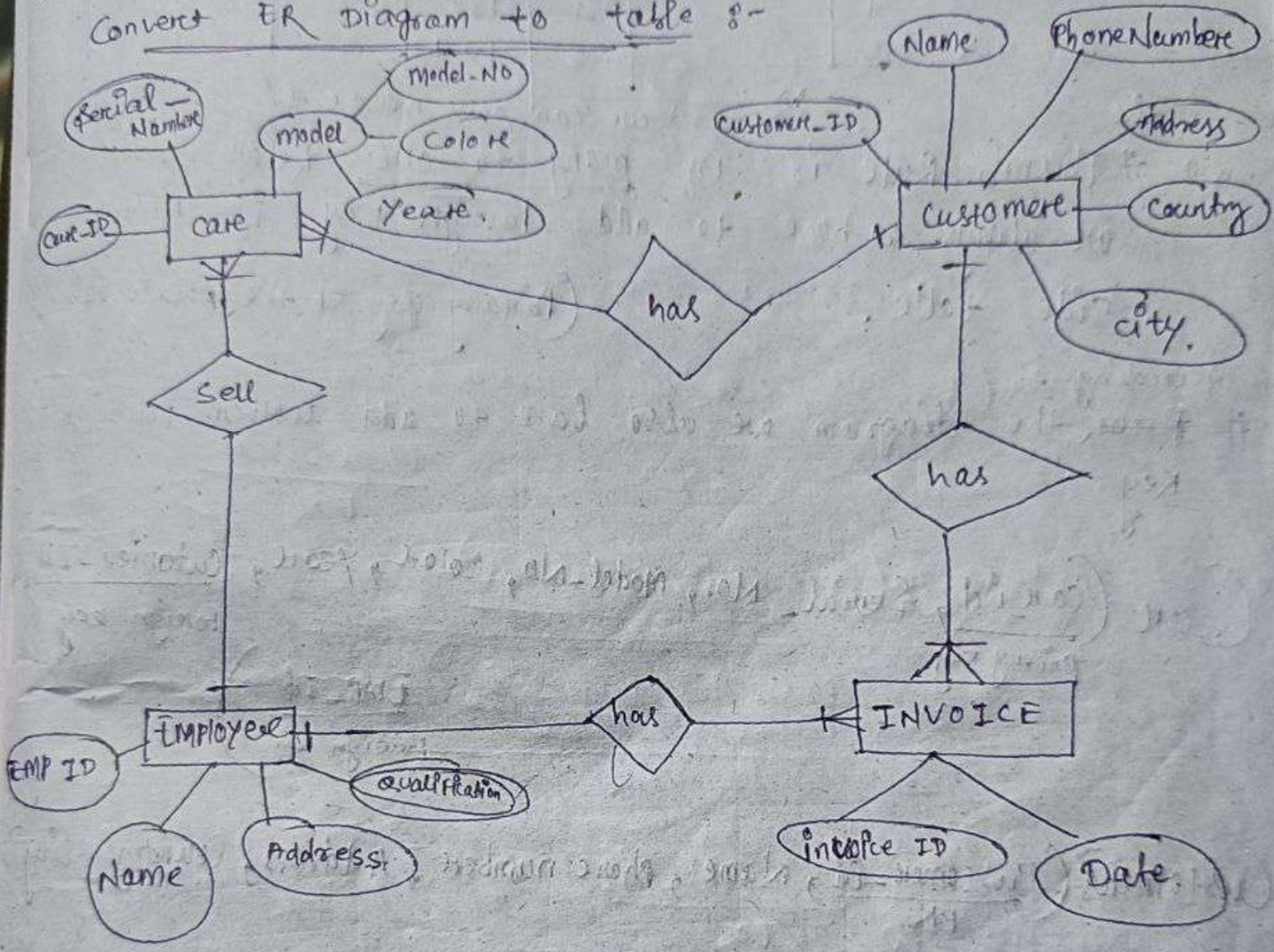
Relationship ..

1

ISA (Specialization or generealization)

ISA

Convert ER Diagram to table :-



Let first make care table :-

Care (Care_id, Serial_No, model_No, Colore, Yeare, Customer Id)

Primary key — Foreign key

Why we add customer id as foreign key in this table ?

Ans :- Because the relationship beth care and customere in many to one ⇒ that means one customer can have multiple care but an care can have perticulare customere_ID...

