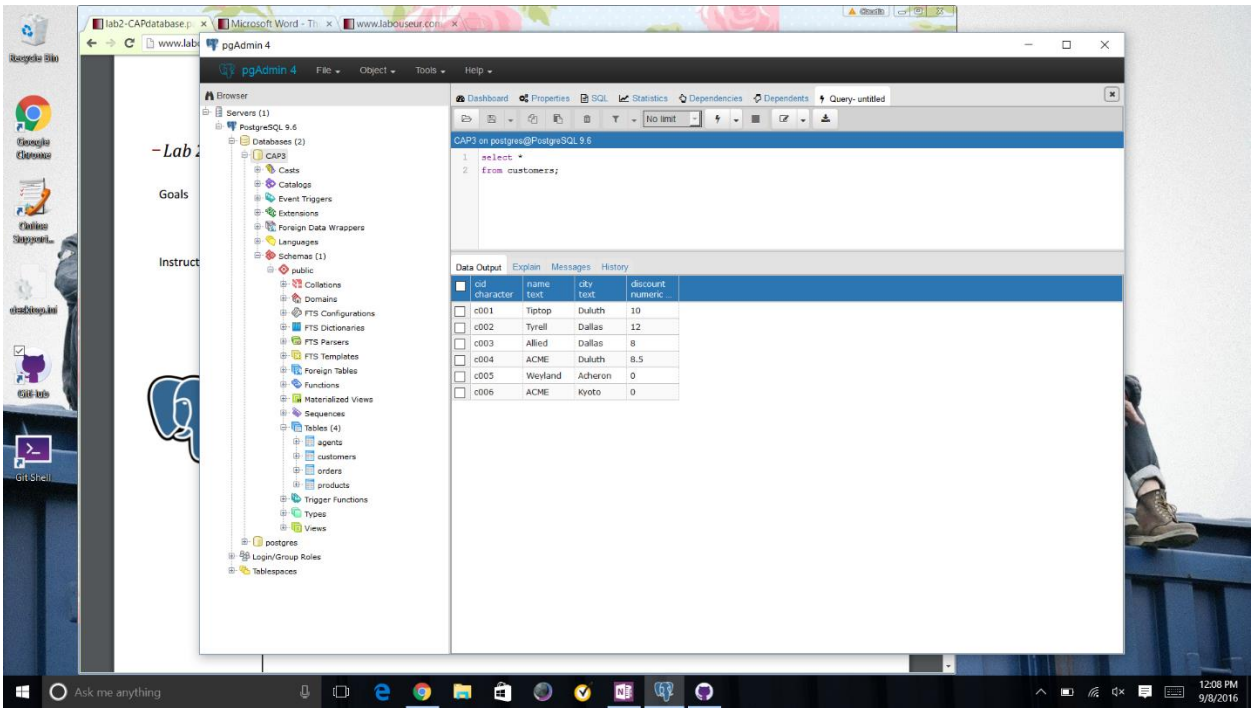
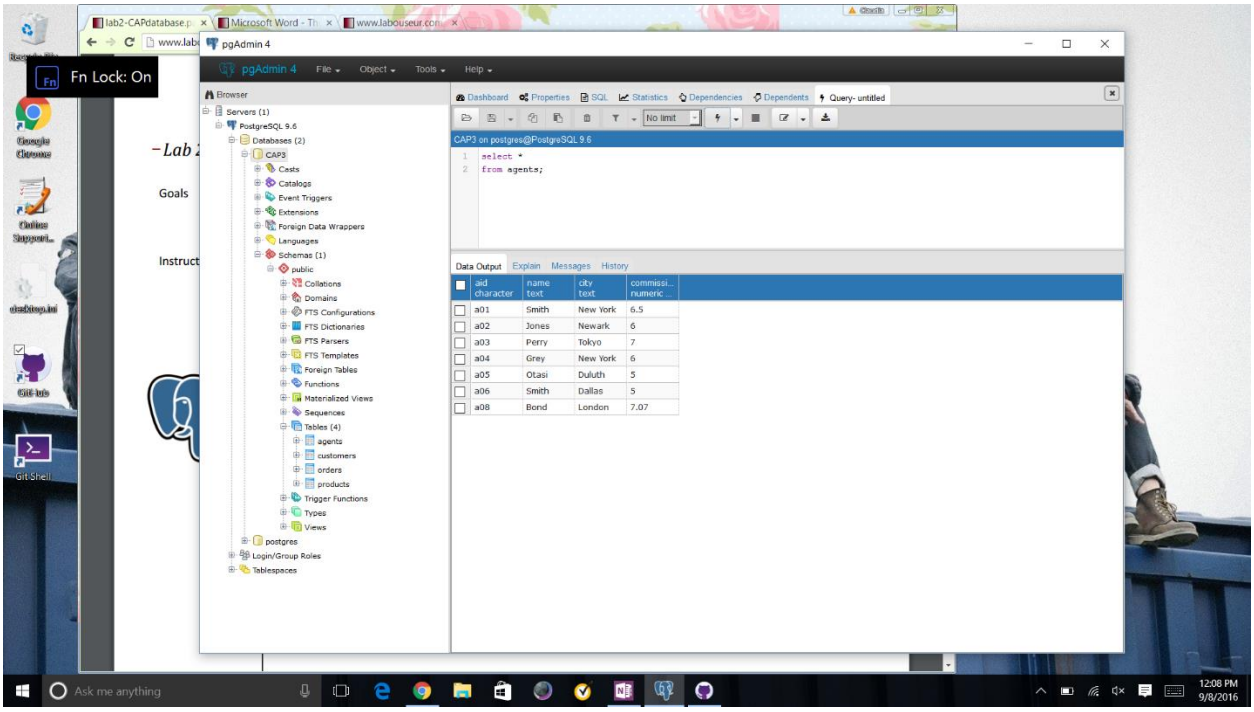
Claudia Rojas
Database Systems 308
Lab 2 CAP database





