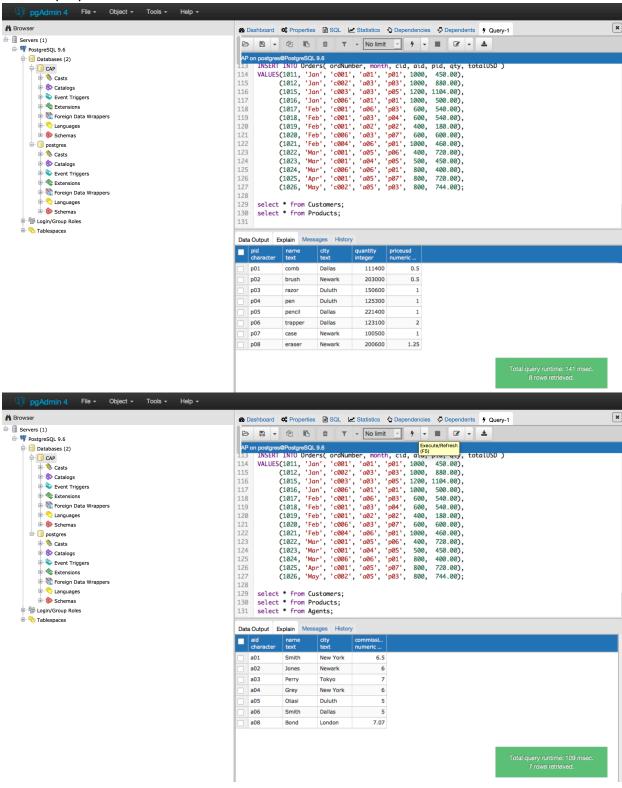
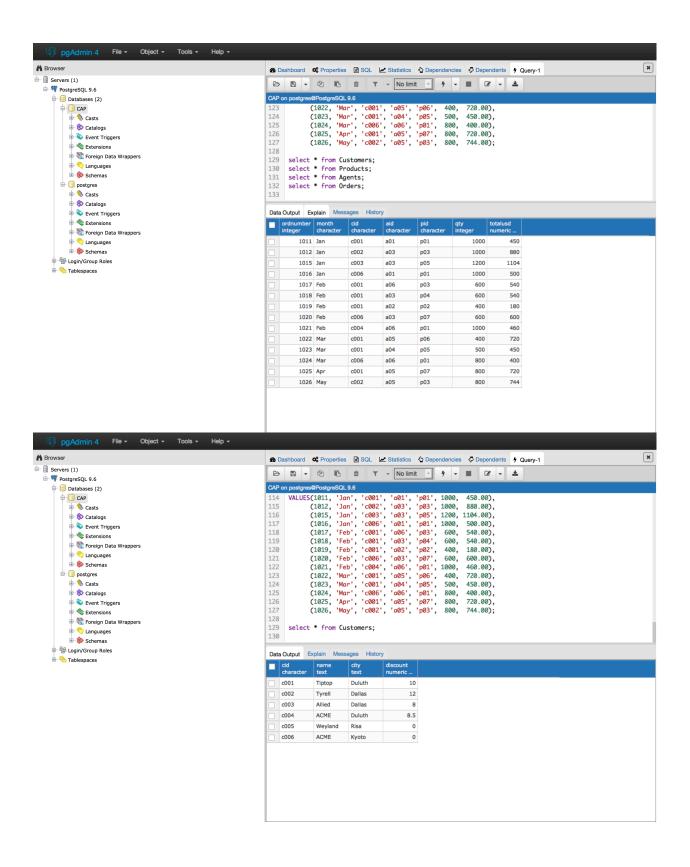
Mackenzie O'Brien

Lab 2: 1/27/17





- 2.
- A primary key is the chosen candidate key
- A **candidate key** is a minimal super key, which means it is a super key of a table that uses the smallest amount of columns
- A **super key** is a column in a table that ensures that every row will be unique

So, a super key exists in every table and there can be multiple super keys, called candidate keys, but only one candidate key is chosen to be the unique identifier of a table.

3.

String	A string is a concatenation of characters				
Int	An integer is a number with no decimals				
Boolean	A Boolean is a true/false value, often represented as a 1 or 0				
Char	A character is a single letter or symbol				
Float	A float is a number value that can have decimals				

If I were to create a table for volleyball players, I might have columns for first name as a string, last name as a string, date started as a date type or separate integer fields for day, month, and year, date ended as the same data types as date started, year in school as either an integer or string, and position as a string. If including past players, another field could be "still playing", which would be a Boolean true or false and could not be null.

The only things that could be null are date ended, year in school.

Players								
First Name	Last Name	Date Started	Date Ended	Year in School	Position	Still Playing		
String	String	Date	Date	Int	String	Boolean		

- 4.
- The **first normal form** rule states that at an intersection of a row and a column, there can be nothing with multiple values. So, like the example we used in class, if a superhero has multiple powers, there cannot be two powers in the same cell of a table; they must be separated into either a new table of just powers or have separate columns for power 1, power 2, etc.
- The access rows by content only rule states that because content can move within the table, the data must be accessed by what it is, not where it is. At one point, the data might be in (1,5), but the next time the table updates, it may be in (1,6) and then the attempt to access it would not work.
- The **all rows must be unique** rule states that, for each table, all rows must be unique. If there are two rows with the same values, neither can be called by themselves and thus cannot be modified or accessed correctly.