Example:-

Car_table

car_id	
1	~
2	~
3	.
4	
5	

Relation table

Car_id	Cust_id
1	107
2	107
3	107
4	108
5	109

Customere table

Cust_id	
107	
108	
109	

we can only merge this two table

So # Thumb Rule is in many to one Relationship we always have to add Foreign Key in many side table. (Primary key of the relate table)

According to the diagram we also have to add another Foreign Key

Car (Car_id, Serial_No., Model_No, Color, Yeare, Cutomer_ID, EMP_Id)

Car_id: primary key
Cutomer_ID: foreign key
EMP_Id: foreign key

Customers (Customer_id, Name, phone numbere, Address, Country, City)

PK

Employee (EMP_Id, Name, Address)

PK

Employee_Qualification (EMP_Id, Qualification)

Composite Primary key

why we make an other table for Qualification ??

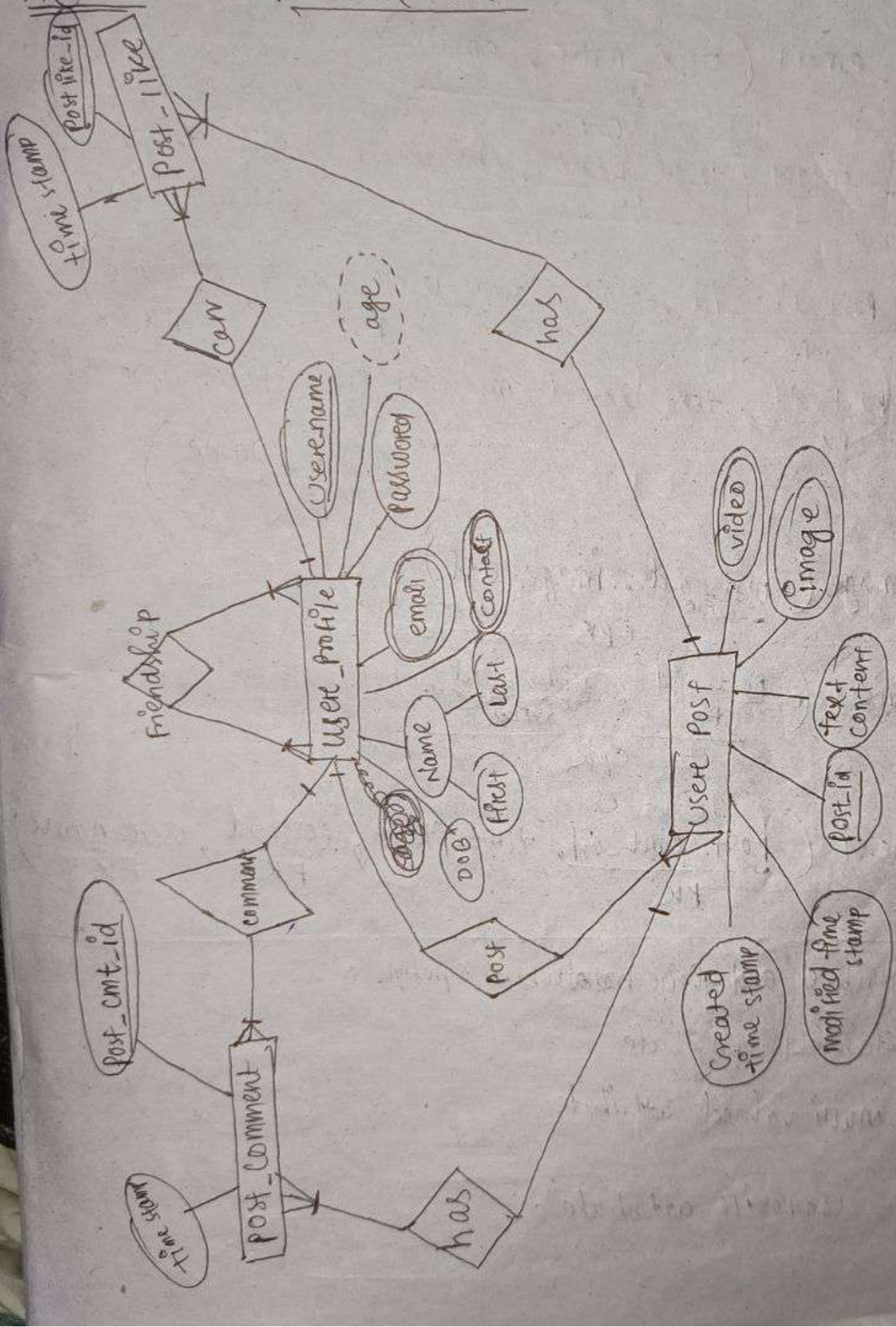
Here Qualification is a multi-valued attribute.

For multi-valued attribute we have to make another table...

and then we make an composite key for that.

Invoice (invoice_id , Date , Emp_ID , Customer_id)
PK FK FK

Example-2 Facebook ERD



Tables

① User_Profile (user_name (PK), First_name, Last_name, DOB, Password)

② Friendship (user_name (FK) as profile_req, user_name (FK) as profile_accept)
composite primary key.

