

```
In [ ]: from google.colab import drive  
drive.mount('/content/MyDrive/')
```

Drive already mounted at /content/MyDrive/; to attempt to forcibly remount, call drive.mount("/content/MyDrive/", force_remount=True).

```
In [ ]: import pandas as pd  
import numpy as np  
import matplotlib.pyplot as plt  
import seaborn as sns  
pd.set_option('display.max_columns',None)  
pd.set_option('display.max_rows',None)  
%matplotlib inline
```

```
In [ ]: data = pd.read_csv('/content/MyDrive/MyDrive/311_Service_Requests_from_20  
10_to_Present.csv')
```

/usr/local/lib/python3.7/dist-packages/IPython/core/interactiveshell.py:
2882: DtypeWarning: Columns (48,49) have mixed types.Specify dtype option on import or set low_memory=False.

```
exec(code_obj, self.user_global_ns, self.user_ns)
```

In []: `data.info()`

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 300698 entries, 0 to 300697
Data columns (total 53 columns):
 #   Column           Non-Null Count   Dtype  
--- 
 0   Unique Key       300698 non-null    int64  
 1   Created Date     300698 non-null    object  
 2   Closed Date      298534 non-null    object  
 3   Agency           300698 non-null    object  
 4   Agency Name      300698 non-null    object  
 5   Complaint Type   300698 non-null    object  
 6   Descriptor       294784 non-null    object  
 7   Location Type    300567 non-null    object  
 8   Incident Zip     298083 non-null    float64 
 9   Incident Address 256288 non-null    object  
 10  Street Name      256288 non-null    object  
 11  Cross Street 1   251419 non-null    object  
 12  Cross Street 2   250919 non-null    object  
 13  Intersection Street 1 43858 non-null    object  
 14  Intersection Street 2 43362 non-null    object  
 15  Address Type     297883 non-null    object  
 16  City             298084 non-null    object  
 17  Landmark          349 non-null     object  
 18  Facility Type    298527 non-null    object  
 19  Status            300698 non-null    object  
 20  Due Date          300695 non-null    object  
 21  Resolution Description 300698 non-null    object  
 22  Resolution Action Updated Date 298511 non-null    object  
 23  Community Board   300698 non-null    object  
 24  Borough           300698 non-null    object  
 25  X Coordinate (State Plane) 297158 non-null    float64 
 26  Y Coordinate (State Plane) 297158 non-null    float64 
 27  Park Facility Name 300698 non-null    object  
 28  Park Borough      300698 non-null    object  
 29  School Name        300698 non-null    object  
 30  School Number      300698 non-null    object  
 31  School Region      300697 non-null    object  
 32  School Code         300697 non-null    object  
 33  School Phone Number 300698 non-null    object  
 34  School Address      300698 non-null    object  
 35  School City          300698 non-null    object  
 36  School State         300698 non-null    object  
 37  School Zip           300697 non-null    object  
 38  School Not Found    300698 non-null    object  
 39  School or Citywide Complaint 0 non-null     float64 
 40  Vehicle Type         0 non-null     float64 
 41  Taxi Company Borough 0 non-null     float64 
 42  Taxi Pick Up Location 0 non-null     float64 
 43  Bridge Highway Name   243 non-null    object  
 44  Bridge Highway Direction 243 non-null    object  
 45  Road Ramp             213 non-null    object  
 46  Bridge Highway Segment 213 non-null    object  
 47  Garage Lot Name       0 non-null     float64 
 48  Ferry Direction       1 non-null     object  
 49  Ferry Terminal Name    2 non-null     object  
 50  Latitude              297158 non-null    float64 
 51  Longitude             297158 non-null    float64 
 52  Location               297158 non-null    object  
dtypes: float64(10), int64(1), object(42)
memory usage: 121.6+ MB
```

1. Understand the dataset:

```
In [ ]: data.isnull().any()
```

```
Out[ ]: Unique Key           False
         Created Date        False
         Closed Date          True
         Agency                False
         Agency Name           False
         Complaint Type        False
         Descriptor             True
         Location Type          True
         Incident Zip            True
         Incident Address         True
         Street Name              True
         Cross Street 1           True
         Cross Street 2           True
         Intersection Street 1      True
         Intersection Street 2      True
         Address Type              True
         City                   True
         Landmark                True
         Facility Type             True
         Status                  False
         Due Date                 True
         Resolution Description     False
         Resolution Action Updated Date True
         Community Board           False
         Borough                 False
         X Coordinate (State Plane) True
         Y Coordinate (State Plane) True
         Park Facility Name        False
         Park Borough              False
         School Name                False
         School Number               False
         School Region              True
         School Code                 True
         School Phone Number        False
         School Address              False
         School City                 False
         School State                 False
         School Zip                  True
         School Not Found           False
         School or Citywide Complaint True
         Vehicle Type                True
         Taxi Company Borough       True
         Taxi Pick Up Location       True
         Bridge Highway Name         True
         Bridge Highway Direction     True
         Road Ramp                  True
         Bridge Highway Segment       True
         Garage Lot Name             True
         Ferry Direction             True
         Ferry Terminal Name          True
         Latitude                  True
         Longitude                  True
         Location                   True
dtype: bool
```

```
In [ ]: data.shape
```

```
Out[ ]: (300698, 53)
```

```
In [ ]: for column in data:  
    print(f'{column}: {data[column].unique()}')  
    print(f'Total no.of.unique value : {data[column].nunique()}')  
    print  
('-----'  
-----')
```

Unique Key: [32310363 32309934 32309159 ... 30283424 30280004 30281825]
Total no.of.unique value : 300698

Created Date: ['12/31/2015 11:59:45 PM' '12/31/2015 11:59:44 PM'
'12/31/2015 11:59:29 PM' ... '03/29/2015 12:33:03 AM'
'03/29/2015 12:33:02 AM' '03/29/2015 12:33:01 AM']
Total no.of.unique value : 259493

Closed Date: ['01-01-16 0:55' '01-01-16 1:26' '01-01-16 4:51' ...
'03/29/2015 02:33:59 AM' '03/29/2015 04:38:35 AM'
'03/29/2015 04:41:50 AM']
Total no.of.unique value : 237165

Agency: ['NYPD']
Total no.of.unique value : 1

Agency Name: ['New York City Police Department' 'NYPD' 'Internal Affairs Bureau']
Total no.of.unique value : 3

Complaint Type: ['Noise - Street/Sidewalk' 'Blocked Driveway' 'Illegal Parking'
'Derelict Vehicle' 'Noise - Commercial' 'Noise - House of Worship'
'Posting Advertisement' 'Noise - Vehicle' 'Animal Abuse' 'Vending'
'Traffic' 'Drinking' 'Bike/Roller/Skate Chronic' 'Panhandling'
'Noise - Park' 'Homeless Encampment' 'Urinating in Public' 'Graffiti'
'Disorderly Youth' 'Illegal Fireworks' 'Ferry Complaint' 'Agency Issues'
'Squeegee' 'Animal in a Park']
Total no.of.unique value : 24

Descriptor: ['Loud Music/Party' 'No Access' 'Commercial Overnight Parking'
'Blocked Sidewalk' 'Posted Parking Sign Violation' 'Blocked Hydrant'
'With License Plate' 'Partial Access' 'Unauthorized Bus Layover'
'Double Parked Blocking Vehicle' 'Double Parked Blocking Traffic'
'Vehicle' 'Loud Talking' 'Banging/Pounding' 'Car/Truck Music' 'Tortured'
'In Prohibited Area' 'Congestion/Gridlock' 'Neglected' 'Car/Truck Horn'
'In Public' 'Other (complaint details)' nan 'No Shelter'
'Truck Route Violation' 'Unlicensed' 'Overnight Commercial Storage'
'Engine Idling' 'After Hours - Licensed Est' 'Detached Trailer'
'Underage - Licensed Est' 'Chronic Stoplight Violation' 'Loud Television'
'Chained' 'Building' 'In Car' 'Police Report Requested'
'Chronic Speeding' 'Playing in Unsuitable Place' 'Drag Racing'
'Police Report Not Requested' 'Nuisance/Truant' 'Homeless Issue'
'Language Access Complaint' 'Disruptive Passenger' 'Animal Waste']
Total no.of.unique value : 45

Location Type: ['Street/Sidewalk' 'Club/Bar/Restaurant' 'Store/Commercial'
'House of Worship' 'Residential Building/House' 'Residential Building'

```
'Park/Playground' 'Vacant Lot' 'House and Store' 'Highway' 'Commercial'  
'Roadway Tunnel' 'Subway Station' 'Parking Lot' 'Bridge' 'Terminal' nan  
'Ferry' 'Park']  
Total no.of.unique value : 18
```

```
-----  
Incident Zip: [10034. 11105. 10458. 10461. 11373. 11215. 10032. 10457. 1  
1415. 11219.  
11372. 10453. 11208. 11379. 11374. 11412. 11217. 11234. 10026. 10456.  
10030. 10467. 11432. 10031. 11419. 10024. 11201. 11216. 10462. nan  
11385. 11414. 11213. 11375. 11211. 10312. 10017. 11417. 10002. 10027.  
11209. 10035. 11418. 11421. 11205. 10468. 11355. 11358. 11210. 11368.  
11427. 11436. 10308. 11364. 10011. 11423. 11230. 10003. 11221. 11416.  
11378. 11236. 11218. 10029. 10028. 11214. 11207. 11369. 11223. 11220.  
10302. 11420. 11354. 10473. 10301. 11103. 10465. 11377. 11212. 11365.  
10472. 10452. 11203. 10469. 11237. 11434. 11101. 10460. 11229. 11206.  
11102. 10466. 10009. 10033. 11694. 10022. 10470. 11433. 11428. 11413.  
10463. 10471. 10474. 11228. 10014. 10475. 11225. 11233. 11370. 11204.  
11435. 10459. 11238. 10304. 11367. 10306. 10305. 10001. 10314. 10019.  
11222. 10023. 11356. 11235. 10018. 10036. 11106. 10075. 10025. 10451.  
11366. 10005. 10303. 10455. 11361. 10016. 10309. 10013. 11226. 10012.  
11224. 11249. 10039. 10128. 10454. 10010. 11360. 11004. 11691. 10307.  
11232. 10038. 10310. 10040. 11426. 11362. 11411. 11429. 11422. 10007.  
10065. 10021. 10004. 11104. 11231. 11357. 11239. 11363. 10037. 11693.  
10280. 11430. 10464. 10006. 11692. 10044. 11001. 10282. 11371. 10281.  
11109. 11040. 83. 10020. 10000. 11697. 11251. 10103. 10112. 10069.  
11451. 10153. 10041. 11242. 10119. 10048. 10803. 11695. 10111. 10162.  
10123. 11241.]  
Total no.of.unique value : 201
```

