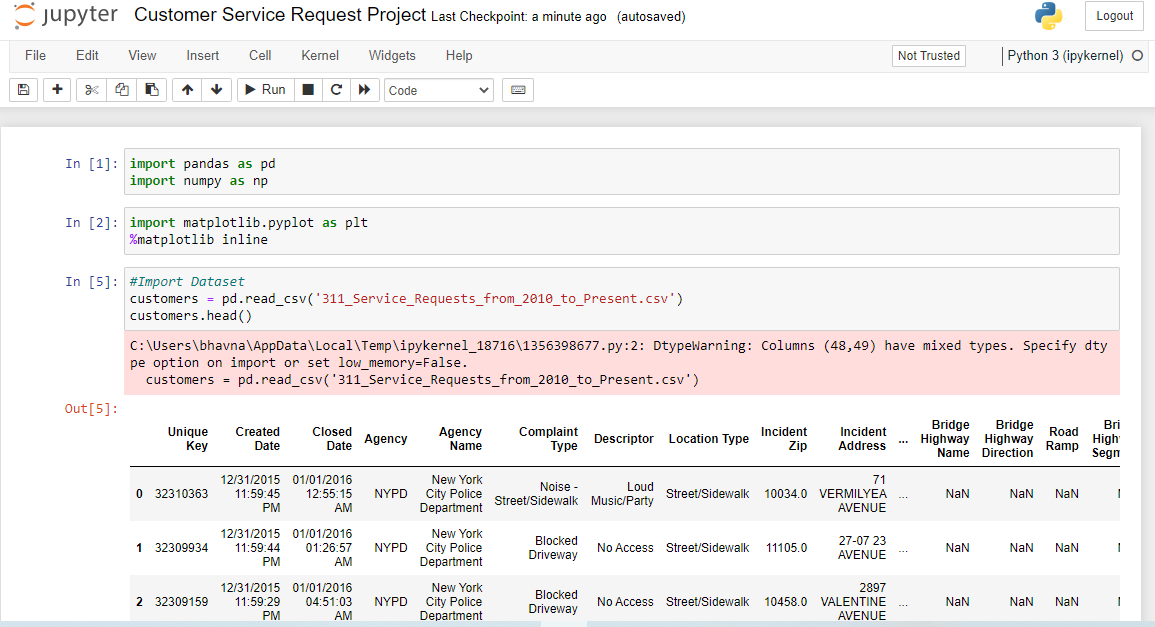
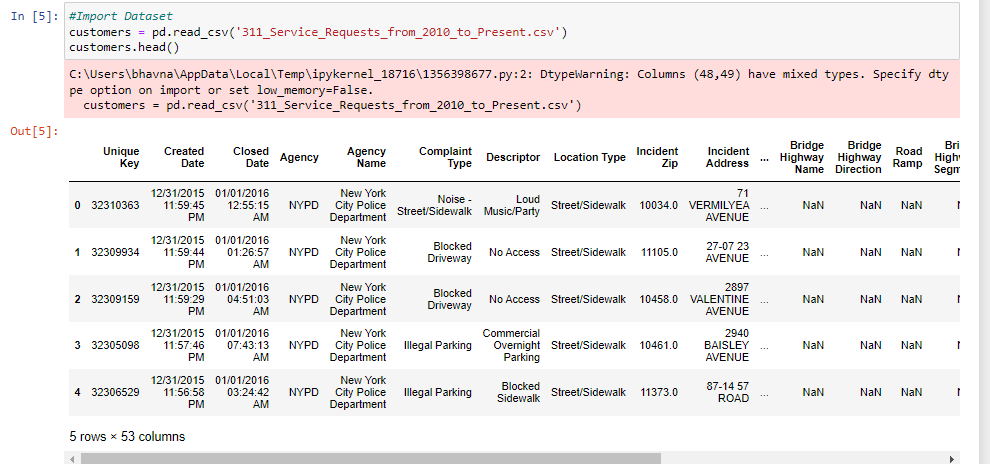
**Customer Service Requests Analysis Project**

