

DBMS SKILL-3

PRE-LAB:

1. What is the use of the IS A relationship?

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1. IS-A relationship is totally based on inheritance, which can be of two types class inheritance or Interface Inheritance. It is just like saying "A is a B type of thing". For example, Apple is a fruit.

The IS-A relationship is used to model the hierarchy which is created as the class entity is decomposed into its logical sub-components.

2. What is the difference between NULL and Blank space in a specific field of the table?

2. NULL means absence of value, whereas a blank space means an empty string is stored at that cell/field.

NULL is not allocated any memory, it is just a pointer pointing nowhere in memory, whereas blank space is a value which takes memory.

3. How is Chen's notation different from crow's foot notation?

3. Each of these notations applies its own set of ERD symbols. Chen's notation uses rectangles to represent entity sets and diamond to represent relationships, whereas crow's foot diagrams represent entities as boxes, and relationships as lines between the boxes. Different shapes at end of these lines represent relative cardinality of relationship.

4. State the differences between identifying and non-identifying relationships.

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4. Identifying relationships exist when the primary key of the parent entity is included in the primary key of child entity. On the other hand, a non-identifying relationship exists when the primary key of the parent entity is included in child entity but not as a part of the child entity's primary key.

5. How to represent the weak relationship in crow's foot model?

5. Dotted lines means - weak Relationship in crow's foot notation.

INLAB**CASE STUDY 8 : SAINT GOBAIN**

There is glass industry SAINT GOBAIN in Nellore in which there is a large problem to store all the information as there is a large fact to shop. So, the management commenced to store it in database. There are a lot of glasses available there within the industry in order that they want to list out the forms of glasses and then unique thicknesses in it and then special colors in that thicknesses. As the distinct glasses have specific thicknesses and unique shades in it, they need to consider all the things and then determine a way to store it in a database.

Different types: Various types of glasses available in that industry.

- ☐ Clear glass
- ☐ Tinted glass
- ☐ Cooling glass
- ☐ Reflective glass
- ☐ Lacquer glass
- ☐ Mirror

The manager approached database team to help him to maintain all this data. Now if customer wants to buy a glass first customer has to fill in an online portal, so that the management can do preparation for the processing. In that portal customer will be asked to fill what type of glass he wants and then followed by thickness he wants and shade in the selected thickness. Now according to the online portal's primary requirements, the glass is manufactured and after that customer is asked for further details like the type of design and the shape. And then the bill is generated according to the selection of the customer.

GLASS QUOTATION

DATE: ____/____/____

CUSTOMER NAME: _____

PHONE NUMBER: _____

GLASS TYPE: _____

GLASS COLOUR: _____

GLASS THICKNESS: _____ MM

GLASS MEASUREMENT: _____ MM* _____ MM* _____ MM

DELIVERY ADDRESS: _____

PIN: _____

EXPECTED AMOUNT: /-

ADVANCE PAID: /-

COMPANY TRANSPORT/CHARGES APPLIED	
OWN TRANSPORT	

BILL

DATE: ____/____/____

CUSTOMER NAME: _____

PHONE NUMBER: _____

DELIVERY ADDRESS: _____

PIN: _____

GLASS FEATURE	AMOUNT
GLASS TYPE:	/-
GLASS THICKNESS:	/-
GLASS COLOUR:	/-
DELIVERY CHARGES:	/-
SGST	
CGST	
TOTAL:	/-

MODE OF PAYMENT: *COD

*CHEQUE

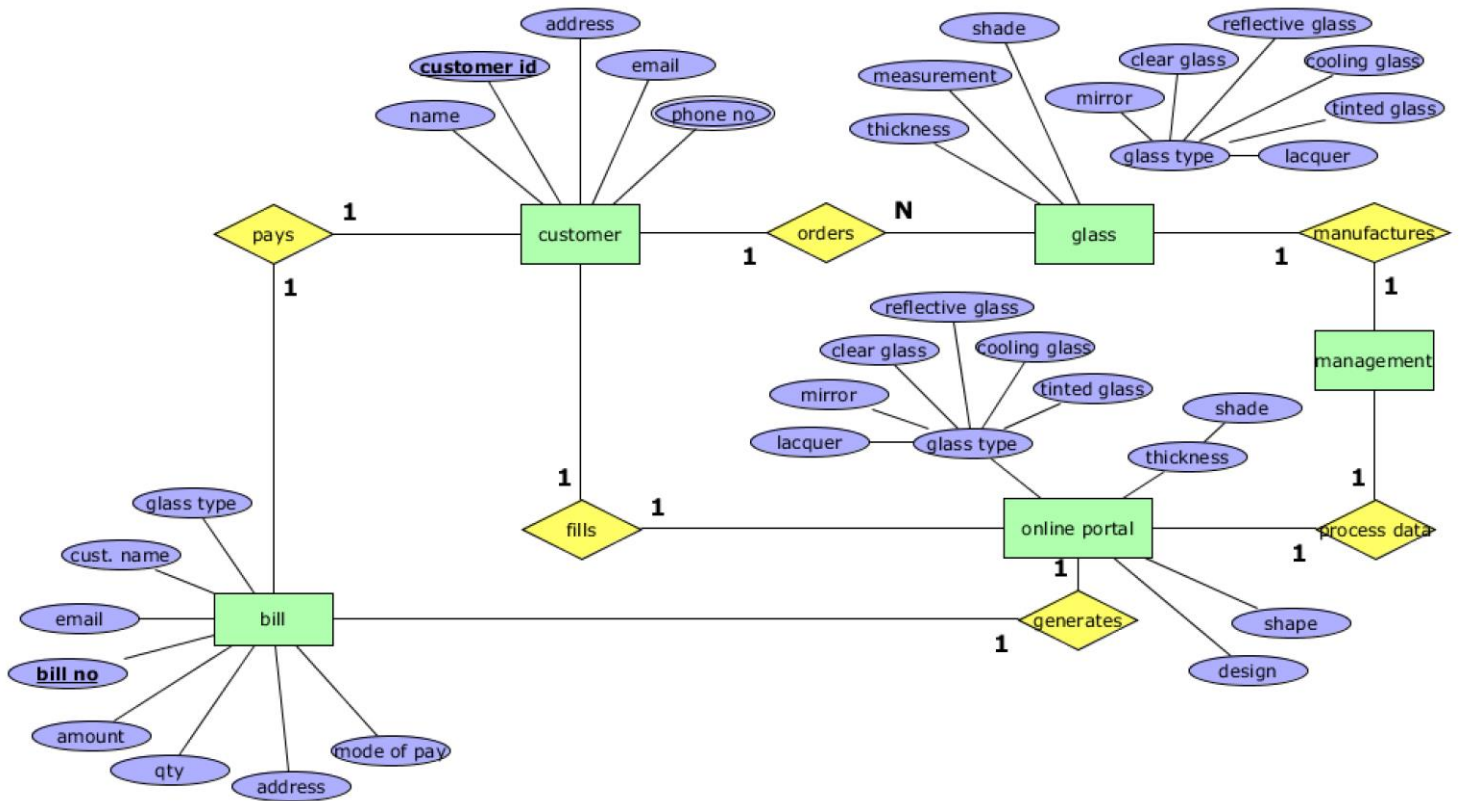
*NET BANKING

*CARD

CUSTOMER SIGN

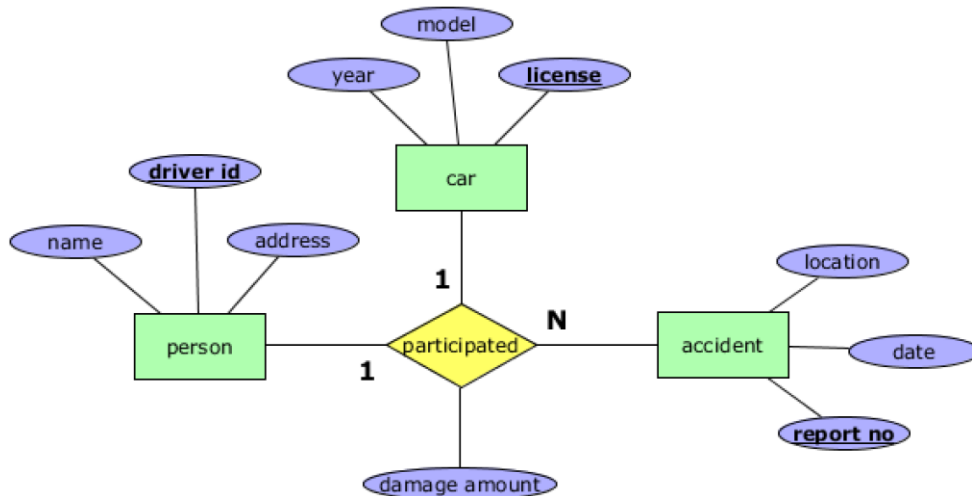
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ISSUING AUTHORITY

