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DEP : BS(SE) MID TERM

PAPER : DATABASE SYSTEM

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Q1:

1. What is metadata in Database? Give 1 example

ANS :

Metadata means "data about data". Although the "meta" prefix (from the Greek preposition and prefix μετά-) means "after" or "beyond", it is used to mean "about" in epistemology. Metadata is defined as the data providing information about one or more aspects of the data; it is used to summarize basic information about data which can make tracking and working with specific data easier.

Some examples include:

Means of creation of the data

Purpose of the data

Time and date of creation

Creator or author of the data

2. List down the components of database environment?

ANS :

Components of DBMS

DBMS have several components, each performing very significant tasks in the database management system environment. Below is a list of components within the database and its environment.

List

Software

Hardware

Data

Procedures

Database Access Language

Query Processor

Run Time Database Manager

Data Manager

Database Engine

Data Dictionary

Report Writer

3. Give 4 examples of database Management System (DBMS).

ANS :

Some DBMS examples include MySQL, PostgreSQL, Microsoft Access, SQL Server, FileMaker, Oracle, RDBMS, dBASE, Clipper, and FoxPro. Since there are so many database management systems available, it is important for there to be a way for them to communicate with each other.

4. What is a Data warehouse?

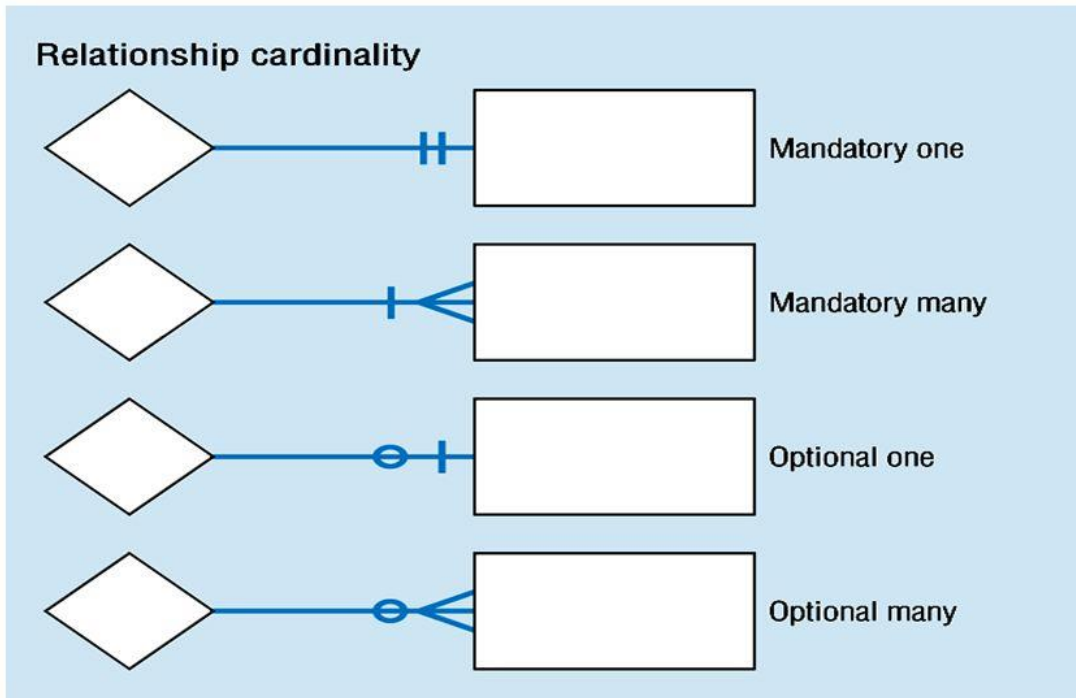
ANS :

A Data Warehousing (DW) is process for collecting and managing data from varied sources to provide meaningful business insights. A Data warehouse is typically used to connect and analyze business data from heterogeneous sources. The data warehouse is the core of the BI system which is built for data analysis and reporting.

