# Project 3 – NYC 311 calls

NYC 311 is a service that provides access to non-emergency City services and info about City government programs to the residents of New York. Each year, the service receives millions of requests reporting various kinds of problems with city services and other issues.

The data on the type of calls received, and their ultimate resolution is made available through the NYC Open Data portal at <https://data.cityofnewyork.us/Social-Services/311-Service-Requests-from-2010-to-Present/erm2-nwe9>. The data is updated daily. The link also provides the data dictionary for the data.

To ensure that we are all using the same data and arrive at the same results, the data has been downloaded and includes information up to 2023-08-04 12:00:00. Several columns not required for this project have been removed from the original data. (As an additional exercise to showcase your skills, you should feel free to download the entire dataset from the URL above for investigation.)

Please use the Project-3\_NYC\_311\_Calls.pkl for this analysis. The data file is available as a pickle file on Jupyterhub, and has information on 32 million calls to 311. You should be able to read the file into a dataframe using pd**.**read\_pickle**(**'Project-3\_NYC\_311\_Calls.pkl'**)**

You may choose to move the ‘Created Date’ to the dataframe’s index, for example, using the below code.

# We make the index as a proper DatetimeIndex, and then delete the Created Date column

df **=** df**.**set\_index**(**pd**.**DatetimeIndex**(**df**[**'Created Date'**]))**

**del** df**[**'Created Date'**]**

**Data Exploration**

Spend some time querying the data, and making yourself familiar with it using the EDA techniques we learned in class. Show your EDA in the Jupyter notebook you will use for uploading to Github. Look at the types of complaints, read some descriptions, see the earliest date, the latest date etc. Read the data dictionary to understand what the columns mean. Be aware that many columns have NaN values, and they may not get counted for your analysis.

Next, answer the questions that follow: