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Database Management
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Lab Two

- 1) When run through the CAP3 database, the results are put into a table. When comparing the results, the tables were exactly the same.
- 2) There are three types of keys in databases that are closely related: the primary key, the candidate key and the superkey. The most basic of the three is the superkey. The superkey, as defined in class, is “any field or set of fields that uniquely identifies every row in the table. The candidate key, which is a subset of a superkey, has the fewest possible number of columns that still uniquely identifies every row in the table. Finally, the primary key is the superkey that is chosen to be the most unique key. A database can only have one primary key, whereas there can be multiple candidate keys and superkeys.
- 3) According to W3Schools, a date type defines what kind of value a column can hold. Naming what type of data can go in each column helps SQL determine what kind of data can be stored. This gives the data more context. Some examples of data types are Boolean, which stores a true or false value, an integer (numeric), or character. You then have to decide whether the data can be null, or changed or not. Below is a table that stores data for NBA players.

NBA PLAYERS

Player ID	Name	Team	Position	Points/Game
Integer	Character	Character	Character	Integer
111	Kristaps Porzingis	NYK	F	14.3
999	LeBron James	CLE	F	25.4
Non-Nullable	Non- Nullable	Nullable	Non – Nullable	Nullable

- 4) The “first normal form” rule is to define the data in a table. This data will be used to create the columns. This rule also states that any column that has internal structure is not allowed. Data cannot be broken down any further or duplicated. This also ensures that there is a primary key.

The “what?! Not where!” rule otherwise known as the “access rows by content only” rule states that we can retrieve rows based on the content in the rows, not where the row is located in the database. This allows users to query for the data row they are looking for.

The “all rows must be unique” rule creates consistency in a table. It makes sure that data is not duplicated. The ‘uniqueness’ refers to maintaining data integrity.