

# Mid Term Assignment Summer 2020

**Course Title: Database Systems**

**Instructor: Rimsha Khan**

**Total Marks: 30**

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**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 paste it in a word file**
  - 3. Convert word to pdf and upload on SIC.**
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**Q 1: Answer the following Short Question in maximum 2 to 3 lines. (16 Marks)**

1. What is metadata in Database? Give 1 example (3 Marks)
2. List down the components of database environment? (3 Marks)
- 3 Give 4 examples of database Management System (DBMS). (2 Marks)
4. What is a Data warehouse? (3 Marks)
5. How are the following represented using ER Diagram: Mandatory one, Mandatory many, Optional one, Optional Many? (2 Marks)
6. What are CASE tools on Database Environment? (3 Marks)

**Q 2: Draw an ERD from the following business rules: Use proper notations for the type of attributes (Marks 9)**

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 19<sup>th</sup> 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: (5 Marks)**

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

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

\*\*\*\*\*Good Luck 😊\*\*\*\*\*