import libraries

import required libraries

In [1]:

```
import pandas as pd
import numpy as np
import requests
from bs4 import BeautifulSoup
import folium
```

creating DataFrame

In [2]:

```
df = pd.read_html("https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M")
df=df[0]
df.head()
```

Out[2]:

	Postal Code	Community	Neighbourhood
0	M1A	Not assigned	Not assigned
1	M2A	Not assigned	Not assigned
2	M3A	North York	Parkwoods
3	M4A	North York	Victoria Village
4	M5A	Downtown Toronto	Regent Park, Harbourfront

In [4]:

```
df=df[df['Community']!='Not assigned']
df.reset_index()
df
```

Out[4]:

	Postal Code	Community	Neighbourhood
2	M3A	North York	Parkwoods
3	M4A	North York	Victoria Village
4	M5A	Downtown Toronto	Regent Park, Harbourfront
5	M6A	North York	Lawrence Manor, Lawrence Heights
6	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government
...	...	...	...
160	M8X	Etobicoke	The Kingsway, Montgomery Road, Old Mill North
165	M4Y	Downtown Toronto	Church and Wellesley
168	M7Y	East Toronto	Business reply mail Processing Centre, South C...
169	M8Y	Etobicoke	Old Mill South, King's Mill Park, Sunnylea, Hu...
178	M8Z	Etobicoke	Mimico NW, The Queensway West, South of Bloor,...

103 rows × 3 columns

In [5]:

In [5]:

```
df[(df['Neighbourhood'] == "Not assigned")].count()
```

Out[5]:

```
Postal Code       0
Community         0
Neighbourhood     0
dtype: int64
```

In [6]:

```
df = df.groupby(["Postal Code", "Community"])["Neighbourhood"].apply(", ".join).reset_in
dex()
df
```

Out[6]:

	Postal Code	Community	Neighbourhood
0	M1B	Scarborough	Malvern, Rouge
1	M1C	Scarborough	Rouge Hill, Port Union, Highland Creek
2	M1E	Scarborough	Guildwood, Morningside, West Hill
3	M1G	Scarborough	Woburn
4	M1H	Scarborough	Cedarbrae
...	...	...	...
98	M9N	York	Weston
99	M9P	Etobicoke	Westmount
100	M9R	Etobicoke	Kingsview Village, St. Phillips, Martin Grove ...
101	M9V	Etobicoke	South Steeles, Silverstone, Humbergate, Jamest...
102	M9W	Etobicoke	Northwest, West Humber - Clairville

103 rows × 3 columns

In [7]:

```
print("shape:", df.shape)
```

```
shape: (103, 3)
```

Get the latitude and the longitude coordinates of each neighbourhood.

In [8]:

```
geo_coor = pd.read_csv("http://cocl.us/Geospatial_data")
geo_coor.head()
```

Out[8]:

	Postal Code	Latitude	Longitude
0	M1B	43.806686	-79.194353
1	M1C	43.784535	-79.160497
2	M1E	43.763573	-79.188711
3	M1G	43.770992	-79.216917
4	M1H	43.773136	-79.239476

In [9]:

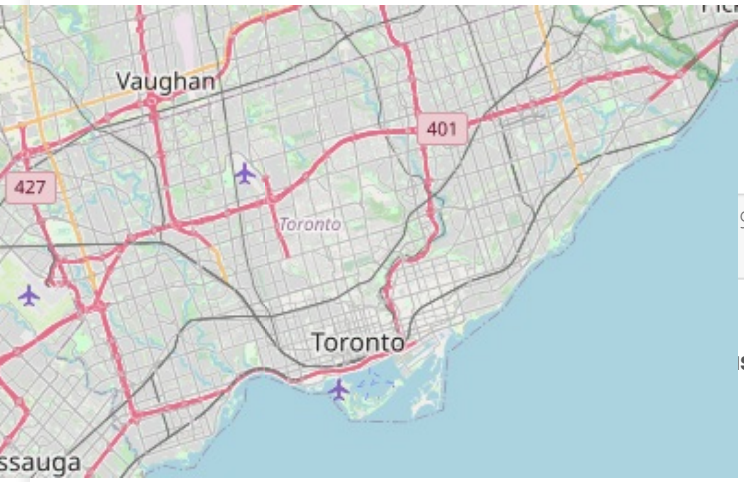
```
toronto = pd.merge(df, geo_coor, how='left', left_on = 'Postal Code', right_on = 'Postal
Code')
```

```
toronto.drop('Postal Code', axis=1, inplace=True)
toronto
```

Out[9]:

	Community	Neighbourhood	Latitude	Longitude
0	Scarborough	Malvern, Rouge	43.806686	-79.194353
1	Scarborough	Rouge Hill, Port Union, Highland Creek	43.784535	-79.160497
2	Scarborough	Guildwood, Morningside, West Hill	43.763573	-79.188711
3	Scarborough	Woburn	43.770992	-79.216917
4	Scarborough	Cedarbrae	43.773136	-79.239476
...	...	...	...	...
98	York	Weston	43.706876	-79.518188
99	Etobicoke	Westmount	43.696319	-79.532242
100	Etobicoke	Kingsview Village, St. Phillips, Martin Grove ...	43.688905	-79.554724
101	Etobicoke	South Steeles, Silverstone, Humbergate, Jamest...	43.739416	-79.588437
102	Etobicoke	Northwest, West Humber - Clairville	43.706748	-79.594054

103 rows × 4 columns




```
963, -79.387207], zoom_start=10)
```

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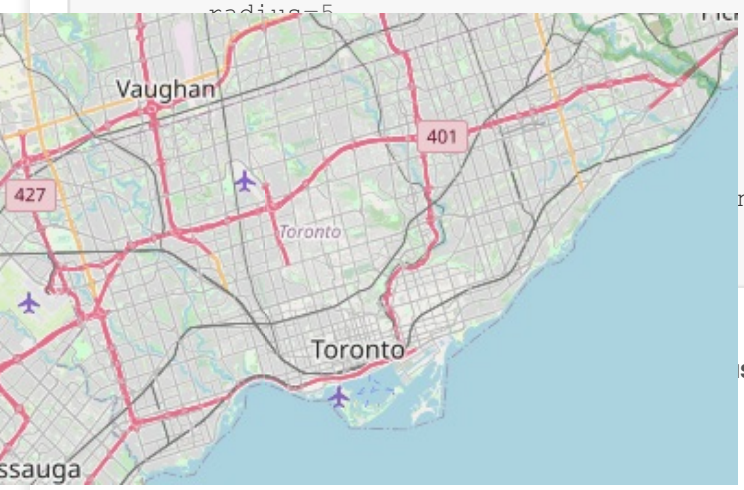
In [12]:

```
for lat, lng, borough, neighborhood in zip(
        toronto['Latitude'],
        toronto['Longitude'],
```

```
        toronto['Community'],
        toronto['Neighbourhood']):
    label = '{}, {}'.format(neighborhood, borough)
    label = folium.Popup(label, parse_html=True)
    folium.CircleMarker(
        [lat, lng],
```



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In [ ]: