GGR372 – Lab 2

Instructions:
We are going to learn how geocoding works – geocoding links non-spatial data with a spatial dataset. Toronto is Canada's largest city; clearly there will be increasing pressure on our healthcare service locations, including physician offices and pharmacies, to meet rising demand for services.
Pharmacies have become an increasingly important place with regard to certain public health interventions, such as covid and flu vaccines. Moreover, along with their traditional role in medicine dispensing, pharmacies in Ontario can now prescribe medication for common ailments such as tick bites (among others). Furthermore, with the increasing population of Toronto, demand for health care continues to rise.
In this exercise you are beginning to create a database to study access to Shoppers Drug Mart (one of the largest pharmacy chains in Ontario) in Toronto and show the current locations of select physician offices and hospitals in Toronto.

Task: [25 marks]
Your task is to locate the addresses and geocode all of the Shoppers Drug Mart pharmacies in Toronto. Data are not always given to you, so it is important to learn where and how to create data on your own. Aside from the Shoppers Drug Mart, you are given a table with select physician offices in Toronto and asked to map the locations of all Toronto hospitals. You will need to geocode these to create a map that includes the following elements:

1. Shoppers Drug Marts as geocoded dots
2. Select physician offices as geocoded dots (table provided)
3. Hospitals in Toronto (data provided)
4. Select roadways to improve readability of map
5. Toronto neighbourhood boundaries

Your map must have all the necessary cartographic elements discussed in other courses including, legend, scale bar, information on projections and coordinate system.

Be sure to also include your attribute tables for the Shoppers Drug Marts and select physician offices file – you can include as a screenshot or as a table.

Questions: [5 marks]

1) What does your map tell you about your accessibility to pharmacies and the distribution of physician offices [3 sentences indicating if you think you have good or bad accessibility in relation to physician offices and why you have drawn this conclusion from your data]. [3 marks]

2) What challenges did you deal with while geocoding the data? Were you able to overcome these issues (if so how)? [2 marks]

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Data:
Spatial data files:
ADDRESS_Toronto: Point files for all addresses in Toronto – can be used for geocoding.
CENTRELINE_Toronto: All roadways in Toronto.
NEIGHBOURHOODS_Toronto: shape file containing neighbourhood boundaries.
Hospitals: hospitals in Toronto
GreatLakes: Great lakes boundary file
Ontario: Ontario boundary file

Non spatial data file:
Physicians_table: select physician offices in tabular format.
Shoppers Drug Mart: you need to locate this data.

Data sources: City of Toronto; DMTI; LHIN, 2021

Submit your map and answers to the questions as one document on quercus by Feb. 25 at 5:00pm.