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16550

Mid-Term Assignment

Instructor:

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Subject:

Database Theory

Question No: 1 long & 2

Q1) Which attribute in the following table is a candidate key? Assume that no more data will ever be added to this table?

Ans) ID and Name are the candidate keys because we can uniquely identify the each report from them.

Q2) What is data redundancy and data integrity?

Ans) Data redundancy:-

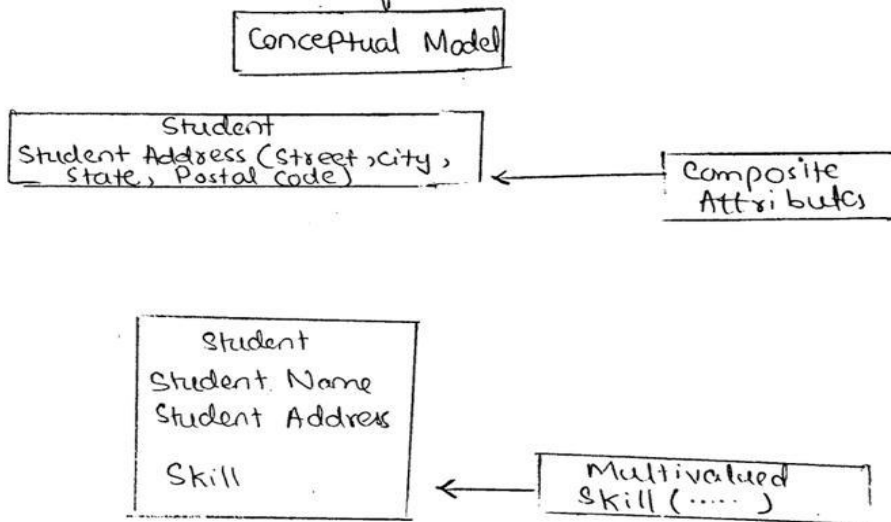
Data redundancy is a condition created within a database or data storage technology in which the same piece of data is held in two separate places. This can mean two different fields within a single database, or two different spots in multiple software environments or platforms. Whenever data is repeated, this basically constitutes data redundancy. This can occur by an accident, but it is also done deliberately for backup and recovery purposes.

Data Integrity:- Data integrity is the maintenance of, and the assurance of the accuracy and consistency of data over its entire life-cycle & is a critical aspect to the design, implementation and usage of any system which stores or retrieves data.

Question No 3 & 4

Q3 How multivalued composite attribute is represented in conceptual model show with examples?

Ans An Attribute broken into number parts
The following is the conceptual Model for Multivalued composite Attributes



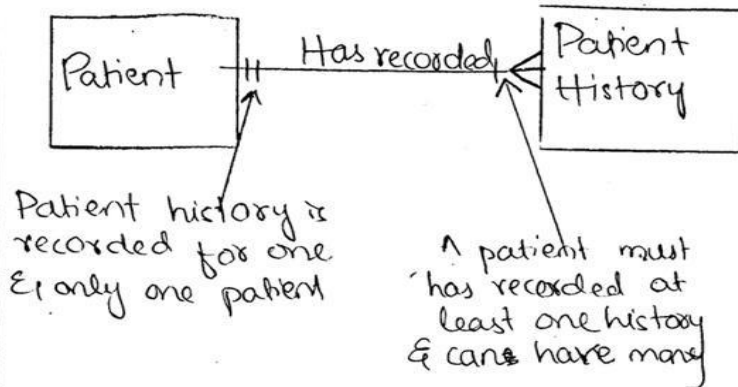
Q4 How is there reduced maintenance in diabetes approach?

Ans Stored data can be changed for variety of reasons,
The system will provide modification to a data file without modifying the program
& it also provides us way to reduce the maintenance of the program.