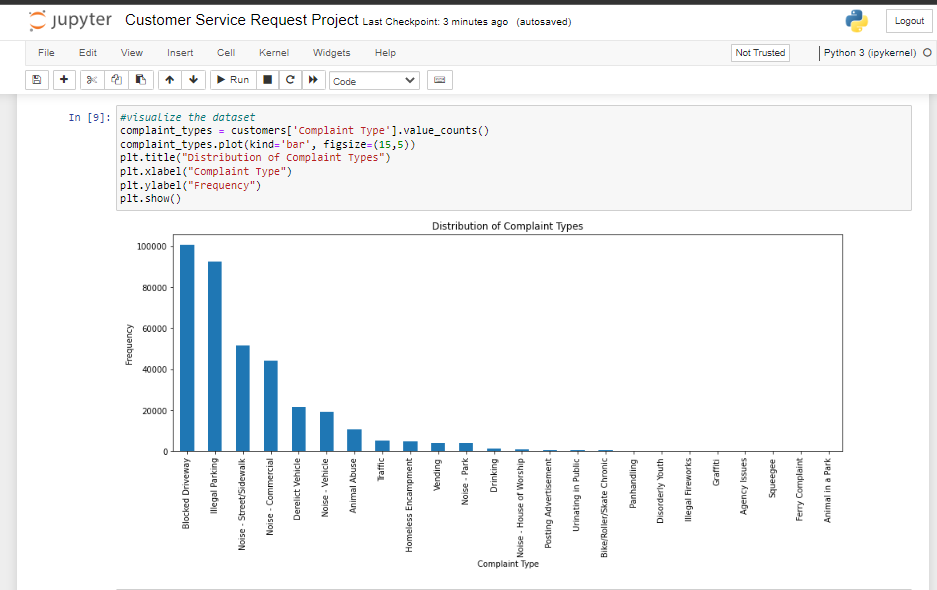
# **Understand the dataset**:



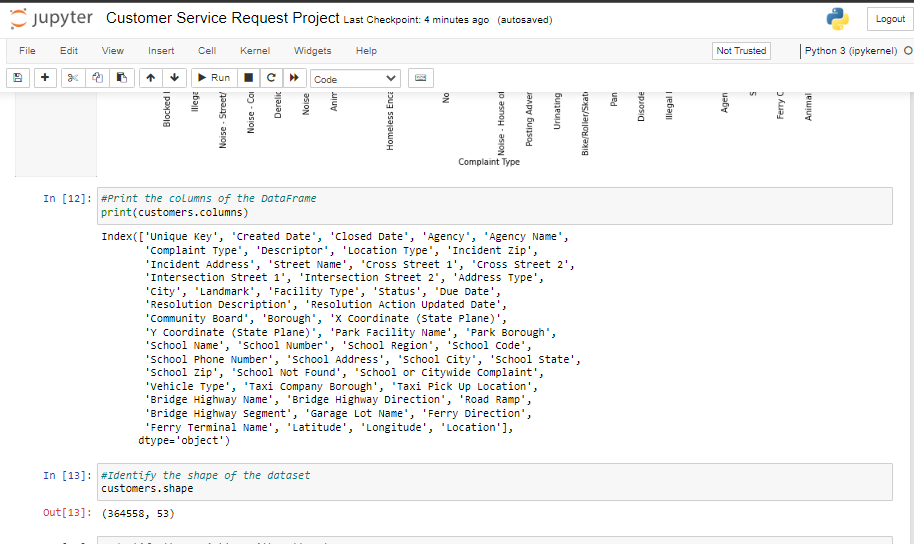
## Import Dataset



## visualize the dataset



## Print the columns of the DataFrame Identify the shape of the dataset

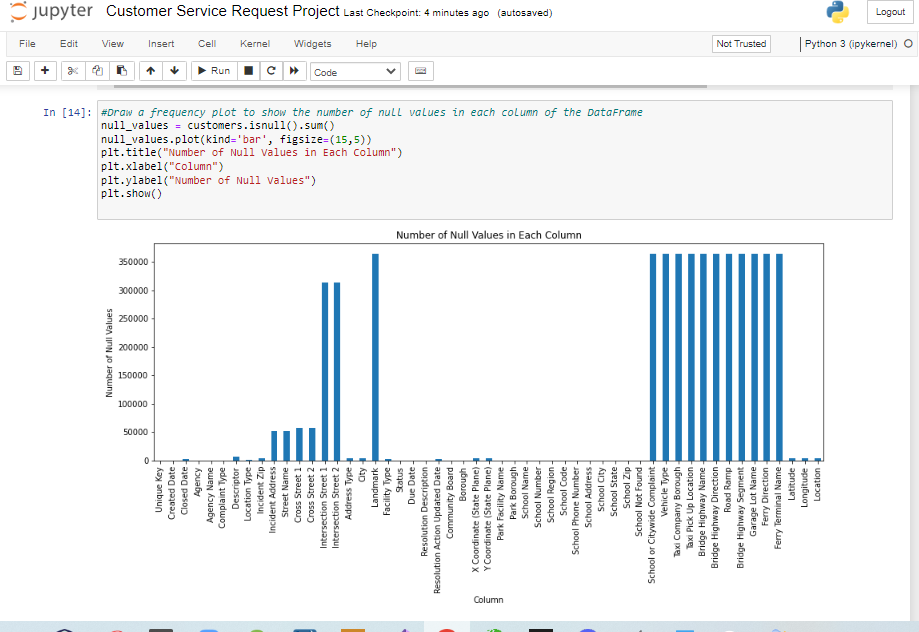


## Identify the variables with null values

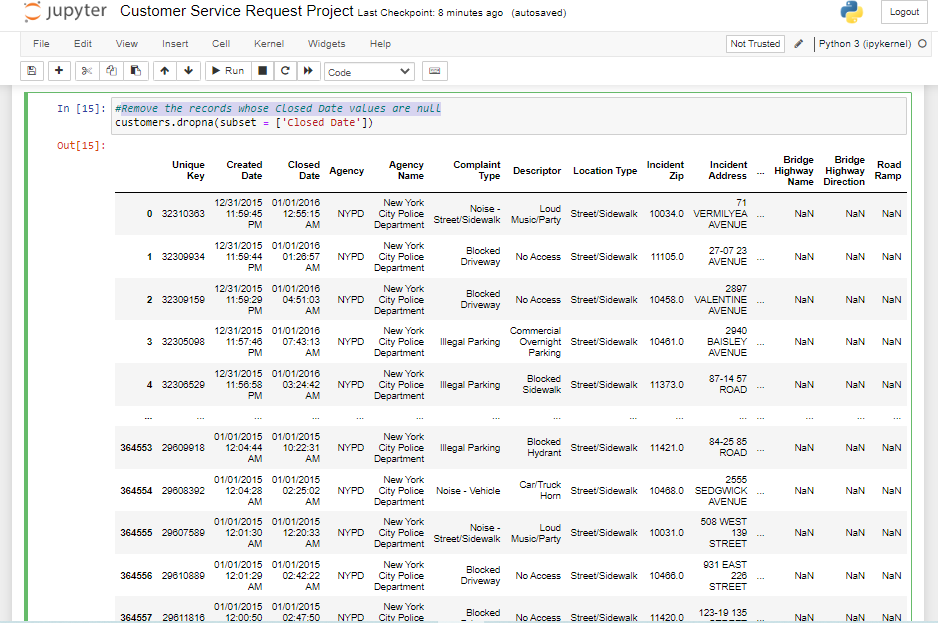
## 

# . **Perform basic data exploratory analysis:**

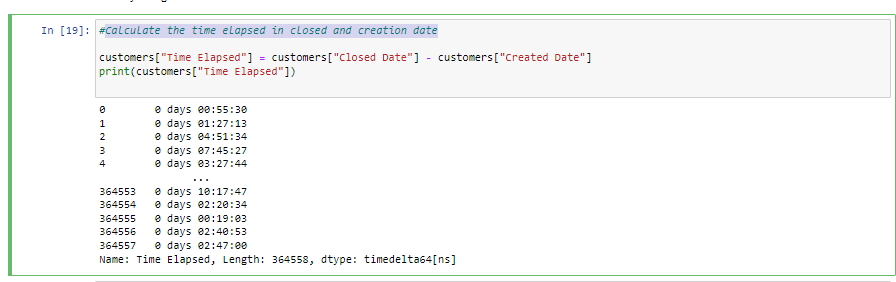
## Draw a frequency plot to show the number of null values in each column of the DataFrame



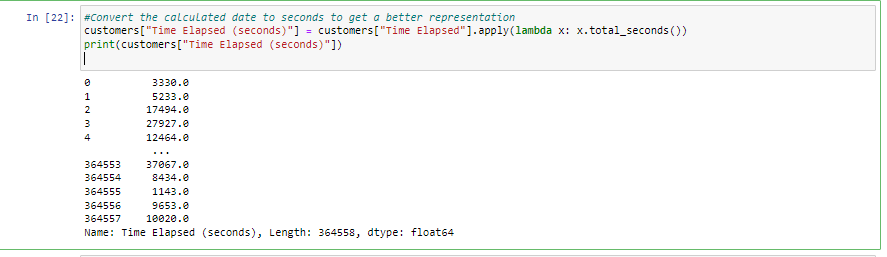
## Remove the records whose Closed Date values are null



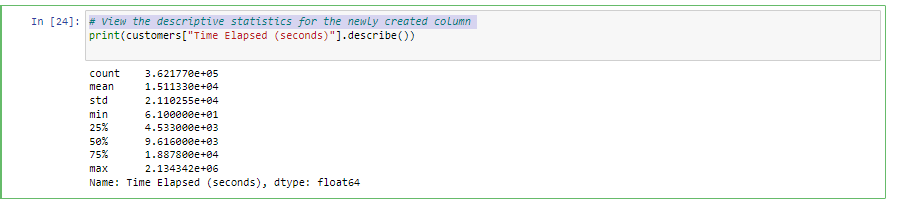
## Calculate the time elapsed in closed and creation date



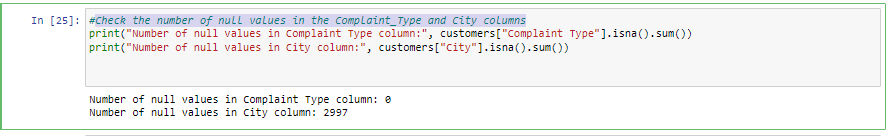
## Convert the calculated date to seconds to get a better representation



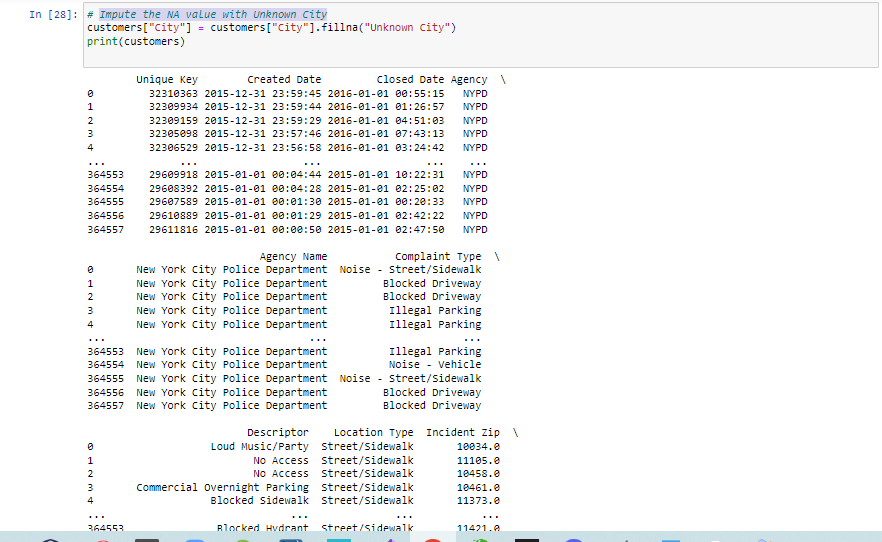
## View the descriptive statistics for the newly created column



## Check the number of null values in the Complaint\_Type and City columns

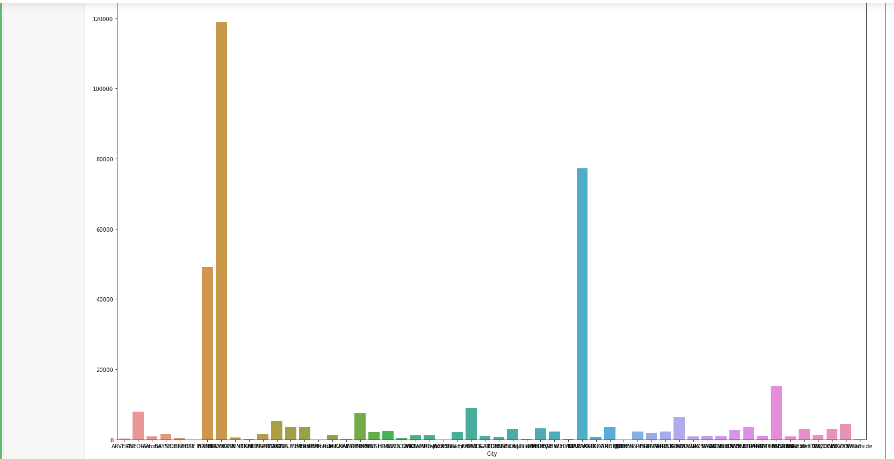


## Impute the NA value with Unknown City

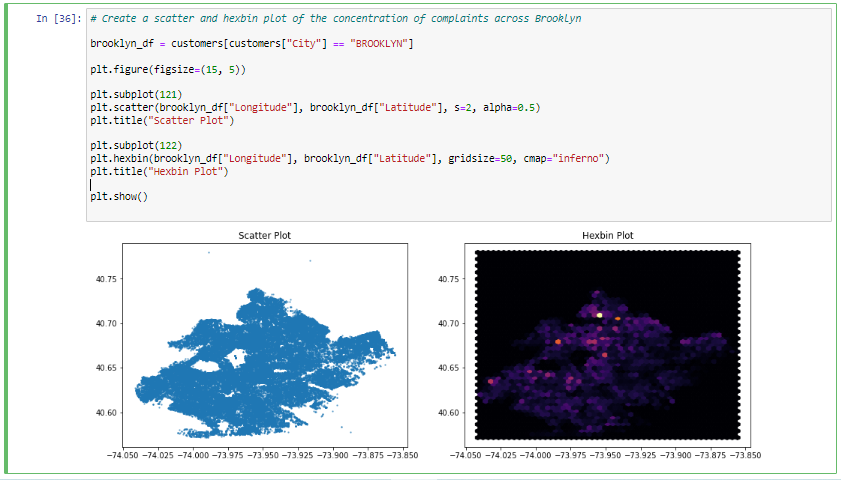


## Draw a frequency plot for the complaints in each city



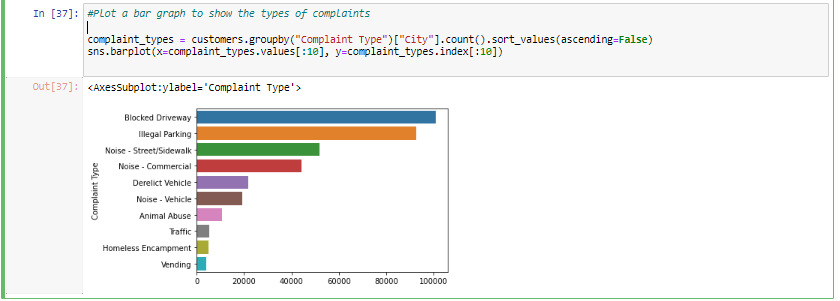


## Create a scatter and hexbin plot of the concentration of complaints across Brooklyn

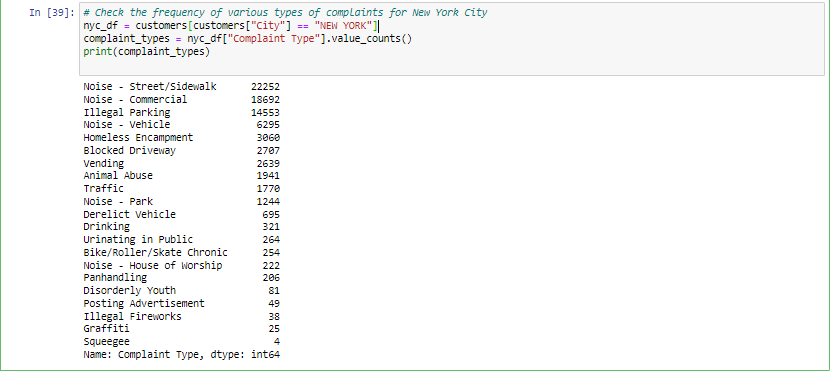


# **Find major types of complaints**:

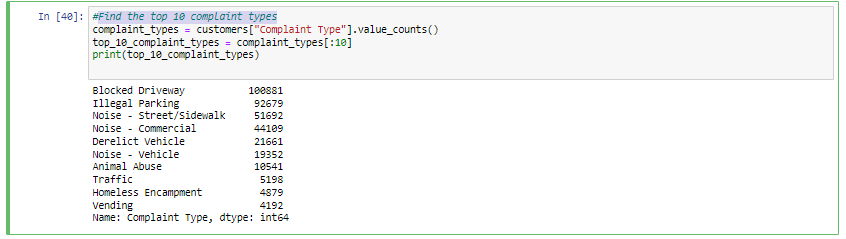
## Plot a bar graph to show the types of complaints



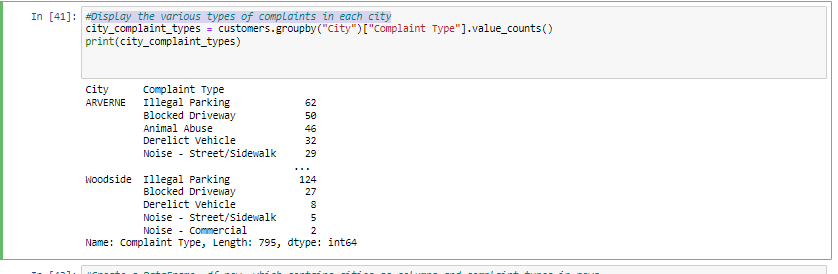
## Check the frequency of various types of complaints for New York City



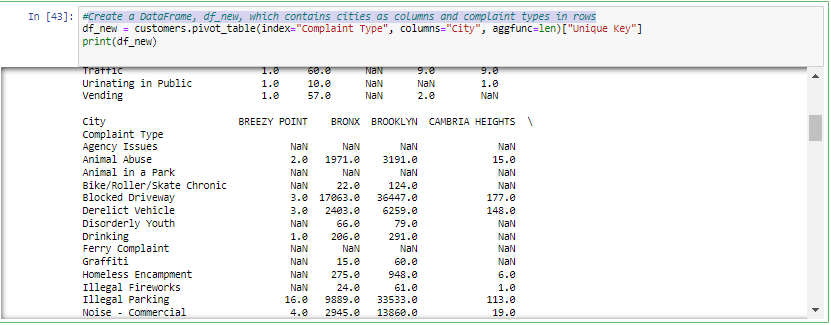
## Find the top 10 complaint types



## Display the various types of complaints in each city

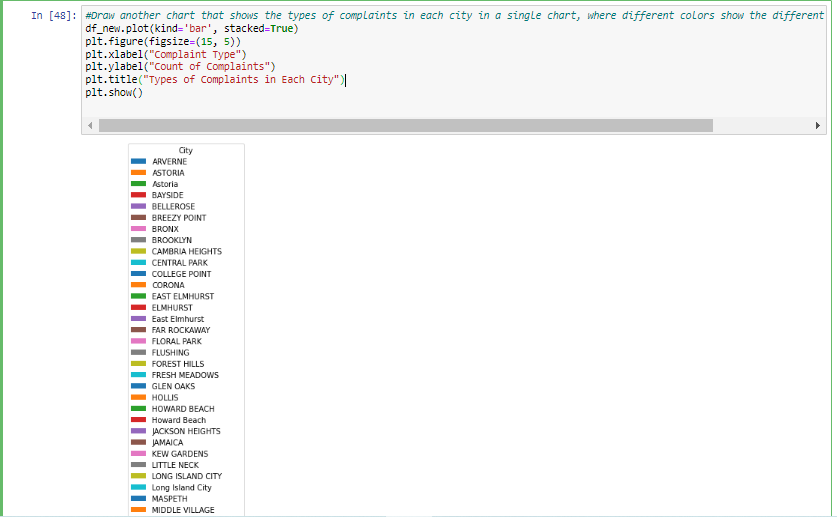


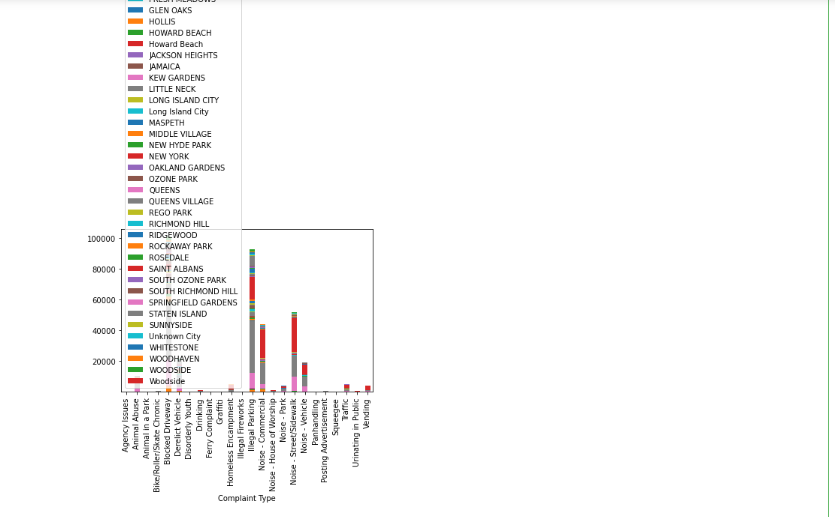
## Create a DataFrame, df\_new, which contains cities as columns and complaint types in rows



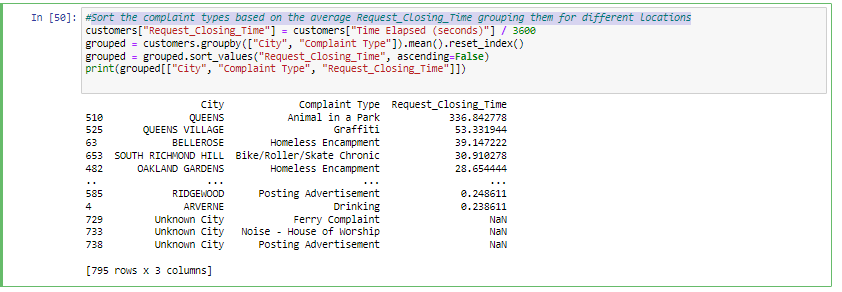
# **Visualize the major types of complaints in each city**

## Draw another chart that shows the types of complaints in each city in a single chart, where different colors show the different types of complaints



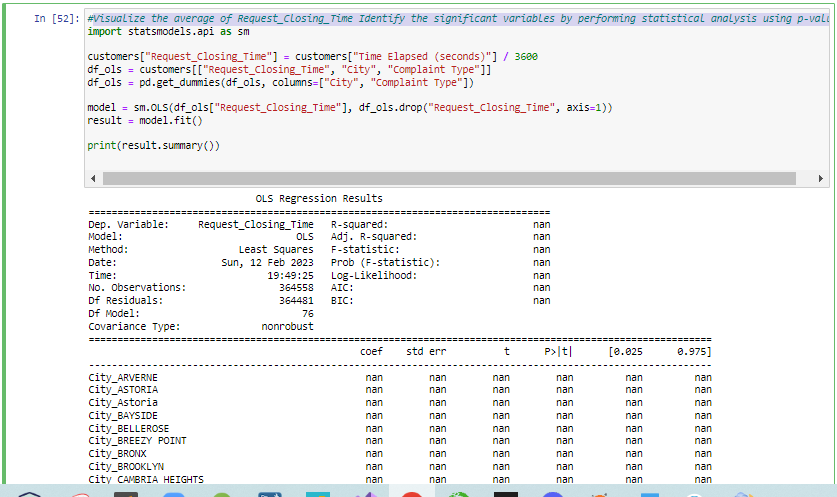


## Sort the complaint types based on the average Request\_Closing\_Time grouping them for different locations

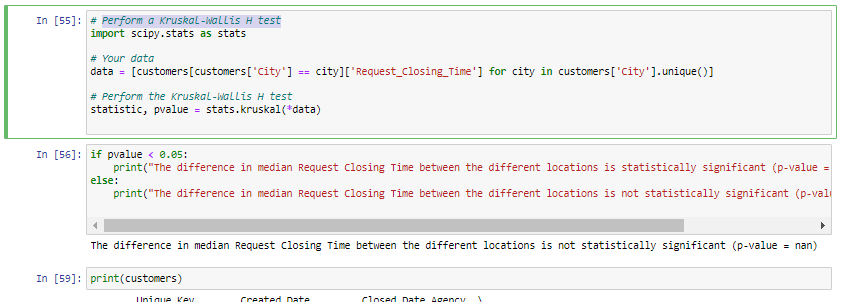


# **See whether the average response time across different complaint types is similar (overall)**

## Visualize the average of Request\_Closing\_Time Identify the significant variables by performing statistical analysis using p-values



# **Perform a Kruskal-Wallis H test**



## 