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CST171-SP18
Chapter 5

Answer the following questions in your own words (do not copy directly from the book or any other source.)

1. Define Insertion Anomalies. How could Insertion Anomalies exist in your Scenario?

An Insert Anomaly is when an attribute cannot be inserted within the database until there are sufficient attributes to allow it. An example of this can happen within my Scenario when you try to add a new Machine but you can't unless an Instructor is assigned to one.

2. Define Update Anomalies. How could Update Anomalies exist in your Scenario?

Update Anomalies cause data redundancy and inconsistency throughout the database and can lead to a partial update. If an Instructor were to move to a new location throughout the school, their Machine information would have to be updated (Machine ID, Machine Location). Then update all occurences of the Machine ID.

3. Define Deletion Anomalies. How could Deletion Anomalies exist in your Scenario?

Deletion Anomalies occurs when attributes become lost from deletion of other certain attributes. For example, if an Instructor was the last one to request Software then all the information about the Software could potentially become lost.

4. Define 1st, 2nd, and 3rd Normal Forms.

1st Normal Form - There are no repeating groups of columns and they each contain diminutive values.

2nd Normal Form - All columns with non-key's are dependant on the primary key of the table.

3rd Normal Form - It contains only columns that are non-transitively dependant on the primary key.

5. What is the difference between an entity and a table?

An entity belongs in a table, and is a single piece of information. A table is a group of fields with specified parameters.

You are to answer the question to the best of your ability from the material in chapter 5. Do not copy information word for word from the textbook or other source. If the question requires you to write a few paragraphs make sure you do so.