

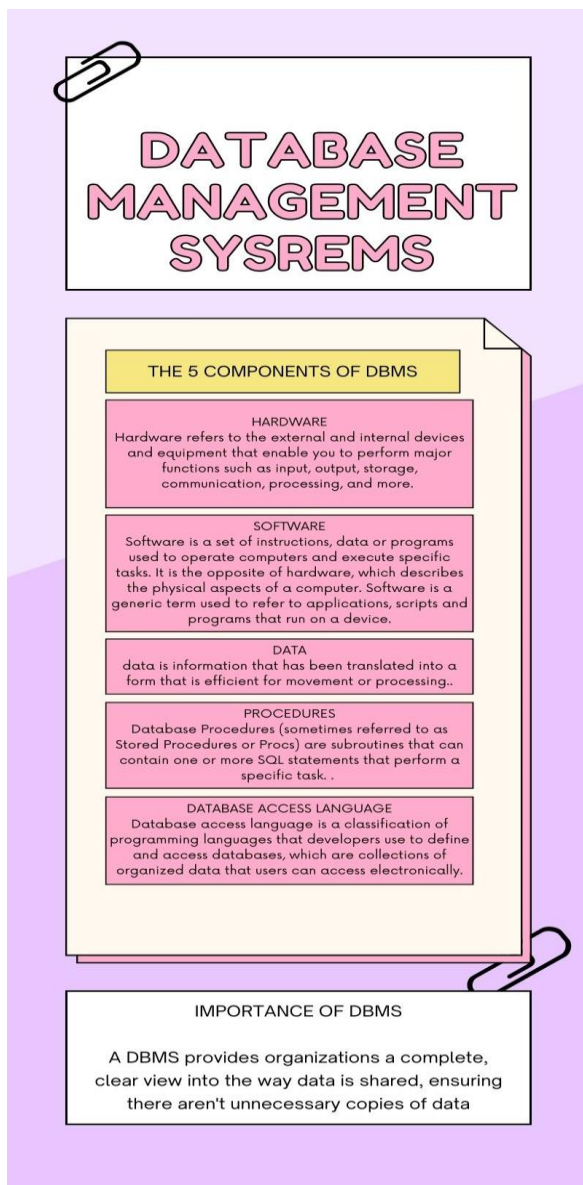
ZAIN FERIS

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ASSIGNMENT

QUESTION 1



Question 2

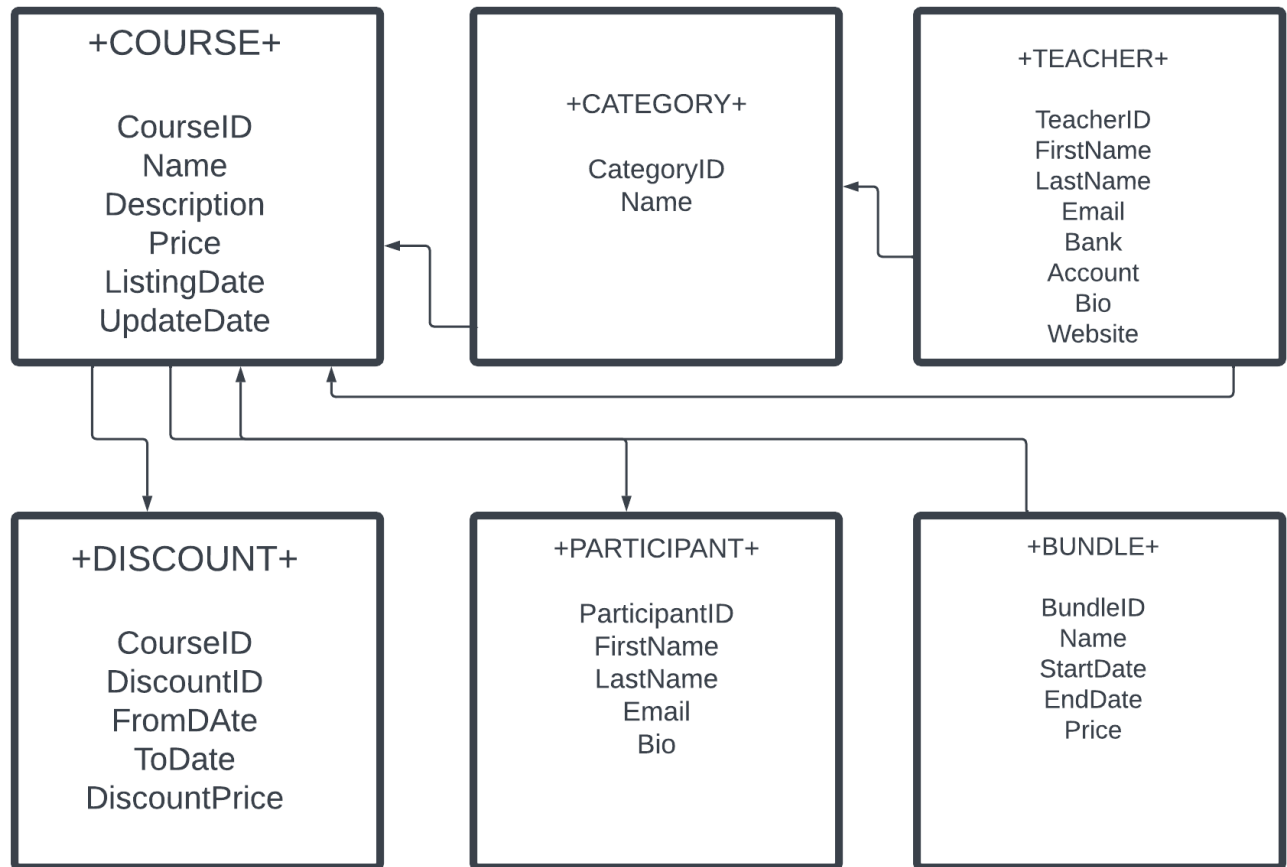
2.1 Since relational databases are specifically made to manage structured data that adheres to a pre-defined format or schema, such as information linked to course name, creator name, category, and other crucial features, they are the best option for storing data on courses.

You can simply maintain the integrity and accuracy of the data saved by utilizing a relational database, and you can carry out actions like searching, querying, and updating the data as necessary. Additionally, relational databases come with built-in facilities for managing complex queries and transactions, which can be particularly useful when working with data pertaining to courses.

2.2 It is advised to use a NoSQL database to store any multimedia content that course designers wish to make available to customers who buy their courses, such as videos, images, and files. Unstructured data, which can be of many sizes and formats, can be handled by these databases. In contrast to relational databases, they don't have a set schema, making it simple to store and retrieve files of all shapes and sizes. NoSQL databases also have a great degree of scalability, which enables them to manage enormous amounts of data while retaining performance.

These elements make them an excellent option for managing the significant and varied volumes of multimedia content that may be linked to online courses. In light of this, NoSQL databases offer a versatile and effective option for handling multimedia data, which is crucial in many online courses.

QUESTION 3



QUESTION 4

Each entity should have a distinctive identifier, such as an ID, to prevent duplication and guarantee data integrity in order for the ERD to improve. The lines joining the entities should have a cardinality indication to show the relationship between them. The related entities should be given foreign keys in order to establish relationships between them. Since each product requires different components, the component quantity property should be kept in a separate entity that links the product and component entities. A factor production line entity must be added in order to hold the capacity of the production line.

REFERENCING

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