```
-----  
Incident Address: ['71 VERMILYEA AVENUE' '27-07 23 AVENUE' '2897 VALENTI  
NE AVENUE' ...  
'77-03 79 PLACE' '81 HESTER STREET' '100-17 87 AVENUE']  
Total no.of.unique value : 107652
```

```
-----  
Street Name: ['VERMILYEA AVENUE' '23 AVENUE' 'VALENTINE AVENUE' ... 'CRA  
FTON AVENUE'  
'LANDIS AVENUE' 'COOPER AVE']  
Total no.of.unique value : 7320
```

```
-----  
Cross Street 1: ['ACADEMY STREET' '27 STREET' 'EAST 198 STREET' ... '80T  
H STREET' 'E 186'  
'EAST 186']  
Total no.of.unique value : 5982
```

```
-----  
Cross Street 2: ['WEST 204 STREET' '28 STREET' 'EAST 199 STREET' ... 'BA  
RNARD AVENUE'  
'DEY STREET' 'GRAMERCY PARK']  
Total no.of.unique value : 5823
```

```
-----  
Intersection Street 1: [nan 'GRAND CENTRAL PARKWAY' 'DEVOE STREET' ... '  
E 186' 'BAXTER AVENUE'  
'east 186']  
Total no.of.unique value : 4413
```

```
-----  
Intersection Street 2: [nan '63 AVENUE' 'BUSHWICK AVENUE' ... 'MAYVILLE  
STREET' 'STERLING AVENUE'  
'LAWTON STREET']  
Total no.of.unique value : 4172  
-----  
Address Type: ['ADDRESS' nan 'INTERSECTION' 'LATLONG' 'BLOCKFACE' 'PLACE  
NAME']  
Total no.of.unique value : 5  
-----  
City: ['NEW YORK' 'ASTORIA' 'BRONX' 'ELMHURST' 'BROOKLYN' 'KEW GARDENS'  
'JACKSON HEIGHTS' 'MIDDLE VILLAGE' 'REGO PARK' 'SAINT ALBANS' 'JAMAICA'  
'SOUTH RICHMOND HILL' nan 'RIDGEWOOD' 'HOWARD BEACH' 'FOREST HILLS'  
'STATEN ISLAND' 'OZONE PARK' 'RICHMOND HILL' 'WOODHAVEN' 'FLUSHING'  
'CORONA' 'QUEENS VILLAGE' 'OAKLAND GARDENS' 'HOLLIS' 'MASPETH'  
'EAST ELMHURST' 'SOUTH OZONE PARK' 'WOODSIDE' 'FRESH MEADOWS'  
'LONG ISLAND CITY' 'ROCKAWAY PARK' 'SPRINGFIELD GARDENS' 'COLLEGE POINT'  
'  
'BAYSIDE' 'GLEN OAKS' 'FAR ROCKAWAY' 'BELLEROSE' 'LITTLE NECK'  
'CAMBRIA HEIGHTS' 'ROSEDALE' 'SUNNYSIDE' 'WHITESTONE' 'ARVERNE'  
'FLORAL PARK' 'NEW HYDE PARK' 'CENTRAL PARK' 'BREEZY POINT' 'QUEENS'  
'Astoria' 'Long Island City' 'Woodside' 'East Elmhurst' 'Howard Beach']  
Total no.of.unique value : 53  
-----  
Landmark: [nan 'MADISON SQUARE GARDEN' 'J F K AIRPORT' 'CLOVE LAKE' 'WIS  
E TOWERS'  
'FERRY TERMINAL' 'BRONX ZOO' 'UNION SQUARE PARK' 'SERRANO PLAYGROUND'  
'WASHINGTON SQUARE PARK' 'CENTRAL PARK' 'BETH ISRAEL MED CENTER'  
'BARCLAYS CENTER' 'LA GUARDIA AIRPORT' 'HIGHLAND PARK' 'WAGNER COLLEGE'  
'WORLDS FAIR MARINA' 'RODMANS NECK' 'SUNSET PARK' 'UNITED NATIONS HQ'  
'CONEY ISLAND HOSPITAL' 'WASHINGTON SQUARE' 'BRONX LEBANON HOSPITAL'  
'MARCUS GARVEY MEMORIAL PARK' 'MANHATTAN COMMUNITY COLLEGE'  
'BKLYN BATTERY TUNNEL' 'MARCUS GARVEY PARK'  
'BKLYN PUBLIC LIBRARY CTR BRANCH' 'CITI FIELD' 'FLUSHING MEADOW PARK'  
'LINCOLN TERRACE PARK' 'YANKEE STADIUM' 'MEADOW LAKE' 'MANHATTAN COLLEG  
E'  
'PROSPECT PARK' 'PS 174' 'MERCER PLAYGROUND' 'CITY HALL'  
'BROOKLYN BRIDGE' 'PIER 94' 'LEIF ERICSON PARK' 'FORT GREENE PARK'  
'GRAND ARMY PLAZA' 'METROPOLITAN MUSEUM' 'SI FERRY TERMINAL'  
'MADISON SQUARE PARK' 'TRANSMITTER PARK' 'JOHN JAY PARK' 'SOUNDVIEW PAR  
K'  
'JOYCE KILMER PARK' 'QUEENSBIDGE PARK' 'BROOKLYN MUSEUM' 'PIER 2'  
'SOUTH STREET SEAPORT' 'COLUMBUS PARK' 'ST JOHN THE DIVINE'  
'VAN CORTLAND PARK' 'WOODHULL MEDICAL CENTER' 'SEWARD PARK'  
'EAST RIVER PARK' 'KOLBERT PARK' 'ST JOHNS UNIVERSITY' 'BARRY PARK'  
'RAILROAD PARK' 'BRIGHTON BEACH' 'COOPER PARK' 'VALENTINO PARK'  
'MORNINGSIDE PARK' 'ST MARYS PARK' 'VAN CORTLANDT PARK'  
'CADMAN PLAZA PARK' 'JACKIE ROBINSON PARK' 'ASTORIA PARK' 'GAELIC PARK'  
'PARKSIDE PLAYGROUND' '79 STREET BOAT BASIN' 'GRAND CENTRAL TERM'  
'RIVERSIDE PARK' 'SOUTH BEACH' 'ROBERTO CLEMENTE STATE PARK BRDG'  
'ROY WILKINS PARK' 'MARINE PARK' 'PELHAM BAY PARK' 'LINCOLN CENTER'  
'MAURICE PARK' 'HAFFEN PARK' 'CONEY ISLAND BEACH' 'FORT TRYON PARK'  
'PORT AUTH 42 STREET' 'COOPER UNION' 'TANAHEY PLAYGROUND'  
'HAMILTON METZ FIELD' 'BATTERY PARK' 'CUYLER GORE' 'INWOOD HILL PARK'  
'BETH ABRAHAM HOSPITAL' 'SEANS PLACE' 'BK BOTANIC GARDENS'  
'JUMEL MANSION' 'POWELL COVE' 'CLAREMONT PARK' 'FORT INDEPENDENCE PARK'  
'AQUEDUCT RACE TRACK' 'THE CLOISTERS' 'J HOOD WRIGHT PARK'
```

'LEHMAN COLLEGE' 'GREENWOOD PLAYGROUND' 'JUNIPER VALLEY PARK'
'MARIA HERNANDEZ PARK' 'JOHN JAY HS HISTORICAL' 'VICTORY FIELD'
'KINGS COUNTY HOSPITAL' 'MUSEUM NATURAL HIST' 'FLATIRON BUILDING'
'ROCKEFELLER CENTER' 'QUEENS HOSPITAL CENTER' 'INTREPID MUSEUM']
Total no.of.unique value : 116

Facility Type: ['Precinct' nan]
Total no.of.unique value : 1

Status: ['Closed' 'Open' 'Assigned' 'Draft']
Total no.of.unique value : 4

Due Date: ['01-01-16 7:59' '01-01-16 7:57' '01-01-16 7:56' ...
'03/29/2015 08:33:03 AM' '03/29/2015 08:33:02 AM'
'03/29/2015 08:33:01 AM']
Total no.of.unique value : 259851

Resolution Description: ['The Police Department responded and upon arrival those responsible for the condition were gone.'

'The Police Department responded to the complaint and with the information available observed no evidence of the violation at that time.'

'The Police Department responded to the complaint and took action to fix the condition.'

'The Police Department issued a summons in response to the complaint.'

'The Police Department responded to the complaint and determined that police action was not necessary.'

'The Police Department reviewed your complaint and provided additional information below.'

'Your request can not be processed at this time because of insufficient contact information. Please create a new Service Request on NYC.gov and provide more detailed contact information.'

"This complaint does not fall under the Police Department's jurisdiction."

"Your complaint has been forwarded to the New York Police Department for a non-emergency response. 311 will have additional information in 8 hours. Please note your service request number for future reference."

'The Police Department responded to the complaint and a report was prepared.'

'The Police Department responded to the complaint but officers were unable to gain entry into the premises.'

'The Police Department made an arrest in response to the complaint.'

"Your complaint has been forwarded to the New York Police Department for a non-emergency response. If the police determine the vehicle is illegally parked, they will ticket the vehicle and then you may either contact a private towing company to remove the vehicle or ask your local precinct to contact 'rotation tow'. Any fees charged for towing will have to be paid by the vehicle owner. 311 will have additional information in 8 hours. Please note your service request number for future reference."

'Your complaint has been received by the Police Department and it has been determined that a long-term investigation may be necessary. Additional information will be available at the conclusion of the investigation.'

'The Department of Transportation contacted the customer and resolved the Service Request or provided the information requested.'

'The New York City Police Department received your comments and forwarded them to the appropriate unit for resolution. You may follow up by cal

ling (646) 610-6952 after 60 days from submitting your agency issue.'

'The Department of Transportation requires 30 days to respond to this type of complaint. Please note your Service Request number for future reference.'

'The condition was determined to be an issue appropriate for handling by an alternate entity. The Department of Parks and Recreation has notified the appropriate resource.]

Total no.of.unique value : 18

Resolution Action Updated Date: ['01-01-16 0:55' '01-01-16 1:26' '01-01-16 4:51' ...

'03/29/2015 02:33:59 AM' '03/29/2015 04:38:35 AM'

'03/29/2015 04:41:50 AM']

Total no.of.unique value : 237895

Community Board: ['12 MANHATTAN' '01 QUEENS' '07 BRONX' '10 BRONX' '04 QUEENS'

'07 BROOKLYN' '03 BRONX' '09 QUEENS' '11 BROOKLYN' '03 QUEENS' '05 BRONX'

'05 BROOKLYN' '05 QUEENS' '06 QUEENS' '12 QUEENS' '06 BROOKLYN'

'18 BROOKLYN' '10 MANHATTAN' '04 BRONX' '12 BRONX' '09 MANHATTAN'

'10 QUEENS' '07 MANHATTAN' '02 BROOKLYN' '03 BROOKLYN' '11 BRONX'

'0 Unspecified' '08 BROOKLYN' '01 BROOKLYN' '03 STATEN ISLAND'

'06 MANHATTAN' '03 MANHATTAN' '10 BROOKLYN' '11 MANHATTAN' '07 QUEENS'

'11 QUEENS' '17 BROOKLYN' '13 QUEENS' '06 BRONX' '04 MANHATTAN'

'14 BROOKLYN' '12 BROOKLYN' '08 MANHATTAN' '13 BROOKLYN' '15 BROOKLYN'

'01 STATEN ISLAND' '09 BRONX' '02 STATEN ISLAND' '02 QUEENS'

'16 BROOKLYN' '08 QUEENS' '09 BROOKLYN' '04 BROOKLYN' '14 QUEENS'

'05 MANHATTAN' '08 BRONX' '02 BRONX' '02 MANHATTAN' '01 BRONX'

'01 MANHATTAN' '83 QUEENS' '95 STATEN ISLAND' '81 QUEENS' '27 BRONX'

'Unspecified STATEN ISLAND' '64 MANHATTAN' '80 QUEENS' '55 BROOKLYN'

'26 BRONX' '82 QUEENS' '56 BROOKLYN' '28 BRONX' 'Unspecified QUEENS'

'Unspecified MANHATTAN' '84 QUEENS']

Total no.of.unique value : 75

Borough: ['MANHATTAN' 'QUEENS' 'BRONX' 'BROOKLYN' 'Unspecified' 'STATEN ISLAND']

Total no.of.unique value : 6

X Coordinate (State Plane): [1005409. 1007766. 1015081. ... 1003221. 1016065. 1016436.]

Total no.of.unique value : 63226

Y Coordinate (State Plane): [254678. 221986. 256380. ... 178766. 222214. 222234.]

Total no.of.unique value : 73694

Park Facility Name: ['Unspecified' 'Alley Pond Park - Nature Center']

Total no.of.unique value : 2

Park Borough: ['MANHATTAN' 'QUEENS' 'BRONX' 'BROOKLYN' 'Unspecified' 'STATEN ISLAND']

Total no.of.unique value : 6