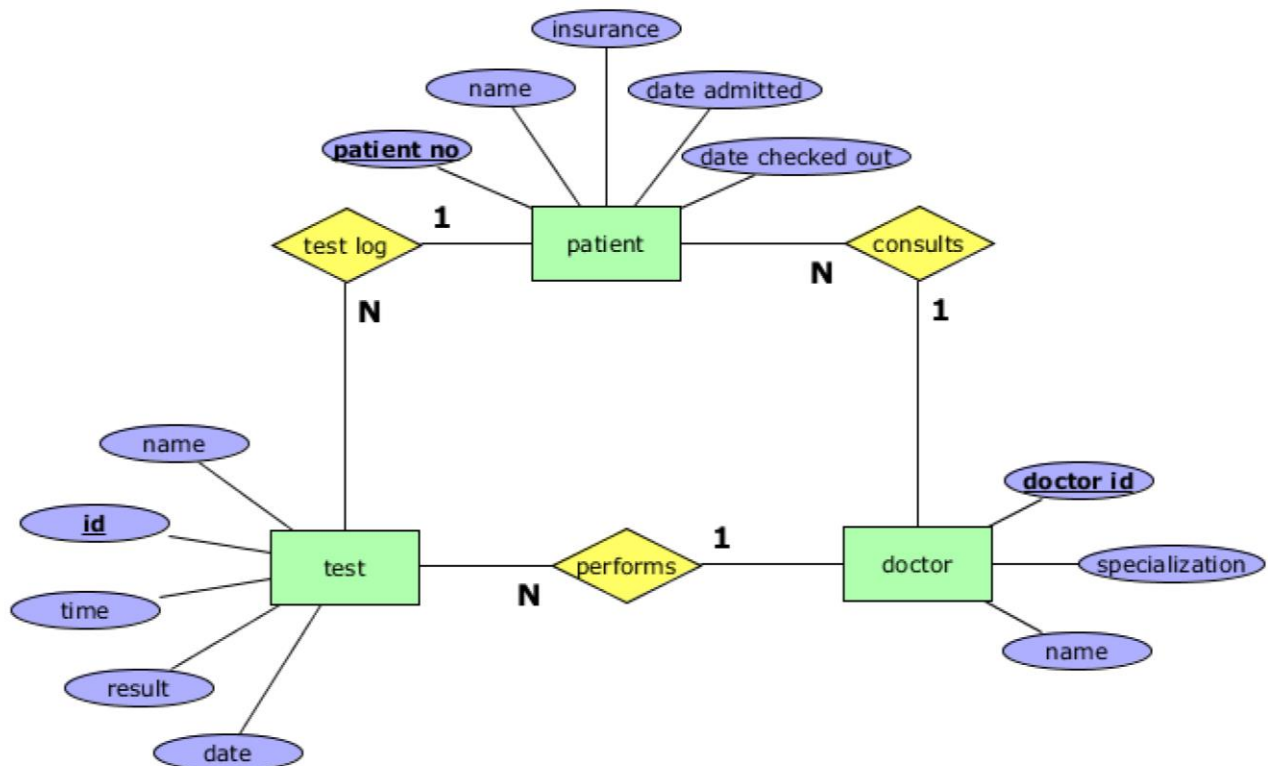


POSTLAB

1. In a city every person has his own car. The car has participated in accidents at some times and it has an estimation of the damage amount. Make an ER diagram using this information - a person has driver-id, address, name as attributes, the car has a license, model, year as attributes and accident has its date, report number, and location.

