

Re-Mid Term Assignment Spring 2020

Course Title: Database Systems

Instructor: Rimsha Khan

Total Marks: 30

NOTE: Understanding the paper is part of solving the paper so no questions will be entertained.

INSTRUCTIONS:

1. Write your names and IDS at top of each paper.
 2. Scan / Take clear photo of each paper and save it with a number.
 3. Put answer photos/pdf in a folder, name the folder with subject, ID and student name
 4. Zip the folder and upload it.
 5. It is better to upload pdf.
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Q: Answer the following Short Question in maximum 2 to 3 lines. (12 Marks)

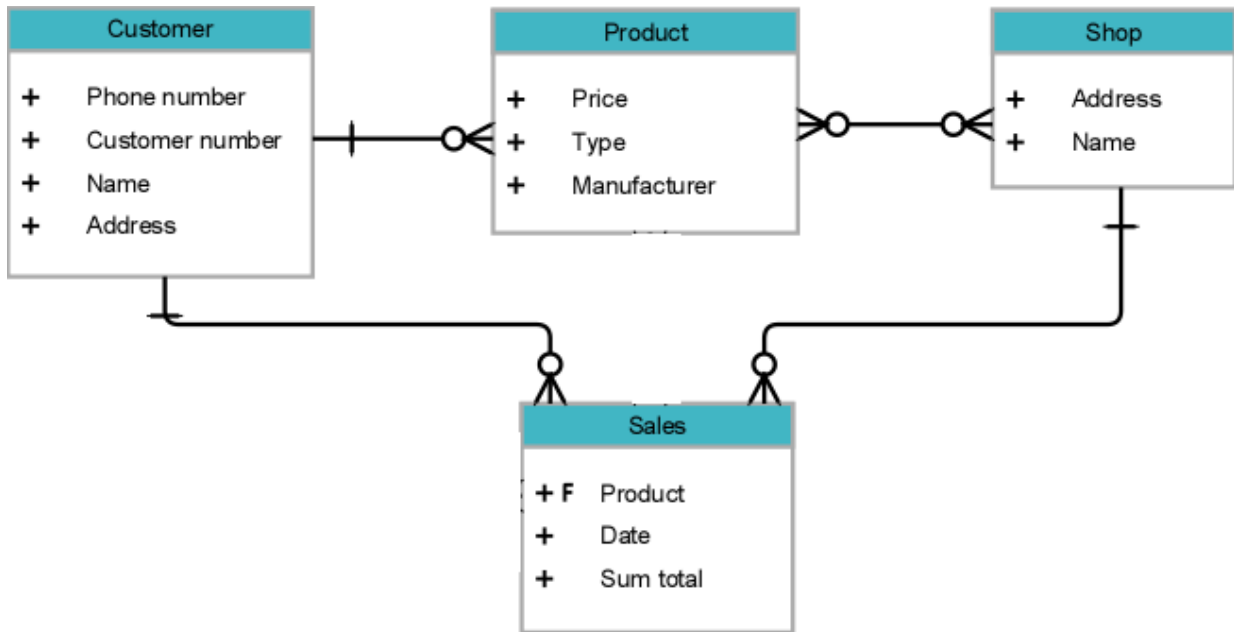
1. What is metadata in Database? Give 1 example
2. List down the components of database environment? (2 Marks)
- 3 How a multivalued composite attribute is represented in **Conceptual Model**. Show with example. (2 Marks)
4. Data warehouse is an operational database or non-operational database? (2 Marks)
5. How are the following represented using ER Diagram: Mandatory one, Mandatory many, Optional one, Optional Many? (2 Marks)
6. Why is there an explicit need of backup in database approach? (2 Marks)

Q 2: Draw an ERD from the following business rules: Use proper notations for the type of attributes (Marks 10)

A schema needs to capture all the information that An Art gallery need to maintain.

- The database shall keep information about Artists, their names (which are unique), birthplace, age, and style of art.
- For each piece of artwork, the artist, the year it was made, its unique title, its type of art (e.g. painting lithography, sculpture, photograph), and its price must be stored.
- Pieces of artwork are also classified into groups of various kinds for example, potraits, still lifes, works by Picasso, or works of the 19th century.
- A given piece may belong to more than one group.
- Each group identified by a name that describes the group.
- Finally galleries keep the Customer's unique name, address, total amount of dollars spent in the gallery and the artist and groups of the art that the customer tends to like

Q 3: Convert the following Conceptual Model to Relational Model. (Marks 8)



*****Good Luck ☺*****