```
-----
School Name: ['Unspecified' 'Alley Pond Park - Nature Center']
Total no.of.unique value : 2
-----

School Number: ['Unspecified' 'Q001']
Total no.of.unique value : 2
-----

School Region: ['Unspecified' nan]
Total no.of.unique value : 1
-----

School Code: ['Unspecified' nan]
Total no.of.unique value : 1
-----

School Phone Number: ['Unspecified' '7182176034']
Total no.of.unique value : 2
-----

School Address: ['Unspecified' 'Grand Central Parkway, near the soccer f
ield']
Total no.of.unique value : 2
-----

School City: ['Unspecified' 'QUEENS']
Total no.of.unique value : 2
-----

School State: ['Unspecified' 'NY']
Total no.of.unique value : 2
-----

School Zip: ['Unspecified' nan]
Total no.of.unique value : 1
-----

School Not Found: ['N']
Total no.of.unique value : 1
-----

School or Citywide Complaint: [nan]
Total no.of.unique value : 0
-----

Vehicle Type: [nan]
Total no.of.unique value : 0
-----

Taxi Company Borough: [nan]
Total no.of.unique value : 0
-----

Taxi Pick Up Location: [nan]
Total no.of.unique value : 0
-----

Bridge Highway Name: [nan 'BQE/Gowanus Expwy' 'Grand Central Pkwy' 'Cros
```

```
s Bronx Expwy'
'Park Ave Tunnel - E 34th St./Grand Central' 'Long Island Expwy' 'FDR D
r'
'Prospect Expwy' 'Jackie Robinson/Interboro Pkwy' 'Staten Island Expwy'
'Hutchinson River Pkwy' 'Belt Pkwy' 'First Ave Tunnel - UN Plaza'
'Van Wyck Expwy' 'West Street' 'FDR Southbound' 'Battery Park Underpass
'
'Harlem River Dr' 'Bronx River Pkwy' 'Richmond Pkwy/Korean War Vets'
'Nassau Expwy' 'Henry Hudson Pkwy/Rt 9A' 'Third Ave Br - Fifth St Basin
'
'Major Deegan Expwy' 'Sheridan Expwy' 'Whitestone Expwy'
'Cross Island Pkwy' 'Bruckner Expwy' 'Third Ave Br - E 129th St'
'Clearview Expwy']
Total no.of.unique value : 29
```

```
-----
Bridge Highway Direction: [nan 'East/Queens Bound' 'West/Toward Triborou
gh Br'
'North/Westbound (To GW Br)' 'West/Staten Island Bound' 'North Bound'
'West/Manhattan Bound' 'Northbound/Uptown' 'Westbound/To BQE' 'Westboun
d'
'Westbound/To Goethals Br' 'North/Westchester County Bound'
'East/Brooklyn Bound' 'West/Brooklyn Bound' 'Southbound/Downtown'
'East/Long Island Bound' 'East/Bronx Bound' 'South/JFK Airport Bound'
'South Bound' 'Eastbound/To Ocean Pkwy' 'North/Bronx Bound'
'To West St/West Side' 'South/Downtown' 'To FDR/East Side' 'Eastbound'
'Northbound' 'South/Toward Triborough Br' 'Southbound'
'Southbound/To Triborough Br' 'South/East (To Throgs Neck Br)'
'Manhattan Bound' 'North/Eastbound' 'South/New Jersey Bound'
'South/Queens Bound' 'South/Long Island Bound']
Total no.of.unique value : 34
```

```
-----
Road Ramp: [nan 'Roadway' 'Ramp']
Total no.of.unique value : 2
```

```
-----
Bridge Highway Segment: [nan
'Brooklyn-Queens Expwy(I-278) (Exit 25) - Brooklyn-Battery Tunnel (I-47
8)'
'La Guardia Airport-Main Terminal (Exit 7) - La Guardia Airport/Steinwa
y St (Exit 5)'
'Whitestone Br (I-678) (Exit 6A) - Cross Bronx Expwy Extension (I-295)
(Exit 6B)'
'Meeker Ave/Morgan Ave (Exit 34)' 'Grand Central Pkwy (Exit 22 A-B)'
'38th St / 39th St (Exit 23) - Prospect Expwy (NY 27) (Exit 24)'
'East 96th St (Exit 14) - Triborough Br (Exit 17)'
'4th Ave (Exit 2B) - Hamilton Ave (Exit 2A)'
'Cypress Ave Vermont Place (Exit 2) - Bushwick Ave (Exit 1)'
'Clove Rd/Richmond Rd (Exit 13) - Todt Hill Road/Slossen Ave (Exit 12)'
'East Tremont Ave / Westchester Ave (Exit 2) - Pelham Pkwy (Exit 3E)'
'Victory Blvd (Exit 8) - Dr Martin Luther King Jr Expwy (NY 440) (Exit
9)'
'Van Wyck Expwy (I-678) (Exit 19) - Lefferts Blvd. (Exit 18)'
'East 42nd St (Exit 9) - East 61st St / East 63rd St (Exit 12)'
'Triborough Br (Exit 17) - East 116th St (Exit 16)'
'Cross Bay Blvd (Exit 17 S-N) - Nassau Expwy (NY 878)/Van Wyck Expwy (I
-678) (Exit 19)'
'Roosevelt Ave / Broadway (Exit 37) - Northern Blvd (NY 25A) (Exit 38)'
'McGuinness Blvd / Humboldt St (Exit 33) - Kosciuszko Br (to Queens)'
```

'Hillside Ave/Jamaica Ave (Exit 6)'
'Jackie Robinson Pkwy (Exit 7) - Hillside Ave/Jamaica Ave (Exit 6)'
'East 96th St (Exit 14) - East 71st St (Exit 13)'
'BEGIN Staten Island Expwy (Exit 15N) - Lily Pond Ave/Bay St (Exit 15S)'
'31st St (Exit 3)' 'Clove Rd/Richmond Rd (Exit 13)'
'END FDR Dr/Battery Park Underpass'
'10Ave/11Ave (Exit 4) - Park Circle (Exit 5)'
'Flushing Meadows-Corona Park (Exit 9P) - Whitestone Expwy (I-678) (Exit 9E)'
'Nassau Expwy (NY 878) (Exit 1A) - Belt Pkwy (1 E-W)'
'E 125th St 2nd Ave (Exit 19)'
'Flushing Ave (Exit 30) - Williamsburg Br / Metropolitan Ave (Exit 32)'
'East 71st St (Exit 13) - East 61st St / East 63rd St (Exit 12)'
'BEGIN Staten Island Expwy - Forest Ave (Exit 4)'
'Ocean Pkwy (Exit 7 S-N) - Coney Island Ave (Exit 8)'
'East 61st St / East 63rd St (Exit 12) - East 96th St (Exit 14)'
'Forest Ave (Exit 4) - West Shore Expwy (NY 440) (Exit 5)'
'East 71st St (Exit 13)' 'East 20th St/East 23rd St (Exit 7)'
'Rockaway Pkwy (Exit 13) - Flatbush Ave (Exit 11N)'
'Entrance Bronx River Pkwy'
'Cypress Hills St (Exit 3) - Forest Park Dr (Exit 4)'
'Arden Ave - Richmond Ave'
'Houston St (Exit 5) - East 20th St / East 23rd St (Exit 7)'
'Castle Hill Ave (Exit 5B) - Bronx-Whitestone Br (I-678) (Exit 6A)'
'JFK Expwy (Exit 2S)- JFK Expwy (Exit 2N)'
'Flatbush Ave (Exit 11N) - Flatbush Ave (Exit 11S)'
'W 57 St - W 72 St (Exit 9)'
'Gateway National Recreation Area (Exit 12) - Rockaway Pkwy (Exit 13)'
'East 106th St (Exit 15) - East 96th St (Exit 14)'
'Grand Central Pkwy (Exit 22 A-B) - Junction Blvd (Exit 20)' 'Roadway'
'Kissena Blvd (Exit 24)'
'Jerome Ave (Exit 2A) - Webster Ave (US 1) (Exit 2B)'
'Metropolitan Ave (Exit 6) -Van Wyck Expwy (I-678) (Exit 7)'
'Bronx River Pkwy (Exit 4B) - Westchester Ave / White Plains Road (Exit 5A)'
'Cross Bronx / GWB (Exit 14) - Riverside Dr (Exit 15)'
'Grand Central Pkwy (Split) (Exit 39)'
'Brooklyn-Queens Expwy (I-278) (Exit 4) - La Guardia Airport/Astoria Blvd. (Exit 5)'
'East 96th St (Exit 14)'
'Westchester Ave / White Plains Road (Exit 5A) - Castle Hill Ave (Exit 5B)'
'E 161St (Exit 6) - E 155th St/W 153rd St (Exit 5)'
'Bradley Ave (Exit 11) - Todt Hill Road/Slossen Ave (Exit 12)'
'Richmond Ave (Exit 7) - Victory Blvd (Exit 8)'
'Entrance ramp from George Washington Bridge'
'BEGIN Sheridan Expwy - Westchester Ave'
'Bronx River Pkwy/Westchester County'
'92nd St (From Lower Level) (Exit 17)' 'Entrance Staten Island Expwy'
'Triborough Bridge Connector (I-278) (Exit 17)'
'78th Ave Queens Blvd (NY 25) (Exit 12) - Van Wyck Expwy (I-678) (Exit 13)'
'Triborough Bridge (Exit 17)'
'Amsterdam Ave. W. 179th St. / George Washington Br (Exit 24) - Dyckman St 10th Ave'
'Van Cortlandt Park South (Exit 11) - W 230th St (Exit 10)'
'20th Ave (Exit 15) - Cross Island Pkwy (Exit 16)'
'South St (Exit 1) - Battery Park Underpass'
'Throgs Neck Br/Pennyfield Ave (Exit 8) - Throgs Neck Expwy (I-695) (Ex

it 10)'
'South St (Exit 3) - Pearl St / Brooklyn Br (Exit 2)'
'Crospey Ave Stillwell Ave (Exit 6N) - Crospey Ave Stillwell Ave (Exit 6S)'
'Belt Pkwy (1 E-W) - Rockaway Blvd (Exit 2)'
'East 61st St/East 63rd St (Exit 12)'
'Northern Blvd (NY 25A) (Exit 31E) - Northern Blvd (NY 25A) (Exit 31W)'
'3rd Ave (Exit 21)'
'Sheridan Expwy (I-895) (Exit 4A) - Bronx River Pkwy (Exit 4B)'
'Westchester Ave (Exit 8A) - East Tremont Ave (Exit 7B)'
'BEGIN Cross Bronx Expwy (Extension) - Randall Ave (Exit 11)'
'Springfield Blvd. (Exit 22) - Sunrise Highway(NY 27) (Exit 23)'
'8Ave/7Ave (Exit 3) - 4th Ave (Exit 2B)' 'Entrance Belt Pkwy'
'7th Ave/65th St (Exit 20) - 3rd Ave (Exit 21)' 'Entrance FDR Dr'
'Webster Ave (US 1) (Exit 2B) - Sheridan Expwy (I-895) (Exit 4A)' 'Ramp'
'Linden Place (Exit 14) - 20th Ave (Exit 15)'
'Wythe Ave / Kent Ave (Exit 31) - Tillary St /Manhattan Br (Exit 29)'
'Begin Brooklyn-Queens Expwy'
'Boston Post Road (US 1N) (Exit 6) - East 177th St / Sheridan Expwy (I-895) (Exit 5)'
'Flatbush Ave (Exit 11S) - Flatbush Ave (Exit 11N)'
'Cross Bay Blvd (Exit 17N) - Cross Bay Blvd (Exit 17S)'
'Clove Rd/Richmond Rd (Exit 13) - Lily Pond Ave/Bay St (Exit 15 S-N)'
'Westchester Ave - END Sheridan Expwy (Bruckner Expwy) (I-278)'
'Todt Hill Road/Slossen Ave (Exit 12) - Bradley Ave (Exit 11)'
'W. Fordham Rd (Exit 9) - I95 / US 1 (Exit 7 N-S)'
'Van Wyck Service Roads - Federal Circle'
'Dr Martin Luther King Jr Expwy (NY 440) (Exit 9) - Bradley Ave (Exit 11)'
'Queens Blvd (NY 25) / Woodhaven Blvd (Exit 19) - 108th St (Exit 21)'
'Hoyt Ave (Exit 3) - Triboro Br' 'Maurice Ave (Exit 18)'
'30th Ave (Exit 40) West Leg - Astoria Blvd (Exit 41) West Leg'
'Francis Lewis Blvd. (Exit 24A) - 130th Ave. (Exit 24B)'
'JFK Expwy (Exit 20) - Van Wyck Expwy (I-678) (Exit 19)'
'Clearview Expwy (I-295) (Exit 21 S-N) - Union Trnpke (Exit 22)'
'South St (Exit 1)' 'Erskine St (Exit 15) - Pennsylvania Ave (Exit 14)'
'Crospey Ave Stillwell Ave (Exit 6 S-N) - Ocean Pkwy (Exit 7 S-N)'
'W 79 St (Exit 10) - W 57 St'
'Knapp St (Exits 9 A-B) - Coney Island Ave (Exit 8)'
'Bay Pkwy (Exit 5) - Bay 8th St 14th Ave (Exit 4)'
'Northern Blvd (Exit 5) - 35th Ave (Exit 6A)' 'Rockaway Pkwy (Exit 13)'
'N. Conduit Ave. (NY27) (Exit 17W) - Cross Bay Blvd (Exit 17N)'
'Castle Hill Ave (Exit 5B)' 'W 79 St (Exit 10) - W 96 St (Exit 11)'
'Bronx River Pkwy (Exit 48 S-N) - White Plains Road / Westchester Ave (Exit 49)'
'Cross Island Pkwy (Exit 30S) - Little Neck Pkwy (Exit 32)'
'150th St (Exit 20) - Farmers Blvd. Guy R. Brewer Blvd. (Exit 21B)'
'Begin Korean War Vets Pkwy/Arthur Kill Rd - Arden Ave'
'130th Ave. (Exit 24B) - Southern State Pkwy (Exit 25A)'
'East 177th St/Sheridan Expwy (I-895) (Exit 5)'
'End Major Deegan Expwy/Westchester'
'Lafayette Ave - END Hutchinson River Pkwy' 'Bushwick Ave (Exit 1)'
'I95/US 1 (Exit 7 N-S)' '6th Ave/65th St (Exit 20)'
'6th Ave (Exit 20) - 86th St (Exit 19)'
'Southern State Pkwy (Exit 25A) - END Cross Island Pkwy'
'Clearview Expwy (I-295) (Exit 27 S-N) - Utopia Pkwy (Exit 25)'
'Van Dam St (Exit 15) - Queens Midtown Tunnel'
'Flatbush Ave (Exit 11N) - Gateway National Recreation Area (Exit 12)'
'South Ave (Exit 6) - West Shore Expwy (NY 440) (Exit 5)'

```
'Brooklyn-Queens Expwy (I-278) (Exit 17 E-W) - Queens Blvd (NY 25) / Wo  
odhaven Blvd (Exit 19)'  
'Brooklyn-Queens Expwy (I-278) (Exit 17W) - Greenpoint Ave (Exit 16)'  
'Hamilton Ave (Exit 26) - Atlantic Ave (Exit 27)'  
'East 61st St / East 63rd St (Exit 12) - East 53rd St (Exit 11)'  
'92nd St (Exit 17) - Fort Hamilton Pkwy (Exit 18)'  
'Entrance Major Deegan Expwy' 'W 125 St (Exit 12) - W 95 St (Exit 11)'  
'W 237th St/W 239th St (Exit 20) - W 246th St/W 250th St (Exit 21)'  
'Belt Pkwy - 65th St - 67th St (Exit 1)'  
'Westchester Ave/White Plains Road (Exit 5A)'  
'30th Ave (From East Leg) (Exit 40)'  
'Brooklyn Br (Exit 28B) - Manhattan Br (Exit 29A)'  
'Van Wyck Expwy (I-678) (Exit 7)'  
'Hamilton Ave (Exit 2A) - Gowanus Expwy (I-278) (Exit 1)'  
'East 233rd St (Exit 10) - Westchester County'  
'W 230th (Exit 10) - Van Cortlandt Park South (Exit 11)'  
'END Brooklyn-Queens Expwy' '38th St/39th St (Exit 23)'  
'W 125 St (Exit 12) - W 158 St (Exit 13)'  
'Queens Blvd (NY 25)/Woodhaven Blvd (Exit 19)'  
'Wythe Ave/Kent Ave (Exit 31)'  
'20th Ave (Exit 15) - Linden Place (Exit 14)']  
Total no.of.unique value : 160
```

```
Garage Lot Name: [nan]
```

```
Total no.of.unique value : 0
```

```
Ferry Direction: [nan 'Manhattan Bound']
```

```
Total no.of.unique value : 1
```

```
Ferry Terminal Name: [nan 'St. George Terminal (Staten Island)' 'Barberi  
' ]
```

```
Total no.of.unique value : 2
```

```
Latitude: [40.86568154 40.77594531 40.87032452 ... 40.77664592 40.706352  
59
```

```
40.71605291]
```

```
Total no.of.unique value : 125122
```

```
Longitude: [-73.92350096 -73.91509394 -73.88852464 ... -73.94880526 -73.  
87124456
```

```
-73.9913785 ]
```

```
Total no.of.unique value : 125216
```

```
Location: [(40.86568153633767, -73.92350095571744)'
```

```
'(40.775945312321085, -73.91509393898605)'
```

```
'(40.870324522111424, -73.88852464418646)' ...
```

```
'(40.77664591586459, -73.94880525662063)'
```

```
'(40.70635259429073, -73.8712445609601)'
```

```
'(40.71605290789855, -73.99137850370803)']
```

```
In [ ]: data.columns
```

```
Out[ ]: Index(['Unique Key', 'Created Date', 'Closed Date', 'Agency', 'Agency Name',
       'Complaint Type', 'Descriptor', 'Location Type', 'Incident Zip',
       'Incident Address', 'Street Name', 'Cross Street 1', 'Cross Street 2',
       'Intersection Street 1', 'Intersection Street 2', 'Address Type',
       'City', 'Landmark', 'Facility Type', 'Status', 'Due Date',
       'Resolution Description', 'Resolution Action Updated Date',
       'Community Board', 'Borough', 'X Coordinate (State Plane)',
       'Y Coordinate (State Plane)', 'Park Facility Name', 'Park Borough',
       'School Name', 'School Number', 'School Region', 'School Code',
       'School Phone Number', 'School Address', 'School City', 'School State',
       'School Zip', 'School Not Found', 'School or Citywide Complaint',
       'Vehicle Type', 'Taxi Company Borough', 'Taxi Pick Up Location',
       'Bridge Highway Name', 'Bridge Highway Direction', 'Road Ramp',
       'Bridge Highway Segment', 'Garage Lot Name', 'Ferry Direction',
       'Ferry Terminal Name', 'Latitude', 'Longitude', 'Location'],
      dtype='object')
```

```
In [ ]: data = data.drop(['Unique Key', 'School Region', 'School Code', 'School Zip',
       'School Not Found', 'School or Citywide Complaint', 'Vehicle Type', 'Taxi
       Company Borough', 'Taxi Pick Up Location', 'Garage Lot Name'], axis=1)
```

```
In [ ]: for column in data:  
    print(f'{column}: {data[column].unique()}')  
    print(f'Total no.of.unique value : {data[column].nunique()}')  
    print(f'{column}: {data[column].isnull().any()}')  
    print  
('-----')
```

```
Created Date: ['12/31/2015 11:59:45 PM' '12/31/2015 11:59:44 PM'  
 '12/31/2015 11:59:29 PM' ... '03/29/2015 12:33:03 AM'  
 '03/29/2015 12:33:02 AM' '03/29/2015 12:33:01 AM']  
Total no.of.unique value : 259493  
Created Date: False  
-----  
-----  
Closed Date: ['01-01-16 0:55' '01-01-16 1:26' '01-01-16 4:51' ...  
 '03/29/2015 02:33:59 AM' '03/29/2015 04:38:35 AM'  
 '03/29/2015 04:41:50 AM']  
Total no.of.unique value : 237165  
Closed Date: True  
-----  
-----  
Agency: ['NYPD']  
Total no.of.unique value : 1  
Agency: False  
-----  
-----  
Agency Name: ['New York City Police Department' 'NYPD' 'Internal Affairs  
Bureau']  
Total no.of.unique value : 3  
Agency Name: False  
-----  
-----  
Complaint Type: ['Noise - Street/Sidewalk' 'Blocked Driveway' 'Illegal P  
arking'  
 'Derelict Vehicle' 'Noise - Commercial' 'Noise - House of Worship'  
 'Posting Advertisement' 'Noise - Vehicle' 'Animal Abuse' 'Vending'  
 'Traffic' 'Drinking' 'Bike/Roller/Skate Chronic' 'Panhandling'  
 'Noise - Park' 'Homeless Encampment' 'Urinating in Public' 'Graffiti'  
 'Disorderly Youth' 'Illegal Fireworks' 'Ferry Complaint' 'Agency Issues'  
 '  
 'Squeegee' 'Animal in a Park']  
Total no.of.unique value : 24  
Complaint Type: False  
-----  
-----  
Descriptor: ['Loud Music/Party' 'No Access' 'Commercial Overnight Parkin  
g'  
 'Blocked Sidewalk' 'Posted Parking Sign Violation' 'Blocked Hydrant'  
 'With License Plate' 'Partial Access' 'Unauthorized Bus Layover'  
 'Double Parked Blocking Vehicle' 'Double Parked Blocking Traffic'  
 'Vehicle' 'Loud Talking' 'Banging/Pounding' 'Car/Truck Music' 'Tortured'  
 '  
 'In Prohibited Area' 'Congestion/Gridlock' 'Neglected' 'Car/Truck Horn'  
 'In Public' 'Other (complaint details)' nan 'No Shelter'  
 'Truck Route Violation' 'Unlicensed' 'Overnight Commercial Storage'  
 'Engine Idling' 'After Hours - Licensed Est' 'Detached Trailer'  
 'Underage - Licensed Est' 'Chronic Stoplight Violation' 'Loud Televisio  
n'  
 'Chained' 'Building' 'In Car' 'Police Report Requested'  
 'Chronic Speeding' 'Playing in Unsuitable Place' 'Drag Racing'  
 'Police Report Not Requested' 'Nuisance/Truant' 'Homeless Issue'  
 'Language Access Complaint' 'Disruptive Passenger' 'Animal Waste']  
Total no.of.unique value : 45  
Descriptor: True  
-----  
-----  
Location Type: ['Street/Sidewalk' 'Club/Bar/Restaurant' 'Store/Commercia
```

