**Assignment 3**

In the final lab, we created a map with markers to explore crime rate in San Francisco, California. In this question, you are required to create a Choropleth map to visualize crime in San Francisco.

Before you are ready to start building the map, let's restructure the data so that it is in the right format for the Choropleth map. Essentially, you will need to create a dataframe that lists each neighborhood in San Francisco along with the corresponding total number of crimes.

Based on the San Francisco crime dataset, you will find that San Francisco consists of 10 main neighborhoods, namely:

Central,  
Southern,  
Bayview,  
Mission,  
Park,  
Richmond,  
Ingleside,  
Taraval,  
Northern, and,  
Tenderloin.

Convert the San Francisco dataset, which you can also find here, https://cocl.us/sanfran\_crime\_dataset, into a pandas dataframe.

**Code Solution**

import pandas as pd  
import numpy as np  
df1=pd.read\_csv('https://cocl.us/sanfran\_crime\_dataset')  
df1.drop(['Category','Descript','DayOfWeek','Date','Time','Resolution','Address','X','Y','Location','PdId'], axis=1, inplace=True)  
df1.rename(columns={'IncidntNum':'Count', 'PdDistrict':'Neighborhood'}, inplace=True)  
df1.columns=list(map(str,df1.columns))  
df1.set\_index('Neighborhood',inplace=True)  
df1.sort\_values('Count',ascending=False)  
df1=df1.groupby('Neighborhood').count()  
df1.reset\_index(inplace=True)  
df1