5. How are the following represented using ER Diagram: Mandatory one, Mandatory many, Optional one, Optional Many?

ANS :

Cardinality Constraints (Contd.)



6. What are CASE tools on Database Environment?

ANS :

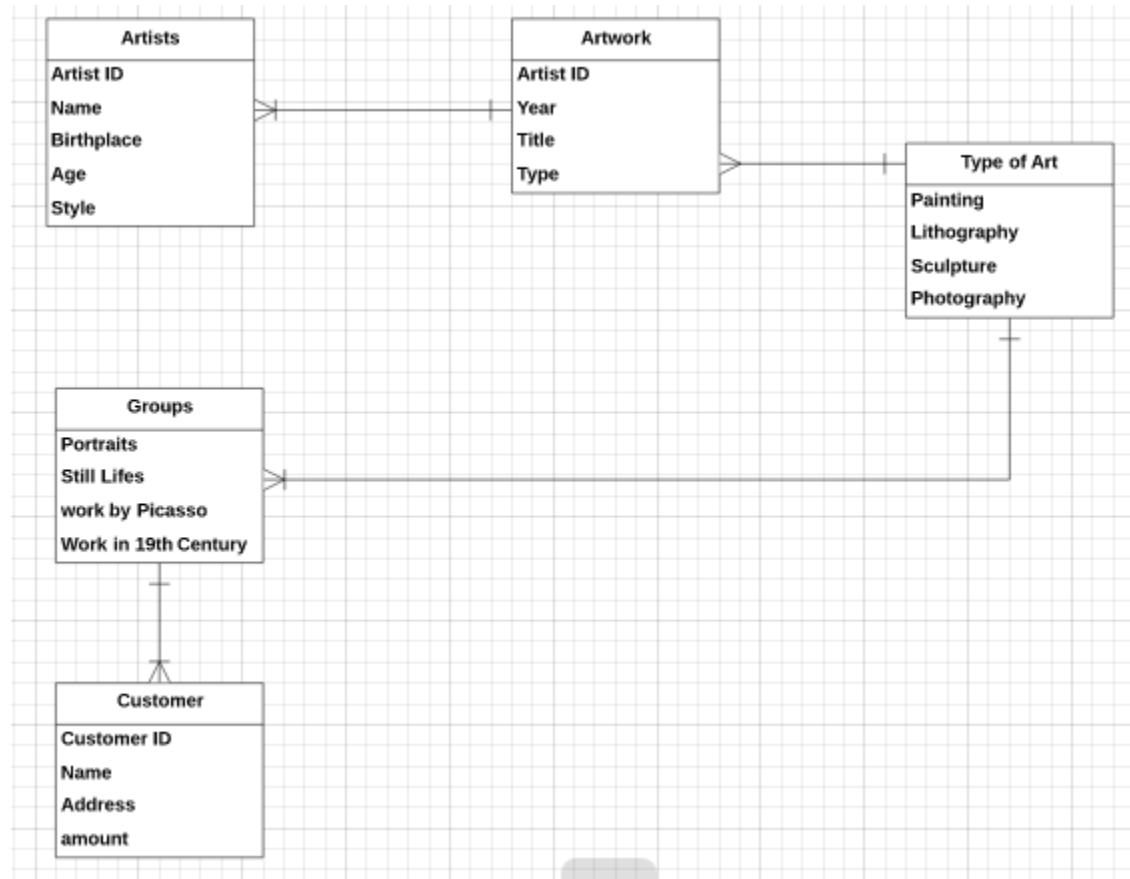
CASE (Computer-Aided Software Engineering) packages are software packages that include many tools that can be helpful when it comes to database design.

The main goal of these packages is to give designers a way of representing systems that are too complex to understand in their source code or schema-based forms.

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

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

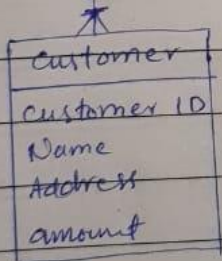
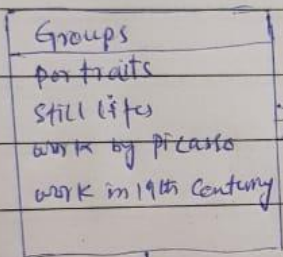
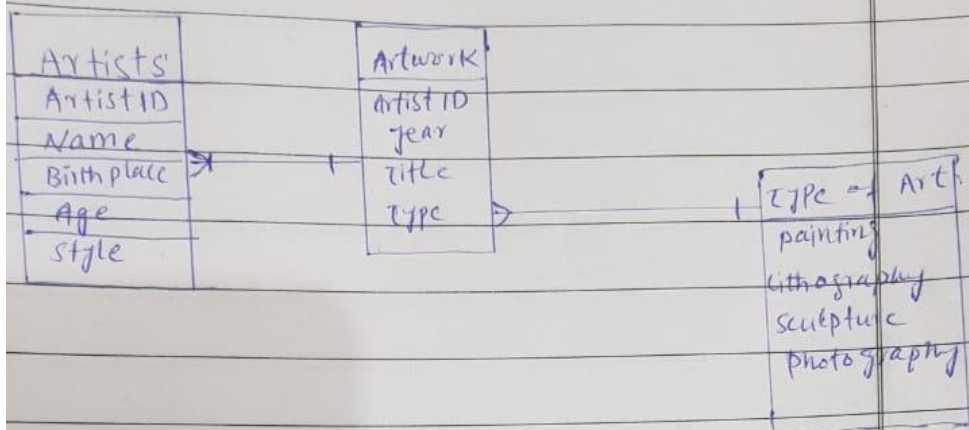
ANS :



OR

ANS :

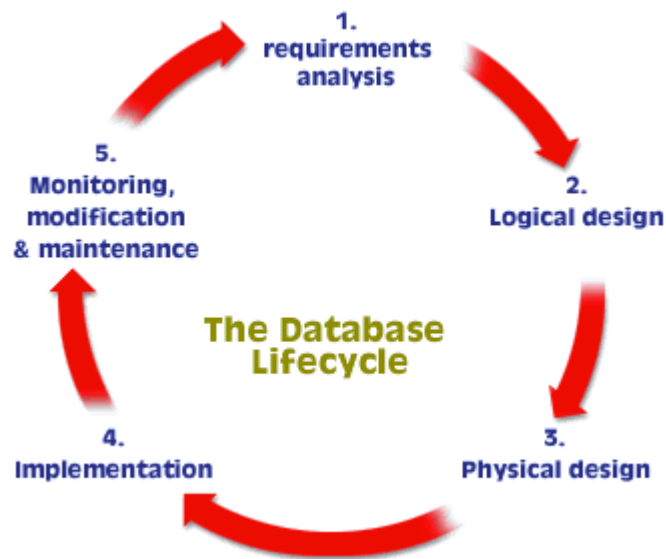
ER DIAGRAM IS THE FOLLOWING



Q 3:

a) Draw the flow of phases in Database Development Life Cycle.

ANS :



b) Conceptual and Realtional Models are created in which phase od Database Development Life Cycle?

ANS :

conceptual model:

During the first part of Logical Design, a conceptual model is created based on the needs assessment performed in stage one. A conceptual model is typically an entity-relationship (ER) diagram that shows the tables, fields, and primary keys of the database, and how tables are related (linked) to one another.

The relational model (RM) for database management is an approach to managing data using a structure and language consistent with first-order predicate logic. The purpose of the relational model is to provide a declarative method for specifying data and queries: users directly state what information the database contains and what information they want from it, and let the database management system software take care of describing data structures for storing the data and retrieval procedures for answering queries

THANK YOU