```
1'
'House of Worship' 'Residential Building/House' 'Residential Building'
'Park/Playground' 'Vacant Lot' 'House and Store' 'Highway' 'Commercial'
'Roadway Tunnel' 'Subway Station' 'Parking Lot' 'Bridge' 'Terminal' nan
'Ferry' 'Park']
Total no.of.unique value : 18
Location Type: True
-----
-----
Incident Zip: [10034. 11105. 10458. 10461. 11373. 11215. 10032. 10457. 1
1415. 11219.
11372. 10453. 11208. 11379. 11374. 11412. 11217. 11234. 10026. 10456.
10030. 10467. 11432. 10031. 11419. 10024. 11201. 11216. 10462. nan
11385. 11414. 11213. 11375. 11211. 10312. 10017. 11417. 10002. 10027.
11209. 10035. 11418. 11421. 11205. 10468. 11355. 11358. 11210. 11368.
11427. 11436. 10308. 11364. 10011. 11423. 11230. 10003. 11221. 11416.
11378. 11236. 11218. 10029. 10028. 11214. 11207. 11369. 11223. 11220.
10302. 11420. 11354. 10473. 10301. 11103. 10465. 11377. 11212. 11365.
10472. 10452. 11203. 10469. 11237. 11434. 11101. 10460. 11229. 11206.
11102. 10466. 10009. 10033. 11694. 10022. 10470. 11433. 11428. 11413.
10463. 10471. 10474. 11228. 10014. 10475. 11225. 11233. 11370. 11204.
11435. 10459. 11238. 10304. 11367. 10306. 10305. 10001. 10314. 10019.
11222. 10023. 11356. 11235. 10018. 10036. 11106. 10075. 10025. 10451.
11366. 10005. 10303. 10455. 11361. 10016. 10309. 10013. 11226. 10012.
11224. 11249. 10039. 10128. 10454. 10010. 11360. 11004. 11691. 10307.
11232. 10038. 10310. 10040. 11426. 11362. 11411. 11429. 11422. 10007.
10065. 10021. 10004. 11104. 11231. 11357. 11239. 11363. 10037. 11693.
10280. 11430. 10464. 10006. 11692. 10044. 11001. 10282. 11371. 10281.
11109. 11040. 83. 10020. 10000. 11697. 11251. 10103. 10112. 10069.
11451. 10153. 10041. 11242. 10119. 10048. 10803. 11695. 10111. 10162.
10123. 11241.]
Total no.of.unique value : 201
Incident Zip: True
-----
-----
Incident Address: ['71 VERMILYEA AVENUE' '27-07 23 AVENUE' '2897 VALENTI
NE AVENUE' ...
'77-03 79 PLACE' '81 HESTER STREET' '100-17 87 AVENUE']
Total no.of.unique value : 107652
Incident Address: True
-----
-----
Street Name: ['VERMILYEA AVENUE' '23 AVENUE' 'VALENTINE AVENUE' ... 'CRA
FTON AVENUE'
'LANDIS AVENUE' 'COOPER AVE']
Total no.of.unique value : 7320
Street Name: True
-----
-----
Cross Street 1: ['ACADEMY STREET' '27 STREET' 'EAST 198 STREET' ... '80T
H STREET' 'E 186'
'EAST 186']
Total no.of.unique value : 5982
Cross Street 1: True
-----
-----
Cross Street 2: ['WEST 204 STREET' '28 STREET' 'EAST 199 STREET' ... 'BA
RNARD AVENUE'
'DEY STREET' 'GRAMERCY PARK']
Total no.of.unique value : 5823
```

Cross Street 2: True

Intersection Street 1: [nan 'GRAND CENTRAL PARKWAY' 'DEVOE STREET' ... 'E 186' 'BAXTER AVENUE'

'east 186']

Total no.of.unique value : 4413

Intersection Street 1: True

Intersection Street 2: [nan '63 AVENUE' 'BUSHWICK AVENUE' ... 'MAYVILLE STREET' 'STERLING AVENUE'

'LAWTON STREET']

Total no.of.unique value : 4172

Intersection Street 2: True

Address Type: ['ADDRESS' nan 'INTERSECTION' 'LATLONG' 'BLOCKFACE' 'PLACE NAME']

Total no.of.unique value : 5

Address Type: True

City: ['NEW YORK' 'ASTORIA' 'BRONX' 'ELMHURST' 'BROOKLYN' 'KEW GARDENS' 'JACKSON HEIGHTS' 'MIDDLE VILLAGE' 'REGO PARK' 'SAINT ALBANS' 'JAMAICA' 'SOUTH RICHMOND HILL' nan 'RIDGEWOOD' 'HOWARD BEACH' 'FOREST HILLS' 'STATEN ISLAND' 'OZONE PARK' 'RICHMOND HILL' 'WOODHAVEN' 'FLUSHING' 'CORONA' 'QUEENS VILLAGE' 'OAKLAND GARDENS' 'HOLLIS' 'MASPETH' 'EAST ELMHURST' 'SOUTH OZONE PARK' 'WOODSIDE' 'FRESH MEADOWS' 'LONG ISLAND CITY' 'ROCKAWAY PARK' 'SPRINGFIELD GARDENS' 'COLLEGE POINT

'BAYSIDE' 'GLEN OAKS' 'FAR ROCKAWAY' 'BELLEROSE' 'LITTLE NECK'

'CAMBRIA HEIGHTS' 'ROSEDALE' 'SUNNYSIDE' 'WHITESTONE' 'ARVERNE'

'FLORAL PARK' 'NEW HYDE PARK' 'CENTRAL PARK' 'BREEZY POINT' 'QUEENS'

'Astoria' 'Long Island City' 'Woodside' 'East Elmhurst' 'Howard Beach']

Total no.of.unique value : 53

City: True

Landmark: [nan 'MADISON SQUARE GARDEN' 'J F K AIRPORT' 'CLOVE LAKE' 'WIS E TOWERS'

'FERRY TERMINAL' 'BRONX ZOO' 'UNION SQUARE PARK' 'SERRANO PLAYGROUND'

'WASHINGTON SQUARE PARK' 'CENTRAL PARK' 'BETH ISRAEL MED CENTER'

'BARCLAYS CENTER' 'LA GUARDIA AIRPORT' 'HIGHLAND PARK' 'WAGNER COLLEGE'

'WORLDS FAIR MARINA' 'RODMANS NECK' 'SUNSET PARK' 'UNITED NATIONS HQ'

'CONEY ISLAND HOSPITAL' 'WASHINGTON SQUARE' 'BRONX LEBANON HOSPITAL'

'MARCUS GARVEY MEMORIAL PARK' 'MANHATTAN COMMUNITY COLLEGE'

'BKLYN BATTERY TUNNEL' 'MARCUS GARVEY PARK'

'BKLYN PUBLIC LIBRARY CTR BRANCH' 'CITI FIELD' 'FLUSHING MEADOW PARK'

'LINCOLN TERRACE PARK' 'YANKEE STADIUM' 'MEADOW LAKE' 'MANHATTAN COLLEG E'

'PROSPECT PARK' 'PS 174' 'MERCER PLAYGROUND' 'CITY HALL'

'BROOKLYN BRIDGE' 'PIER 94' 'LEIF ERICSON PARK' 'FORT GREENE PARK'

'GRAND ARMY PLAZA' 'METROPOLITAN MUSEUM' 'SI FERRY TERMINAL'

'MADISON SQUARE PARK' 'TRANSMITTER PARK' 'JOHN JAY PARK' 'SOUNDVIEW PAR K'

'JOYCE KILMER PARK' 'QUEENSBRIDGE PARK' 'BROOKLYN MUSEUM' 'PIER 2'

'SOUTH STREET SEAPORT' 'COLUMBUS PARK' 'ST JOHN THE DIVINE'

'VAN CORTLAND PARK' 'WOODHULL MEDICAL CENTER' 'SEWARD PARK'

'EAST RIVER PARK' 'KOLBERT PARK' 'ST JOHNS UNIVERSITY' 'BARRY PARK'

'RAILROAD PARK' 'BRIGHTON BEACH' 'COOPER PARK' 'VALENTINO PARK'
'MORNINGSIDE PARK' 'ST MARYS PARK' 'VAN CORTLANDT PARK'
'CADMAN PLAZA PARK' 'JACKIE ROBINSON PARK' 'ASTORIA PARK' 'GAELIC PARK'
'PARKSIDE PLAYGROUND' '79 STREET BOAT BASIN' 'GRAND CENTRAL TERM'
'RIVERSIDE PARK' 'SOUTH BEACH' 'ROBERTO CLEMENTE STATE PARK BRDG'
'ROY WILKINS PARK' 'MARINE PARK' 'PELHAM BAY PARK' 'LINCOLN CENTER'
'MAURICE PARK' 'HAFFEN PARK' 'CONEY ISLAND BEACH' 'FORT TRYON PARK'
'PORT AUTH 42 STREET' 'COOPER UNION' 'TANAHEY PLAYGROUND'
'HAMILTON METZ FIELD' 'BATTERY PARK' 'CUYLER GORE' 'INWOOD HILL PARK'
'BETH ABRAHAM HOSPITAL' 'SEANS PLACE' 'BK BOTANIC GARDENS'
'JUMEL MANSION' 'POWELL COVE' 'CLAREMONT PARK' 'FORT INDEPENDENCE PARK'
'AQUEDUCT RACE TRACK' 'THE CLOISTERS' 'J HOOD WRIGHT PARK'
'LEHMAN COLLEGE' 'GREENWOOD PLAYGROUND' 'JUNIPER VALLEY PARK'
'MARIA HERNANDEZ PARK' 'JOHN JAY HS HISTORICAL' 'VICTORY FIELD'
'KINGS COUNTY HOSPITAL' 'MUSEUM NATURAL HIST' 'FLATIRON BUILDING'
'ROCKEFELLER CENTER' 'QUEENS HOSPITAL CENTER' 'INTREPID MUSEUM']

Total no.of.unique value : 116

Landmark: True

Facility Type: ['Precinct' nan]

Total no.of.unique value : 1

Facility Type: True

Status: ['Closed' 'Open' 'Assigned' 'Draft']

Total no.of.unique value : 4

Status: False

Due Date: ['01-01-16 7:59' '01-01-16 7:57' '01-01-16 7:56' ...

'03/29/2015 08:33:03 AM' '03/29/2015 08:33:02 AM'

'03/29/2015 08:33:01 AM']

Total no.of.unique value : 259851

Due Date: True

Resolution Description: ['The Police Department responded and upon arrival those responsible for the condition were gone.'

'The Police Department responded to the complaint and with the information available observed no evidence of the violation at that time.'

'The Police Department responded to the complaint and took action to fix the condition.'

'The Police Department issued a summons in response to the complaint.'

'The Police Department responded to the complaint and determined that police action was not necessary.'

'The Police Department reviewed your complaint and provided additional information below.'

'Your request can not be processed at this time because of insufficient contact information. Please create a new Service Request on NYC.gov and provide more detailed contact information.'

"This complaint does not fall under the Police Department's jurisdiction."

'Your complaint has been forwarded to the New York Police Department for a non-emergency response. 311 will have additional information in 8 hours. Please note your service request number for future reference.'

'The Police Department responded to the complaint and a report was prepared.'

'The Police Department responded to the complaint but officers were unable to gain entry into the premises.'

'The Police Department made an arrest in response to the complaint.'
"Your complaint has been forwarded to the New York Police Department for a non-emergency response. If the police determine the vehicle is illegally parked, they will ticket the vehicle and then you may either contact a private towing company to remove the vehicle or ask your local precinct to contact 'rotation tow'. Any fees charged for towing will have to be paid by the vehicle owner. 311 will have additional information in 8 hours. Please note your service request number for future reference."

'Your complaint has been received by the Police Department and it has been determined that a long-term investigation may be necessary. Additional information will be available at the conclusion of the investigation.'

'The Department of Transportation contacted the customer and resolved the Service Request or provided the information requested.'

'The New York City Police Department received your comments and forwarded them to the appropriate unit for resolution. You may follow up by calling (646) 610-6952 after 60 days from submitting your agency issue.'

'The Department of Transportation requires 30 days to respond to this type of complaint. Please note your Service Request number for future reference.'

'The condition was determined to be an issue appropriate for handling by an alternate entity. The Department of Parks and Recreation has notified the appropriate resource.]

Total no.of.unique value : 18

Resolution Description: False

Resolution Action Updated Date: ['01-01-16 0:55' '01-01-16 1:26' '01-01-16 4:51' ...

'03/29/2015 02:33:59 AM' '03/29/2015 04:38:35 AM'

'03/29/2015 04:41:50 AM']

Total no.of.unique value : 237895

Resolution Action Updated Date: True

Community Board: ['12 MANHATTAN' '01 QUEENS' '07 BRONX' '10 BRONX' '04 QUEENS'

'07 BROOKLYN' '03 BRONX' '09 QUEENS' '11 BROOKLYN' '03 QUEENS' '05 BRONX'

'05 BROOKLYN' '05 QUEENS' '06 QUEENS' '12 QUEENS' '06 BROOKLYN'

'18 BROOKLYN' '10 MANHATTAN' '04 BRONX' '12 BRONX' '09 MANHATTAN'

'10 QUEENS' '07 MANHATTAN' '02 BROOKLYN' '03 BROOKLYN' '11 BRONX'

'0 Unspecified' '08 BROOKLYN' '01 BROOKLYN' '03 STATEN ISLAND'

'06 MANHATTAN' '03 MANHATTAN' '10 BROOKLYN' '11 MANHATTAN' '07 QUEENS'

'11 QUEENS' '17 BROOKLYN' '13 QUEENS' '06 BRONX' '04 MANHATTAN'

'14 BROOKLYN' '12 BROOKLYN' '08 MANHATTAN' '13 BROOKLYN' '15 BROOKLYN'

'01 STATEN ISLAND' '09 BRONX' '02 STATEN ISLAND' '02 QUEENS'

'16 BROOKLYN' '08 QUEENS' '09 BROOKLYN' '04 BROOKLYN' '14 QUEENS'

'05 MANHATTAN' '08 BRONX' '02 BRONX' '02 MANHATTAN' '01 BRONX'

'01 MANHATTAN' '83 QUEENS' '95 STATEN ISLAND' '81 QUEENS' '27 BRONX'

'Unspecified STATEN ISLAND' '64 MANHATTAN' '80 QUEENS' '55 BROOKLYN'

'26 BRONX' '82 QUEENS' '56 BROOKLYN' '28 BRONX' 'Unspecified QUEENS'

'Unspecified MANHATTAN' '84 QUEENS']

Total no.of.unique value : 75

Community Board: False

Borough: ['MANHATTAN' 'QUEENS' 'BRONX' 'BROOKLYN' 'Unspecified' 'STATEN ISLAND']

Total no.of.unique value : 6

Borough: False

X Coordinate (State Plane): [1005409. 1007766. 1015081. ... 1003221. 1016065. 1016436.]

Total no.of.unique value : 63226
X Coordinate (State Plane): True

Y Coordinate (State Plane): [254678. 221986. 256380. ... 178766. 222214. 222234.]

Total no.of.unique value : 73694
Y Coordinate (State Plane): True

Park Facility Name: ['Unspecified' 'Alley Pond Park - Nature Center']

Total no.of.unique value : 2

Park Facility Name: False

Park Borough: ['MANHATTAN' 'QUEENS' 'BRONX' 'BROOKLYN' 'Unspecified' 'ST ATEN ISLAND']

Total no.of.unique value : 6

Park Borough: False

School Name: ['Unspecified' 'Alley Pond Park - Nature Center']

Total no.of.unique value : 2

School Name: False

School Number: ['Unspecified' 'Q001']

Total no.of.unique value : 2

School Number: False

School Phone Number: ['Unspecified' '7182176034']

Total no.of.unique value : 2

School Phone Number: False

School Address: ['Unspecified' 'Grand Central Parkway, near the soccer field']

Total no.of.unique value : 2

School Address: False

School City: ['Unspecified' 'QUEENS']

Total no.of.unique value : 2

School City: False

School State: ['Unspecified' 'NY']

Total no.of.unique value : 2

School State: False

Bridge Highway Name: [nan 'BQE/Gowanus Expwy' 'Grand Central Pkwy' 'Cross Bronx Expwy'

'Park Ave Tunnel - E 34th St./Grand Central' 'Long Island Expwy' 'FDR D