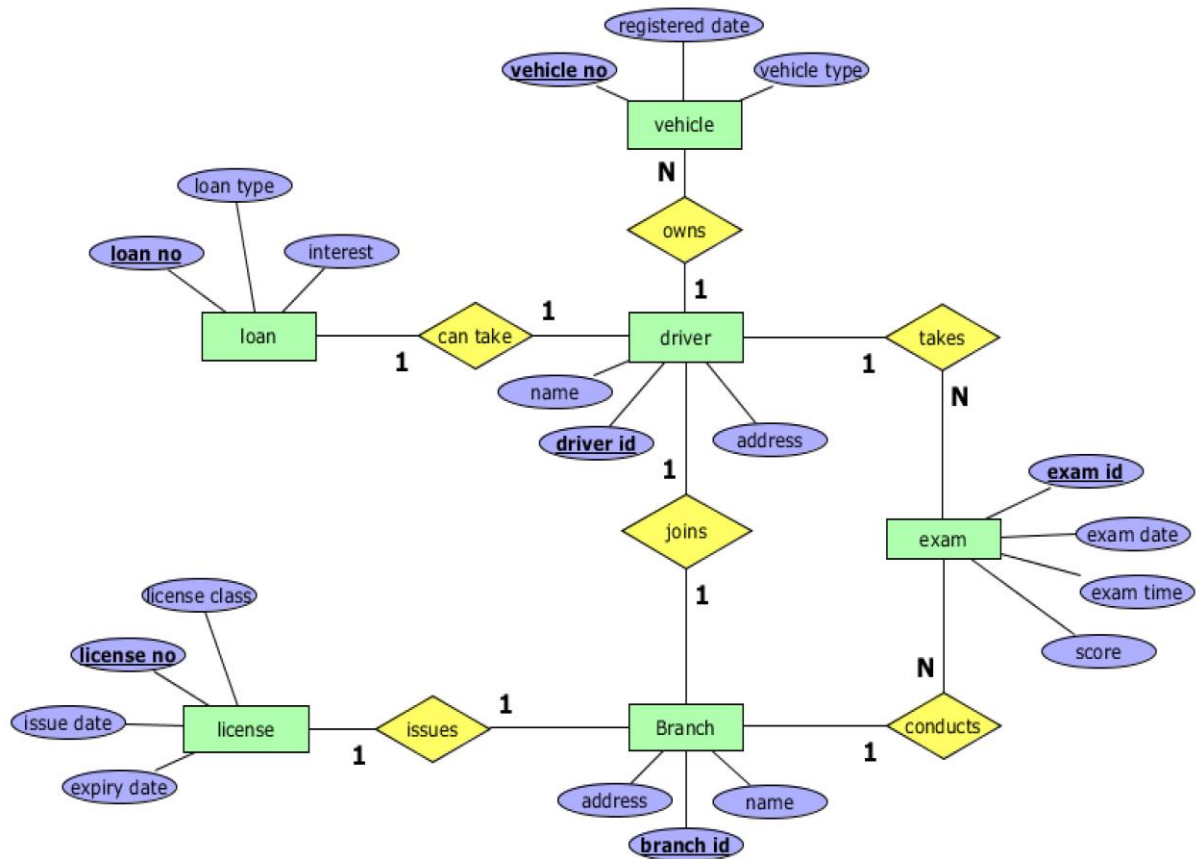


2. In hospital, patients have consulted the doctor for some tests performed by doctor. Make ER diagram using these information - patients has name, insurance, date-admitted, date-checked-out, the doctor has attributes name and specialization and the test has attributes id, name, date, time, result.

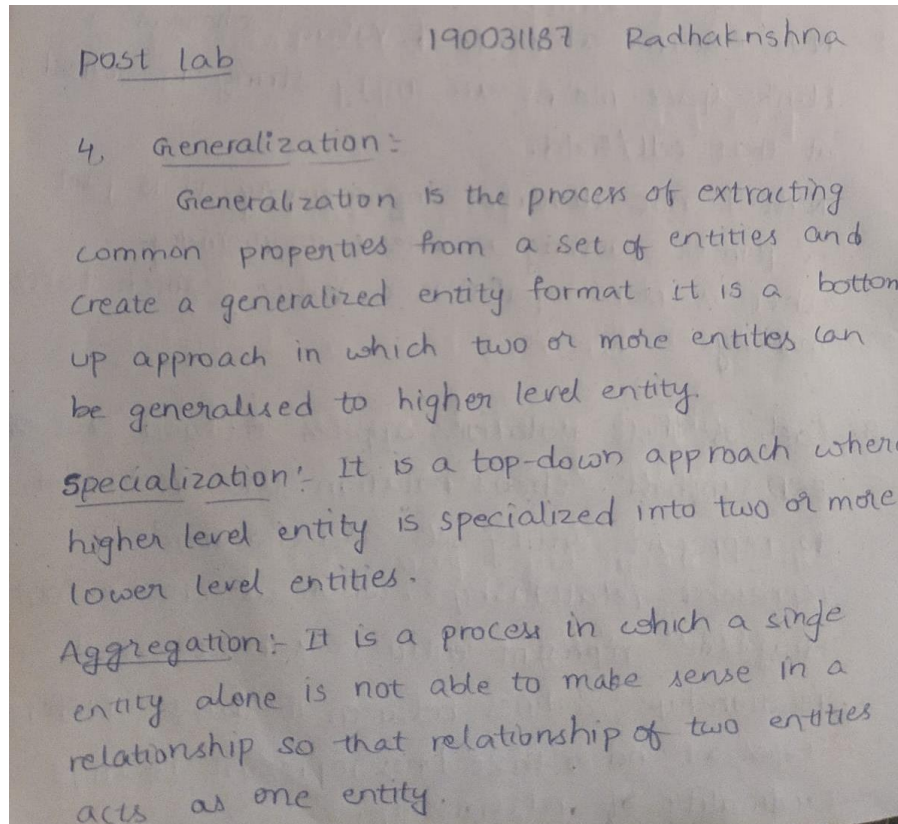
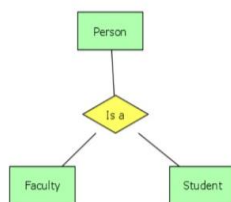
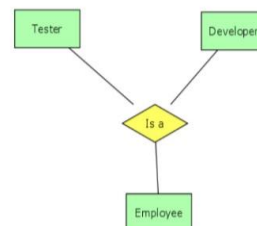
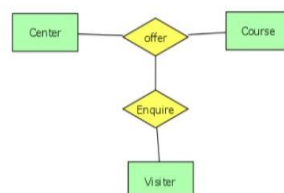


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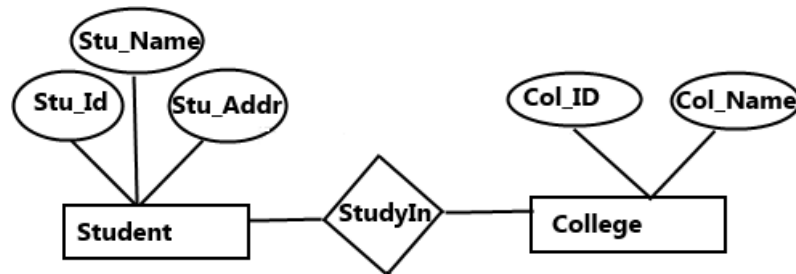
3. The motor vehicle branch administrators driving tests and issue driver's licenses. Any person who wants a driver's license must first take a learner's exam at any motor vehicle branch in the province. If he/she fails the exam, he can take the exam again any time after a week of the failed exam date, at any branch. If he passes the exam, he will be issued a license (learner's type) with a unique license number. A learner's license may contain a single restriction on it. The person may take his driver's exam at any branch any time before the learner's license expiry date (which is usually set at six months after the license issue date). If he passes the exam, the branch issues him a driver's license. A driver's license must also record if the driver has completed driver's education, for insurance purposes. Each driver should own a vehicle. If he has no money, he can lend it through the loan. Find out the relationships among the entities?



4. Explain Generalization, Specialization and Aggregation with examples with respect to ER Model.

**Generalization****Specialization****Aggregation**

5. What did you understand from this below ER diagram and describe it



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5. The above er diagram describes about student studying in college. student has a Id, name and address and college has a Id, name. In both student and college entities Id becomes as primary key and also relationship b/w them is one to one.