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Database Management

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Lab 2

1) The queries and the CAP snapshot are the same. It's the same information that on the snapshot when you query each key in the database.

2) A primary key is a candidate key that is declared as a primary key, that is a unique identifier. A candidate key is a minimal super key, but the difference is that it uses the fewest columns to uniquely identify every row. And a super key is any column or a set of columns that identify every row.

3) SQL is a special language that is used to manage or store information into relational databases. In SQL there are attributes called data types that can hold certain kinds of data. Some can be null and others aren't null. Each data type has certain restrictions to the kind of data that it can hold such as length. For example, if I can make a table for students that attend Marist College. In this table I would have the name of the students, CWID, email, phone number, and year. The information of the students would fill in the fields in the database. Names and email would fall under characters, CWID, phone number, and year would fall under integers. All of these data types would not be null because they are values that are required for the table.

4) The "first normal form" rule explains that the data in the tables has to be organized straightforward and not have any redundancy in its table. It is important because when you want to access information later on, the system does not have any confusion or errors when obtaining the data. The "access rows by content only" rule states that you can only access data by the name of the keys and not the location of them. It is important because the data found are in sets the location of one piece of data will be different the second time you try to access it, so it is more efficient when you try to access it by its key. The third rule, "all rows must be unique" states that there cannot be two rows where they have the same value. It is important in this instance because when you query you don't want to obtain duplicates of the information you want to access and cause any confusion, each row becomes unique and contains different values from each other.