```
r'
'Prospect Expwy' 'Jackie Robinson/Interboro Pkwy' 'Staten Island Expwy'
'Hutchinson River Pkwy' 'Belt Pkwy' 'First Ave Tunnel - UN Plaza'
'Van Wyck Expwy' 'West Street' 'FDR Southbound' 'Battery Park Underpass'
'
'Harlem River Dr' 'Bronx River Pkwy' 'Richmond Pkwy/Korean War Vets'
'Nassau Expwy' 'Henry Hudson Pkwy/Rt 9A' 'Third Ave Br - Fifth St Basin'
'
'Major Deegan Expwy' 'Sheridan Expwy' 'Whitestone Expwy'
'Cross Island Pkwy' 'Bruckner Expwy' 'Third Ave Br - E 129th St'
'Clearview Expwy']
Total no.of.unique value : 29
Bridge Highway Name: True
-----
-----
Bridge Highway Direction: [nan 'East/Queens Bound' 'West/Toward Triborou
gh Br'
'North/Westbound (To GW Br)' 'West/Staten Island Bound' 'North Bound'
'West/Manhattan Bound' 'Northbound/Uptown' 'Westbound/To BQE' 'Westboun
d'
'Westbound/To Goethals Br' 'North/Westchester County Bound'
'East/Brooklyn Bound' 'West/Brooklyn Bound' 'Southbound/Downtown'
'East/Long Island Bound' 'East/Bronx Bound' 'South/JFK Airport Bound'
'South Bound' 'Eastbound/To Ocean Pkwy' 'North/Bronx Bound'
'To West St/West Side' 'South/Downtown' 'To FDR/East Side' 'Eastbound'
'Northbound' 'South/Toward Triborough Br' 'Southbound'
'Southbound/To Triborough Br' 'South/East (To Throgs Neck Br)'
'Manhattan Bound' 'North/Eastbound' 'South/New Jersey Bound'
'South/Queens Bound' 'South/Long Island Bound']
Total no.of.unique value : 34
Bridge Highway Direction: True
-----
-----
Road Ramp: [nan 'Roadway' 'Ramp']
Total no.of.unique value : 2
Road Ramp: True
-----
-----
Bridge Highway Segment: [nan
'Brooklyn-Queens Expwy(I-278) (Exit 25) - Brooklyn-Battery Tunnel (I-47
8)'
'La Guardia Airport-Main Terminal (Exit 7) - La Guardia Airport/Steinwa
y St (Exit 5)'
'Whitestone Br (I-678) (Exit 6A) - Cross Bronx Expwy Extension (I-295)
(Exit 6B)'
'Meeker Ave/Morgan Ave (Exit 34)' 'Grand Central Pkwy (Exit 22 A-B)'
'38th St / 39th St (Exit 23) - Prospect Expwy (NY 27) (Exit 24)'
'East 96th St (Exit 14) - Triborough Br (Exit 17)'
'4th Ave (Exit 2B) - Hamilton Ave (Exit 2A)'
'Cypress Ave Vermont Place (Exit 2) - Bushwick Ave (Exit 1)'
'Clove Rd/Richmond Rd (Exit 13) - Todt Hill Road/Slossen Ave (Exit 12)'
'East Tremont Ave / Westchester Ave (Exit 2) - Pelham Pkwy (Exit 3E)'
'Victory Blvd (Exit 8) - Dr Martin Luther King Jr Expwy (NY 440) (Exit
9)'
'Van Wyck Expwy (I-678) (Exit 19) - Lefferts Blvd. (Exit 18)'
'East 42nd St (Exit 9) - East 61st St / East 63rd St (Exit 12)'
'Triborough Br (Exit 17) - East 116th St (Exit 16)'
'Cross Bay Blvd (Exit 17 S-N) - Nassau Expwy (NY 878)/Van Wyck Expwy (I
-678) (Exit 19)'
'Roosevelt Ave / Broadway (Exit 37) - Northern Blvd (NY 25A) (Exit 38)'
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'McGuinness Blvd / Humboldt St (Exit 33) - Kosciuszko Br (to Queens)'
'Hillside Ave/Jamaica Ave (Exit 6)'
'Jackie Robinson Pkwy (Exit 7) - Hillside Ave/Jamaica Ave (Exit 6)'
'East 96th St (Exit 14) - East 71st St (Exit 13)'
'BEGIN Staten Island Expwy (Exit 15N) - Lily Pond Ave/Bay St (Exit 15S)'
'31st St (Exit 3)' 'Clove Rd/Richmond Rd (Exit 13)'
'END FDR Dr/Battery Park Underpass'
'10Ave/11Ave (Exit 4) - Park Circle (Exit 5)'
'Flushing Meadows-Corona Park (Exit 9P) - Whitestone Expwy (I-678) (Exit 9E)'
'Nassau Expwy (NY 878) (Exit 1A) - Belt Pkwy (1 E-W)'
'E 125th St 2nd Ave (Exit 19)'
'Flushing Ave (Exit 30) - Williamsburg Br / Metropolitan Ave (Exit 32)'
'East 71st St (Exit 13) - East 61st St / East 63rd St (Exit 12)'
'BEGIN Staten Island Expwy - Forest Ave (Exit 4)'
'Ocean Pkwy (Exit 7 S-N) - Coney Island Ave (Exit 8)'
'East 61st St / East 63rd St (Exit 12) - East 96th St (Exit 14)'
'Forest Ave (Exit 4) - West Shore Expwy (NY 440) (Exit 5)'
'East 71st St (Exit 13)' 'East 20th St/East 23rd St (Exit 7)'
'Rockaway Pkwy (Exit 13) - Flatbush Ave (Exit 11N)'
'Entrance Bronx River Pkwy'
'Cypress Hills St (Exit 3) - Forest Park Dr (Exit 4)'
'Arden Ave - Richmond Ave'
'Houston St (Exit 5) - East 20th St / East 23rd St (Exit 7)'
'Castle Hill Ave (Exit 5B) - Bronx-Whitestone Br (I-678) (Exit 6A)'
'JFK Expwy (Exit 2S)- JFK Expwy (Exit 2N)'
'Flatbush Ave (Exit 11N) - Flatbush Ave (Exit 11S)'
'W 57 St - W 72 St (Exit 9)'
'Gateway National Recreation Area (Exit 12) - Rockaway Pkwy (Exit 13)'
'East 106th St (Exit 15) - East 96th St (Exit 14)'
'Grand Central Pkwy (Exit 22 A-B) - Junction Blvd (Exit 20)' 'Roadway'
'Kissena Blvd (Exit 24)'
'Jerome Ave (Exit 2A) - Webster Ave (US 1) (Exit 2B)'
'Metropolitan Ave (Exit 6) -Van Wyck Expwy (I-678) (Exit 7)'
'Bronx River Pkwy (Exit 4B) - Westchester Ave / White Plains Road (Exit 5A)'
'Cross Bronx / GWB (Exit 14) - Riverside Dr (Exit 15)'
'Grand Central Pkwy (Split) (Exit 39)'
'Brooklyn-Queens Expwy (I-278) (Exit 4) - La Guardia Airport/Astoria Blvd. (Exit 5)'
'East 96th St (Exit 14)'
'Westchester Ave / White Plains Road (Exit 5A) - Castle Hill Ave (Exit 5B)'
'E 161St (Exit 6) - E 155th St/W 153rd St (Exit 5)'
'Bradley Ave (Exit 11) - Todt Hill Road/Slossen Ave (Exit 12)'
'Richmond Ave (Exit 7) - Victory Blvd (Exit 8)'
'Entrance ramp from George Washington Bridge'
'BEGIN Sheridan Expwy - Westchester Ave'
'Bronx River Pkwy/Westchester County'
'92nd St (From Lower Level) (Exit 17)' 'Entrance Staten Island Expwy'
'Triborough Bridge Connector (I-278) (Exit 17)'
'78th Ave Queens Blvd (NY 25) (Exit 12) - Van Wyck Expwy (I-678) (Exit 13)'
'Triborough Bridge (Exit 17)'
'Amsterdam Ave. W. 179th St. / George Washington Br (Exit 24) - Dyckman St 10th Ave'
'Van Cortlandt Park South (Exit 11) - W 230th St (Exit 10)'
'20th Ave (Exit 15) - Cross Island Pkwy (Exit 16)'
'South St (Exit 1) - Battery Park Underpass'

