Homework #2 - PS 1 due 9/22/2021

Problems below make use of the northwind dataset (northwind db). Please feel free to consult your notes, the lectures and email me and/or the class TA for help. While you may work together, it is highly advisable that you attempt to do the problems alone (i.e. not with )a fellow classmate so that you may best identify which area(s) you would like to spend more time discussing.

\*\* Note \*\* The acronym CI refers to case-insensitive. So if you see it near a word, it means perform a case-insensitive search.

# QUESTION 1

In the customers table, group by country and contact\_title fields where the contact\_title field does not have the word 'sales' (CI) in it and return the count of items in the grouping as "total". Return groupings with a total greater than 2 and sort the result by the country and contact\_title fields descending.

*Sample of results*

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# QUESTION 2

In the order\_details table, group on the order\_id and discount fields. Compute the following: average of the quantity field as “avg\_quantity” & round it to two decimal places; the sum of the unit\_price field as “sum\_price”, and the count of the number of items in the grouping as “total”. Filter on rows where the total field is greater than four and the discount is greater than zero. Sort by the total and discount fields both descending.

*Sample of results*

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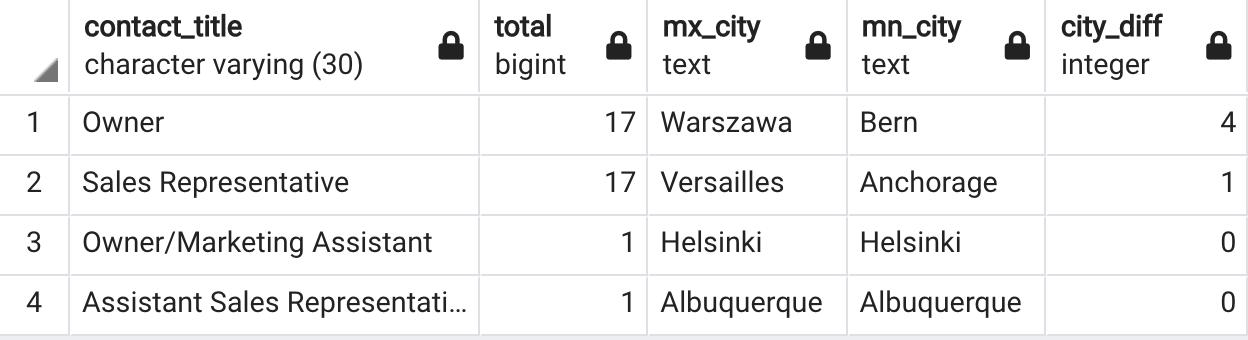
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# QUESTION 3

In the customers table, group by the contact\_title, and return the count per grouping, the maximum value of the city field as mx\_city, the minimum value of the city field as mn\_city, and the length of the minimum city field subtracted from the length of maximum city field (i.e. max - min) as city\_diff.   
  
Only group the rows where the contact\_title of a row contains the word 'owner'(CI) or 'representative' (CI). Sort by the total descending and the mx\_city descending.

\*Note\* max() and min() when used on a string evaluates a set of values in alphabetical order i.e. in other words, MAX( ‘Art’, ‘Board’, ‘Cat’) would return the word ‘Cat’, whereas MIN() would return the word ‘Art’.

*Full list of results below*

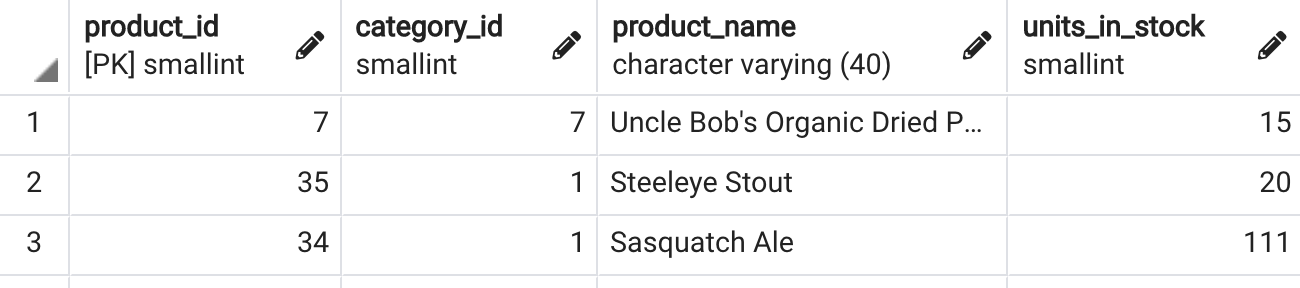


# QUESTION 4

In the products table, select the product\_id ,category\_id, product\_name, and units\_in\_stock where the product\_id is (condition 1) equal to the category\_id or is equal to the product\_id multiplied by the category\_id, and (condition 2) the product\_name starts with an 's' (CI) or starts with a 'u' (CI).

Sort by where the product\_id is equal to the category\_id ascending, and the product\_name descending.

*Full results below*



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# QUESTION 5

In the orders table, group by ship\_via, employee\_id, ship\_country fields, where the ship\_via is less than the employee\_id and (condition 1) the ship\_country does not end in the letter 'y'(CI) or 'L' (CI) or (condition 2) the employee\_id is 4.

For each grouping, return the count of the number of items as total and the average freight as avg\_fr. Return groupings with avg\_fr greater than 30, a total greater than 7, and sort the results by total descending.

*Sample of results*

