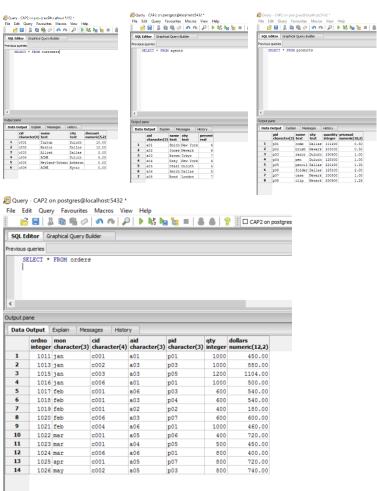
Database Management

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Lab 2

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2. The terms primary key, candidate key, and super key all work as a sort of narrowing process to determine the unique identifier of a table. A super key is the set of all possible sets of attributes that could uniquely identify the table, a candidate key is a set of the sets of attributes that could uniquely identify the table using the least number of attributes, and a primary key is the set of attributes that is chosen to best identify each row in the table. They work as a sort of tiered approach to finding a good unique identifier, as each one narrows the pickings by increasing the criteria and picking from the previous key. So each candidate key must also be a super key but not every super key is a candidate key.

3. Data types are a way of categorizing data so that it can be better understood. There are plenty of different data types, including integer, varchar, decimal, date/time, etc.

So if there were a table that had information about students at a school, the attributes it would need would include an id number, which would be an integer type and could not be null, their first name, which would be a varchar type and could not be null, their middle initial, which would be a varchar type and could be null, their last name, which would be a varchar type and could not be null, their birth date, which would be a date type and could not be null, their graduation date, which would be a date type and could not be null, whether or not they are currently enrolled, which would be a Boolean type and could not be null, their GPA, which would be a decimal type and could not be null, and their address, which would be a varchar type and could not be null.

4. The "first normal form" rule states that every table must follow the guidelines of the normal form, meaning that the domain of each attribute contains only atomic values, and the value of each attribute contains only a single value from that domain.

The "access rows by content only" rule states that you should only call up data by asking for the content rather than the space where the content is stored since different operating systems can store the data in different places, but the content stays the same.

The "all rows must be unique" rule states that you should not have repeats of data. Every row should be unique data, no two should be the same, so that you are not wasting room or confusing anything by having the same thing saved twice.