GGR472
Lab 1 Report

Let's begin by taking a look at the different elements present in my code and their functions:

- **Type** – it specifies the type of GeoJSON object. Some examples include *FeatureCollection*, *Feature*, and *Point*.
- **Features** – it is an array of feature objects, where each feature represents a geographic object. In my GeoJSON file, each feature represents a Cineplex Cinema in Toronto.
- **Properties** – it is a GeoJSON object that contains the properties of each feature. For my file, each feature has the following properties:
    - **Name** – the name of the cinema.
    - **Marker color** - the color of the marker in hex format.
    - **Marker size** – the size of the marker on the map.
    - **Marker symbol** – the symbol of the marker on the map.
- **Geometry** – it is a GeoJSON object that contains the shape and coordinates of the feature.
- **Id** – it is a unique identifier of the feature.

A shapefile is in a binary format and therefore it has a complex structure and is not human-readable. GeoJSON is a JSON-based format, which in turn is a text-based format. This makes it human-readable and easy to understand. It is also suitable for web applications due to the wide range of browsers and operating systems accessing the server. Another major difference is that while geometry and attributes are stored in the same file in GeoJSON, they are stored in different files (geometry in .shp and attributes in .dbf) in a Shapefile. My shapefile (9KB) is larger in size compared to the equivalent GeoJSON file (2KB).

One of the major advantages of using GeoJSON is it is available for use in a wide range of mapping APIs and GIS software like Mapbox, ESRI, Google, and QGIS. Another advantage which I previously mentioned was that it is in a human-readable, easy to understand format. Since it is not tied to any proprietary software like a shapefile, it is also more easily available to use. A major disadvantage could be the redundancy in the data. For example, marker-color was repeated 8 times in my file, once for each of my features.