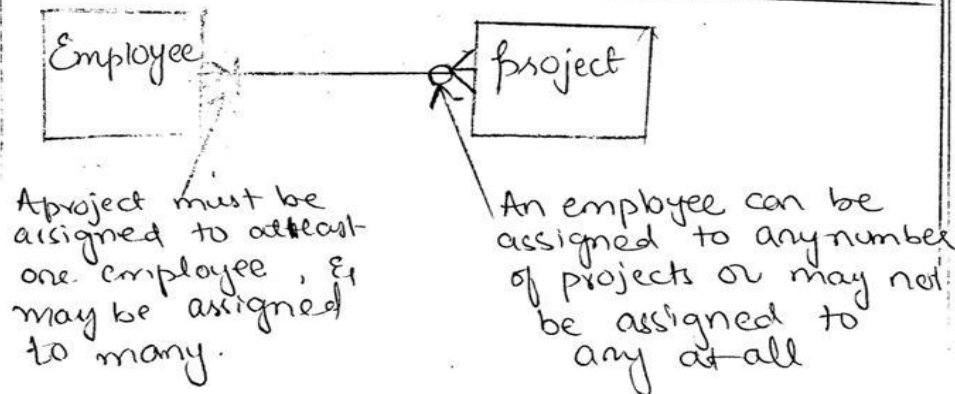
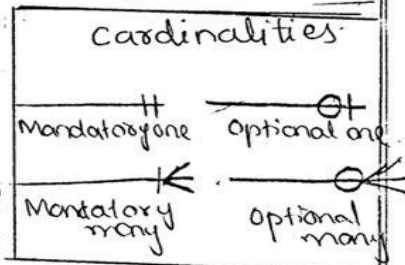
Question NO : 5

Qs How are the following represented using ER Diagram: Mandatory one, Mandatory many, optional one, optional many?

Ans [Mandatory one: Must exist one & only one]
 [Mandatory many: Must exist one or more]
 [Optional one: May exist one or none]
 [Optional many: May exist one, or more or none]



One optional, One Mandatory



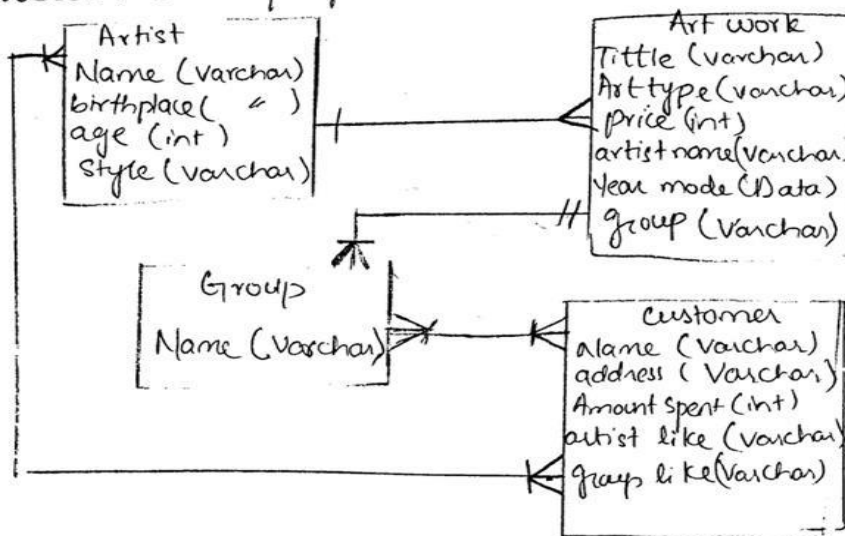
Question No 6 & Long Question 2

Q6 Why is there an explicit need to backup in database approach?

Ans Need For Explicit Backup & Recovery:-

A shared corporate database must be accurate and available at all times. This requires that comprehensive procedure be developed & used for providing backup copies of data and for restoring a database when damage occurs. These considerations have acquired increased urgency in today's security-conscious environment. A modern database management system normally automates many more of the backup & recovery tasks than a file system.

Q7 Draw an ERD from the following business rules: Use proper notations.



Long Question: 3

Q3 Convert the conceptual mode to Relational Model?

