CS621 Self Assessment Week 7
Working with Choropleth Maps in QGIS and PostGIS

QUESTION 1: Distribution of transportation Stops in London

On Moodle you have been provided with three datasets for London. They are described as follows:

1. An ESRI Shapefile describing all of the London Wards:The wards and electoral divisions in the United Kingdom are electoral districts at sub-national level represented by one or more councillors.
2. A GeoJSON file (in EPSG:4326) representing a survey of London Transportation stops carried out in 2017 (osm_id is the primary key)
3. An ESRI Shapefile representing a survey of London Transportation stops carried out in 2018. This survey is more complete.

An example of Layer 1 and Layer 2 from above is shown below. You should use the UTM zone for the United Kingdom (32630) if you require a meter-based CRS.

You are required to perform the following analysis using PostGIS and QGIS.

1. Create TWO Choropleth maps – one showing the density of London Transportation stops in 2017 in all wards in London while the other shows the density of London Transportation stops in 2018 in all wards in London. The density should represent the number of transportation stops per KM2

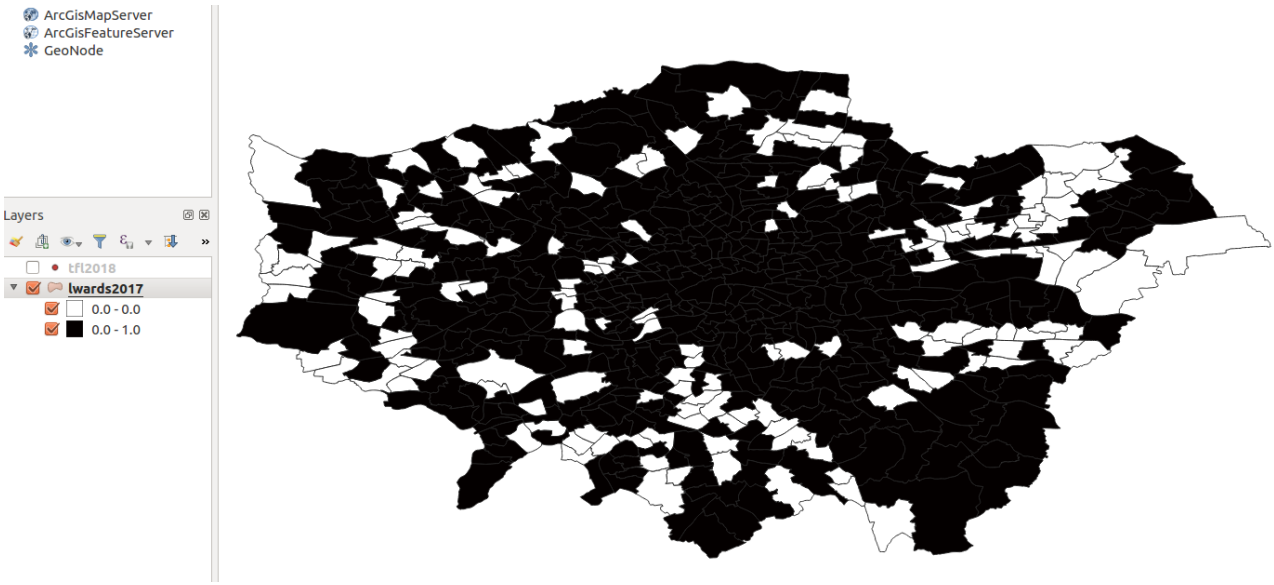
in a given ward. You are asked to use 5 classes in your classification. The choice of color ramp, transparency, etc is left up to you.

2. Considering ONLY the London Transportation Stops 2018 dataset – DELETE all of the rows in the table where the bus column is not equal to 'yes'. It might be a good idea to make a copy of this shapefile and re-import this dataset using DBManager as a different table name. After you have completed the deletion create a choropleth map indicating the density of the transportation stops in every London ward from this new dataset. Perform your own VISUAL COMPARISION between the maps.

QUESTION 2: More detailed Choropleth Maps. [not for lab exam]

You might need to re-import the London Transportation Stops 2018 Dataset for this question. You are advised to either DROP the table in PostGIS or indicate to DBManager that you want to overwrite the existing table.

In this question we want to create a special choropleth map. We want to create a column in the London Wards table which indicates simply if there is at least one transport stop in a given ward polygon. If there are one or more transport stops in a given ward polygon then this is a value of 1. If there are no stops then this is a value of 0. We then create a BINARY colored Choropleth map as shown below.



REMEMBER – DBManager does not like capital letters or special characters in table file names. You are encouraged to choose lowercase table names which do not include characters such as underscores, hyphens or spaces.