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CPI 310

Lab13

1. Briefly describe the difference between logical and physical design of a database

Logical design revolves designing based on the needs of the user it involves gathering info about the data that needed to be stored and there relationship

Physical design involves converting the logical design into a relational database design. At this stage items are defined at the schema level. Objects like tables and columns are created during physical design.

1. What are the three difference anomalies discussed in this week’s lecture?

Insertion anomilies: Happened when you cant add a record due to missing data.

Update anomalies: Happens when the same data is stored in more then one place.

Deletion anomalies: When deleting a record causes data to be lost.

1. Briefly describe three normal forms discussed in lecture notes

1st: Each colom has atomic values.  
2nd. Removed duplicates by having a primary key

3rd. Removed colums that depended on another key besides the primary key.

1. Consider the following order table

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| order\_id | order\_date | items | quantity | cust\_id | cust\_address | price |

1. Identify violations of 1NF in the above table. Then, redesign the table structure so that your new table set comply with 1NF
2. Now, analyze your table set and check for any 2NF violations. If, so redesign the table structure so that your new table set comply with 2NF
3. Finally, analyze your table set and check for any 3NF violations. If, so redesign the table structure so that your new table set comply with 3NF