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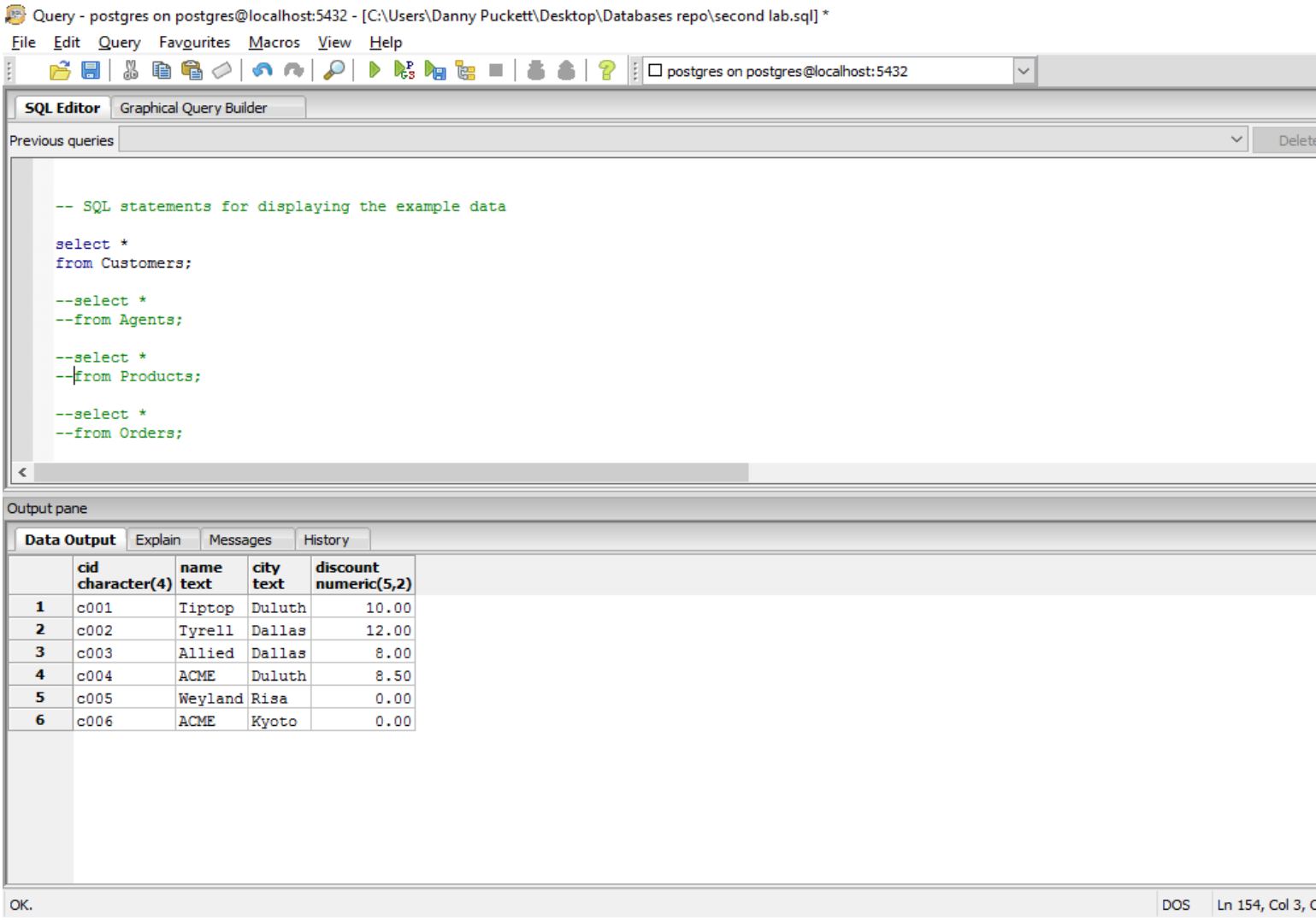
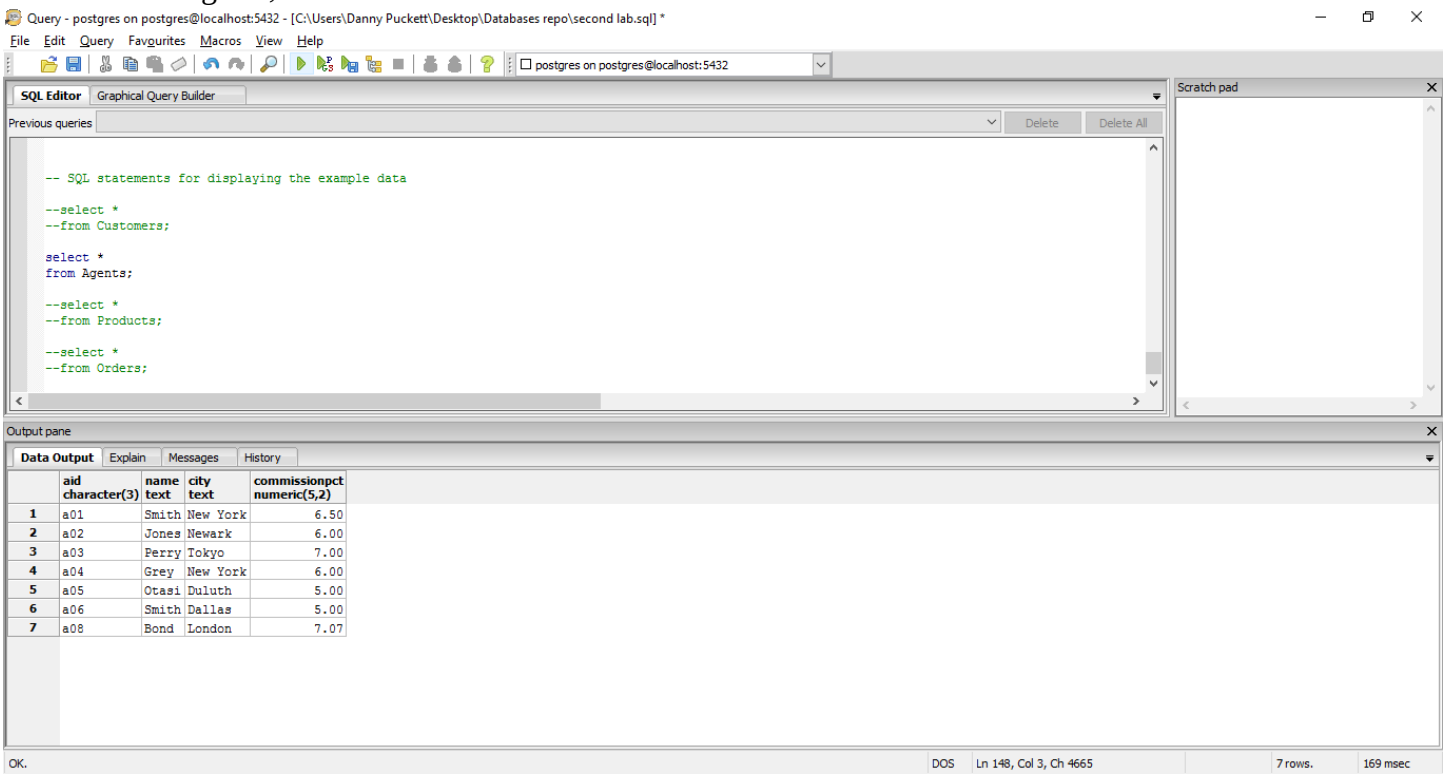
Lab 2 – Database CMPT 308N

1.) After running the code from, http://www.labouseur.com/courses/db/cap4.txt, and running the following queries… (at one time):
select * from Customers;

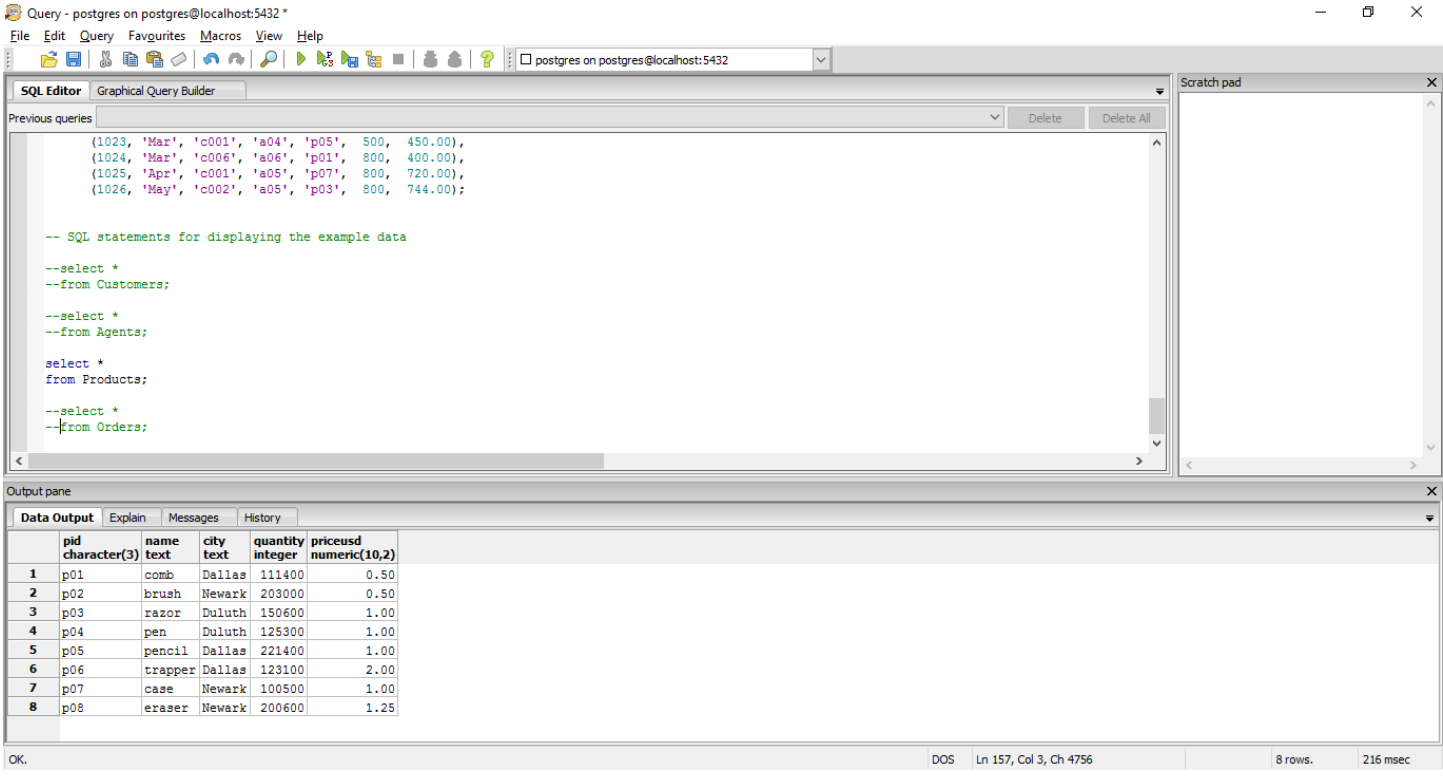
I have the following output from said queries:



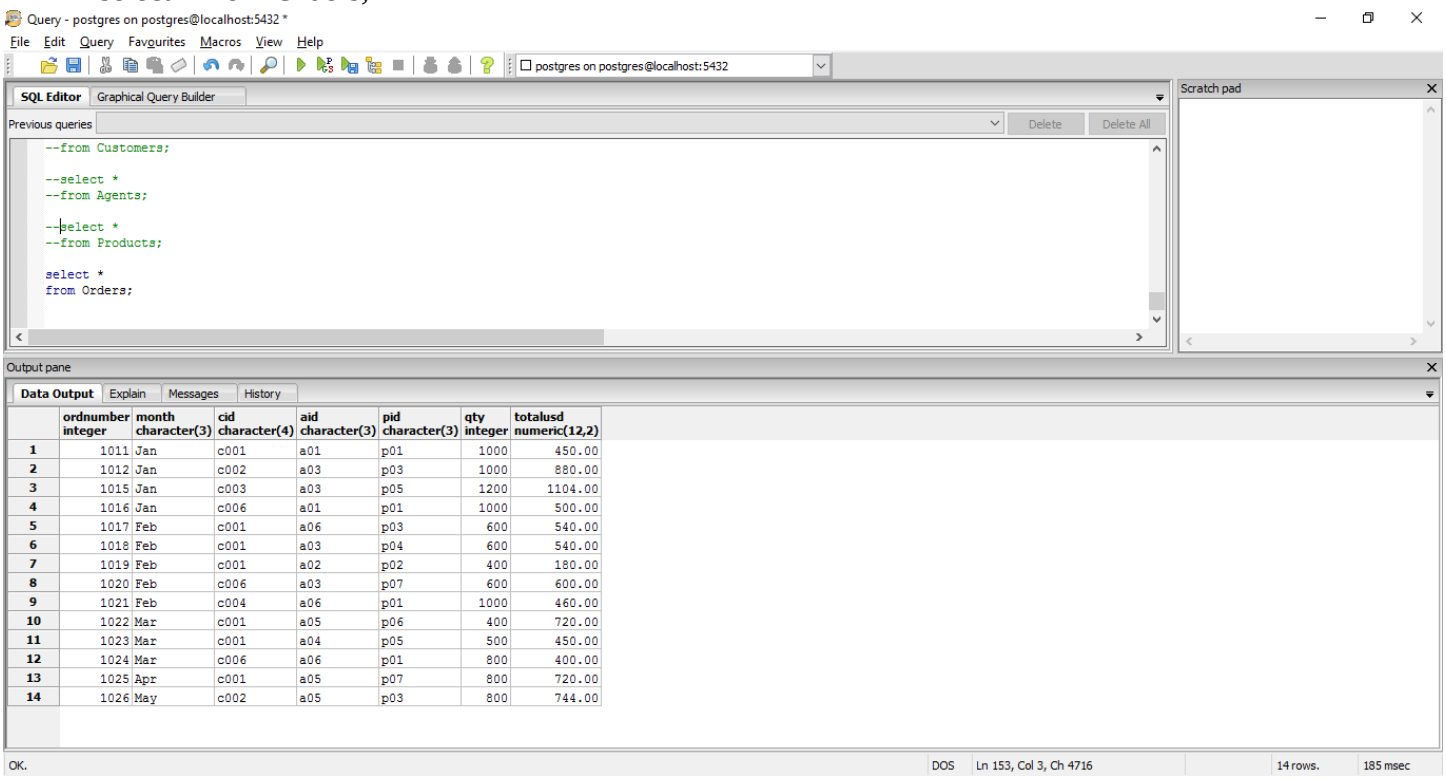
select * from Agents;



select * from Products;



select * from Orders;



2.)

Explain the distinction among the terms primary keys, candidate key, and super key.

A super key is a column or set of columns within a data table that insures every row will be unique.

A candidate key is a minimized super key, to the point that its is at its most reduced state and at its best utilization.

A primary key is a chosen candidate key for each data table for correlational purposes with the un-remarked upon foreign key…

To be noted, the super key and candidate key are said to be unique to their primary tables…

3.)Write a brief essay on data on data types. Select a topic for which you might create a table. Name the table and list its fields (columns). For each field, give its data type and whether or not it is nullable.

By google definition a data type is: a particular kind of data item, as defined by the values it can take, the programming language used, or the operations that can be performed on it. (google.com) A few examples of data types are calendars, time of day, or a restaurant menu… select a data type: I'll select a Calendar.
Its columns (fields) would be the days of the week; Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. And as a whole none of these are nullable in totality, yet every day of the week is considered nullable for its first week value except for Saturday, and all are considered nullable for the last week of the month except for Sunday… to that degree they are all nullable in specific cases depending on the "way the days fall".

4.) Explain the following relational “rules” with examples and reasons why they are important.

a. The “First normal form” rule
b. The “access rows by content only” rule
c. The “all rows must be unique” rule

a. The first normal form “rule” is that all data is to be at its atomical value, its most concise value. Example: 2 is 2, not 2.00 unless needed for uniform reasoning…
b. The access rows by content only “rule” is Codd’s second Relational Rule, to which data is to be accessed by content not value.. you don’t select elements of a data table by row and column, you do so with select, from, and where in relation to the entire data construct to be evaluated.
   Example: not to be, selecting row 5 column 2. To be, select * from Orders where month = Feb and ordNumber = 1017….
c. The all rows must be unique “rule” is just that, all rows in your data construct must be unique. If they aren’t you are either repeating yourself, which causes redundancy, or the rows aren’t unique they just hazily seem to be. Same content, different field reasoning….
   Example: in a data table of a calendar for this example… you cant have a Sunday February 5th 2017 and also have a Monday February 5th 2017, its redundant, and it doesn’t happen. You have to wait 6 years for a next occurring incidence of Monday to fall on the 5th in February.