③ User_Profile_email (user_name (FK), email)
CPK

④ User_Profile_Contact (user_name (FK), Contact)
CPK

⑤ Post_like (Post_like_id (PK), time stamp, user_name (FK), post_id (FK))

⑥ User_post (Post_id (PK), text_content, modified_time_stamp, Created_time_stamp, user_name (FK))

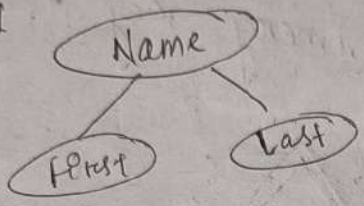
⑦ User_post_image (Post_id (FK), image_url)
CPK

⑧ User_post_vidio (post_id (FK), vidio_url)
CPK

⑨ Post_comment (Post_cmt_id (PK), time_stamp, Post_id (FK), User_name (FK))

Thumb Rule-1 => in Composite attribute we make table something like this.

Ex-01

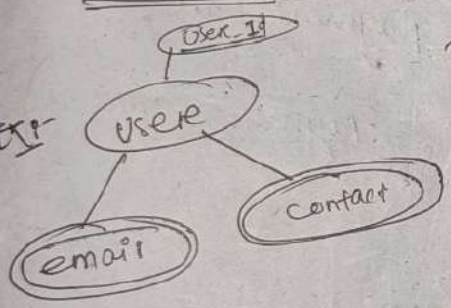


table_name (First_name, Last_name)

Thumb Rule-2 => For derived attribute we don't put that attribute in table.

Ex-> age

Thumb Rule-3 => For Multivalued attribut we have make an separate table for that.



Separate table :-

User_email (User_Id (FK), email)

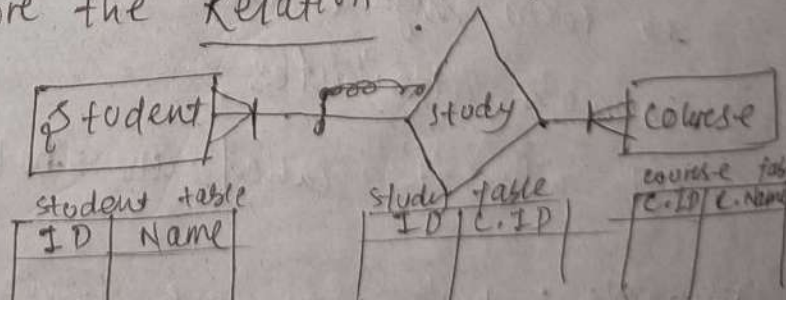
Composite Primary Key.

User_Contact (User_id (FK), Contact)

Composite Primary key

Thumb Rule-4 => If there is many to many relation then we have to make an separate table for the Relation.

Ex:-

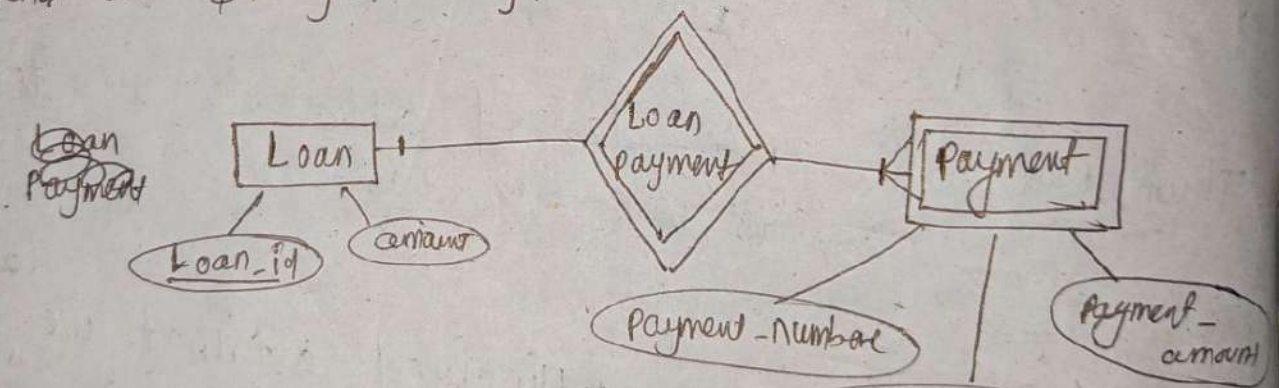


Thumb Rule-5 :- How to deal with weak entity?

weak entity don't have primary key they are depend on strong entity.

#

Ex :-



Payment (Loan_id (FK), payment_number, Payment_Date, Payment_amount)

CPK