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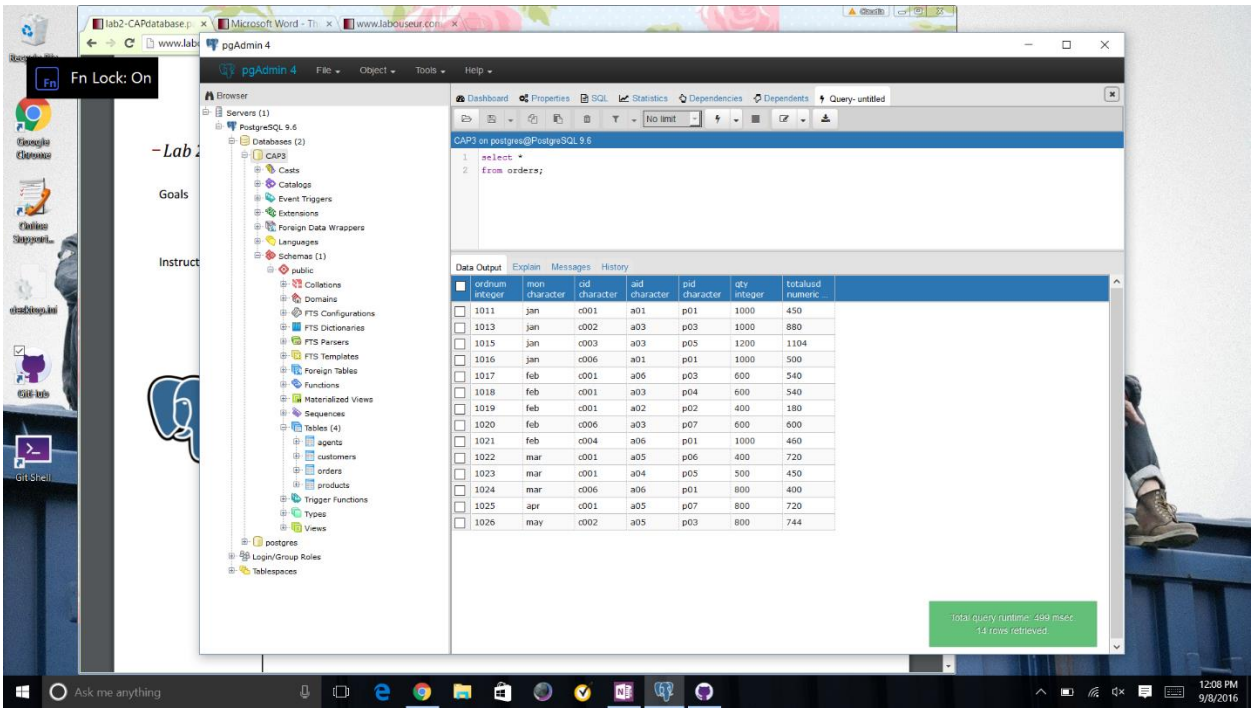

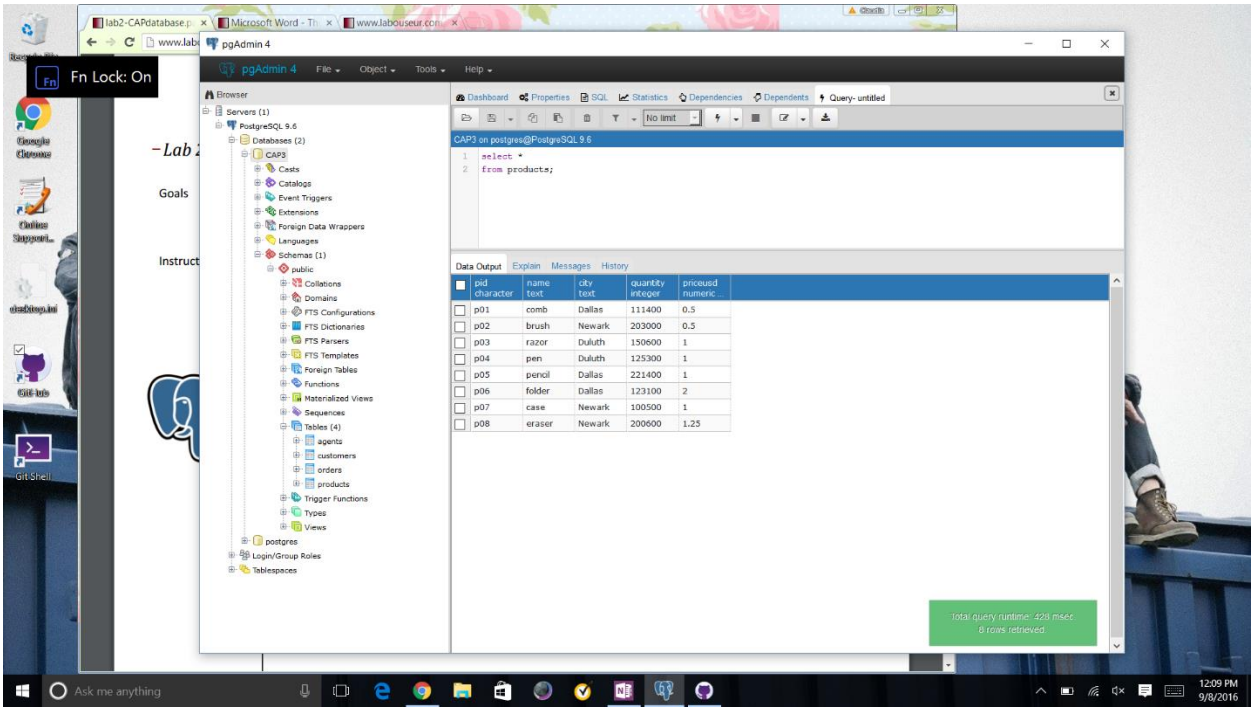

2. A candidate key refers to a column or a set of columns in an entity. For example, a candidate key would be studentDOB or firstName and lastName. A primary key is a singular unique candidate key that is the main key for tan entity, such as studentID. A superkey is a set of columns that identify a specific set. For example, a superkey would identify the name of someone by using the columns with the ID firstName and lastName.
3. A data type is an element that is organized within a table. Data types can be names, ages, phone numbers, addresses, ID's, or position. Each data type must be unique and atomic. Data types describe a specific subject and must relate to each other. For example, we need data to keep track of the people who have annual tickets to a theme park. The data types for this would include first and last name, DOB, address, email address, number of tickets purchased, total purchase and pass type. The table would be called "Theme Park Ticket Holders". None of the values would be nullable since the people in the data would only contain people who have contained passes into the theme park.

firstName	lastName	DOB	Address	emailAddress	ticketsPurchased	passType	totalPurchase
String	String	Date	String	String	Integer	String	Real
String	String	Date	String	String	Integer	String	Real
String	String	Date	String	String	Integer	String	Real

4. Relational rule 1 declares that all the fields must be atomic. For example, in a field every value must be singular such as in the age field there can only be one number. A field is the intersection of a row and a column and has one value stored into it. Relational rule 2 states that the data types must be chosen by what they are not where. The data table cannot be chosen using a pointer but with the combination of the name of the table, primary key and attribute name. For example, to select the date of birth of a student first the table name must be chosen, such as student contact info. Then the primary key, which is either the last name or first name of the student. Lastly the attribute name must be chosen, in this case it would have to be the date of birth column. The last relational rule is that all rows must be unique. Multiple rows cannot have the same information for a person. If one row has the same information for the same person, then the data would be distorted. It is possible for someone to have similar data values but it should not be possible for them to have all the same data.