'Throgs Neck Br/Pennyfield Ave (Exit 8) - Throgs Neck Expwy (I-695) (Exit 10)'
'South St (Exit 3) - Pearl St / Brooklyn Br (Exit 2)'
'Crospey Ave Stillwell Ave (Exit 6N) - Crospey Ave Stillwell Ave (Exit 6S)'
'Belt Pkwy (1 E-W) - Rockaway Blvd (Exit 2)'
'East 61st St/East 63rd St (Exit 12)'
'Northern Blvd (NY 25A) (Exit 31E) - Northern Blvd (NY 25A) (Exit 31W)'
'3rd Ave (Exit 21)'
'Sheridan Expwy (I-895) (Exit 4A) - Bronx River Pkwy (Exit 4B)'
'Westchester Ave (Exit 8A) - East Tremont Ave (Exit 7B)'
'BEGIN Cross Bronx Expwy (Extension) - Randall Ave (Exit 11)'
'Springfield Blvd. (Exit 22) - Sunrise Highway(NY 27) (Exit 23)'
'8Ave/7Ave (Exit 3) - 4th Ave (Exit 2B)' 'Entrance Belt Pkwy'
'7th Ave/65th St (Exit 20) - 3rd Ave (Exit 21)' 'Entrance FDR Dr'
'Webster Ave (US 1) (Exit 2B) - Sheridan Expwy (I-895) (Exit 4A)' 'Ramp'
'Linden Place (Exit 14) - 20th Ave (Exit 15)'
'Wythe Ave / Kent Ave (Exit 31) - Tillary St /Manhattan Br (Exit 29)'
'Begin Brooklyn-Queens Expwy'
'Boston Post Road (US 1N) (Exit 6) - East 177th St / Sheridan Expwy (I-895) (Exit 5)'
'Flatbush Ave (Exit 11S) - Flatbush Ave (Exit 11N)'
'Cross Bay Blvd (Exit 17N) - Cross Bay Blvd (Exit 17S)'
'Clove Rd/Richmond Rd (Exit 13) - Lily Pond Ave/Bay St (Exit 15 S-N)'
'Westchester Ave - END Sheridan Expwy (Bruckner Expwy) (I-278)'
'Todt Hill Road/Slossen Ave (Exit 12) - Bradley Ave (Exit 11)'
'W. Fordham Rd (Exit 9) - I95 / US 1 (Exit 7 N-S)'
'Van Wyck Service Roads - Federal Circle'
'Dr Martin Luther King Jr Expwy (NY 440) (Exit 9) - Bradley Ave (Exit 11)'
'Queens Blvd (NY 25) / Woodhaven Blvd (Exit 19) - 108th St (Exit 21)'
'Hoyt Ave (Exit 3) - Triboro Br' 'Maurice Ave (Exit 18)'
'30th Ave (Exit 40) West Leg - Astoria Blvd (Exit 41) West Leg'
'Francis Lewis Blvd. (Exit 24A) - 130th Ave. (Exit 24B)'
'JFK Expwy (Exit 20) - Van Wyck Expwy (I-678) (Exit 19)'
'Clearview Expwy (I-295) (Exit 21 S-N) - Union Trnpke (Exit 22)'
'South St (Exit 1)' 'Erskine St (Exit 15) - Pennsylvania Ave (Exit 14)'
'Crospey Ave Stillwell Ave (Exit 6 S-N) - Ocean Pkwy (Exit 7 S-N)'
'W 79 St (Exit 10) - W 57 St'
'Knapp St (Exits 9 A-B) - Coney Island Ave (Exit 8)'
'Bay Pkwy (Exit 5) - Bay 8th St 14th Ave (Exit 4)'
'Northern Blvd (Exit 5) - 35th Ave (Exit 6A)' 'Rockaway Pkwy (Exit 13)'
'N. Conduit Ave. (NY27) (Exit 17W) - Cross Bay Blvd (Exit 17N)'
'Castle Hill Ave (Exit 5B)' 'W 79 St (Exit 10) - W 96 St (Exit 11)'
'Bronx River Pkwy (Exit 48 S-N) - White Plains Road / Westchester Ave (Exit 49)'
'Cross Island Pkwy (Exit 30S) - Little Neck Pkwy (Exit 32)'
'150th St (Exit 20) - Farmers Blvd. Guy R. Brewer Blvd. (Exit 21B)'
'Begin Korean War Vets Pkwy/Arthur Kill Rd - Arden Ave'
'130th Ave. (Exit 24B) - Southern State Pkwy (Exit 25A)'
'East 177th St/Sheridan Expwy (I-895) (Exit 5)'
'End Major Deegan Expwy/Westchester'
'Lafayette Ave - END Hutchinson River Pkwy' 'Bushwick Ave (Exit 1)'
'I95/US 1 (Exit 7 N-S)' '6th Ave/65th St (Exit 20)'
'6th Ave (Exit 20) - 86th St (Exit 19)'
'Southern State Pkwy (Exit 25A) - END Cross Island Pkwy'
'Clearview Expwy (I-295) (Exit 27 S-N) - Utopia Pkwy (Exit 25)'
'Van Dam St (Exit 15) - Queens Midtown Tunnel'
'Flatbush Ave (Exit 11N) - Gateway National Recreation Area (Exit 12)'

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'South Ave (Exit 6) - West Shore Expwy (NY 440) (Exit 5)'
'Brooklyn-Queens Expwy (I-278) (Exit 17 E-W) - Queens Blvd (NY 25) / Woodhaven Blvd (Exit 19)'
'Brooklyn-Queens Expwy (I-278) (Exit 17W) - Greenpoint Ave (Exit 16)'
'Hamilton Ave (Exit 26) - Atlantic Ave (Exit 27)'
'East 61st St / East 63rd St (Exit 12) - East 53rd St (Exit 11)'
'92nd St (Exit 17) - Fort Hamilton Pkwy (Exit 18)'
'Entrance Major Deegan Expwy' 'W 125 St (Exit 12) - W 95 St (Exit 11)'
'W 237th St/W 239th St (Exit 20) - W 246th St/W 250th St (Exit 21)'
'Belt Pkwy - 65th St - 67th St (Exit 1)'
'Westchester Ave/White Plains Road (Exit 5A)'
'30th Ave (From East Leg) (Exit 40)'
'Brooklyn Br (Exit 28B) - Manhattan Br (Exit 29A)'
'Van Wyck Expwy (I-678) (Exit 7)'
'Hamilton Ave (Exit 2A) - Gowanus Expwy (I-278) (Exit 1)'
'East 233rd St (Exit 10) - Westchester County'
'W 230th (Exit 10) - Van Cortlandt Park South (Exit 11)'
'END Brooklyn-Queens Expwy' '38th St/39th St (Exit 23)'
'W 125 St (Exit 12) - W 158 St (Exit 13)'
'Queens Blvd (NY 25)/Woodhaven Blvd (Exit 19)'
'Wythe Ave/Kent Ave (Exit 31)'
'20th Ave (Exit 15) - Linden Place (Exit 14)']
Total no.of.unique value : 160
Bridge Highway Segment: True
```

```
-----  
Ferry Direction: [nan 'Manhattan Bound']  
Total no.of.unique value : 1  
Ferry Direction: True
```

```
-----  
Ferry Terminal Name: [nan 'St. George Terminal (Staten Island)' 'Barberi']  
Total no.of.unique value : 2  
Ferry Terminal Name: True
```

```
-----  
Latitude: [40.86568154 40.77594531 40.87032452 ... 40.77664592 40.70635259  
40.71605291]  
Total no.of.unique value : 125122  
Latitude: True
```

```
-----  
Longitude: [-73.92350096 -73.91509394 -73.88852464 ... -73.94880526 -73.87124456  
-73.9913785 ]  
Total no.of.unique value : 125216  
Longitude: True
```

```
-----  
Location: [(40.86568153633767, -73.92350095571744)  
(40.775945312321085, -73.91509393898605)  
(40.870324522111424, -73.88852464418646) ...  
(40.77664591586459, -73.94880525662063)  
(40.70635259429073, -73.8712445609601)  
(40.71605290789855, -73.99137850370803)]  
Total no.of.unique value : 126048
```

"" column which contain null values (Closed Date,Descriptor,Location Type,Incident Zip,Incident Address,Street Name,Cross Street 1,Cross Street 2,Intersection Street 1,Intersection Street 2 Address Type,City,Landmark,Facility Type,Due Date,Resolution Action Updated Date,X Coordinate,Y Coordinate,Bridge Highway Name,Bridge Highway Direction,Road Ramp, Bridge Highway Segment,Total no.of.unique value,Ferry Direction,Ferry Terminal Name,Latitude,Longitude,Location) ""

```
In [ ]: data['Created Date'] = pd.to_datetime(data['Created Date'])
         data['Closed Date'] = pd.to_datetime(data['Closed Date'])
```

```
In [ ]: data['Request_Closing_Time'] = data['Created Date'] - data['Closed Date']
```

```
In [ ]: for column in data:  
    print(f'{column}: {data[column].unique()}')  
    print(f'Total no.of.unique value : {data[column].nunique()}')  
    print(f'{column}: {data[column].isnull().any()}')  
    print  
('-----')
```

```
Created Date: ['2015-12-31T23:59:45.000000000' '2015-12-31T23:59:44.000000000'  
'2015-12-31T23:59:29.000000000' ... '2015-03-29T00:33:03.000000000'  
'2015-03-29T00:33:02.000000000' '2015-03-29T00:33:01.000000000']  
Total no.of.unique value : 259493  
Created Date: False  
-----  
Closed Date: ['2016-01-01T00:55:00.000000000' '2016-01-01T01:26:00.000000000'  
'2016-01-01T04:51:00.000000000' ... '2015-03-29T02:33:59.000000000'  
'2015-03-29T04:38:35.000000000' '2015-03-29T04:41:50.000000000']  
Total no.of.unique value : 237165  
Closed Date: True  
-----  
Agency: ['NYPD']  
Total no.of.unique value : 1  
Agency: False  
-----  
Agency Name: ['New York City Police Department' 'NYPD' 'Internal Affairs Bureau']  
Total no.of.unique value : 3  
Agency Name: False  
-----  
Complaint Type: ['Noise - Street/Sidewalk' 'Blocked Driveway' 'Illegal Parking'  
'Derelict Vehicle' 'Noise - Commercial' 'Noise - House of Worship'  
'Posting Advertisement' 'Noise - Vehicle' 'Animal Abuse' 'Vending'  
'Traffic' 'Drinking' 'Bike/Roller/Skate Chronic' 'Panhandling'  
'Noise - Park' 'Homeless Encampment' 'Urinating in Public' 'Graffiti'  
'Disorderly Youth' 'Illegal Fireworks' 'Ferry Complaint' 'Agency Issues'  
'Squeegee' 'Animal in a Park']  
Total no.of.unique value : 24  
Complaint Type: False  
-----  
Descriptor: ['Loud Music/Party' 'No Access' 'Commercial Overnight Parking'  
'Blocked Sidewalk' 'Posted Parking Sign Violation' 'Blocked Hydrant'  
'With License Plate' 'Partial Access' 'Unauthorized Bus Layover'  
'Double Parked Blocking Vehicle' 'Double Parked Blocking Traffic'  
'Vehicle' 'Loud Talking' 'Banging/Pounding' 'Car/Truck Music' 'Tortured'  
'In Prohibited Area' 'Congestion/Gridlock' 'Neglected' 'Car/Truck Horn'  
'In Public' 'Other (complaint details)' nan 'No Shelter'  
'Truck Route Violation' 'Unlicensed' 'Overnight Commercial Storage'  
'Engine Idling' 'After Hours - Licensed Est' 'Detached Trailer'  
'Underage - Licensed Est' 'Chronic Stoplight Violation' 'Loud Television'  
'Chained' 'Building' 'In Car' 'Police Report Requested'  
'Chronic Speeding' 'Playing in Unsuitable Place' 'Drag Racing'  
'Police Report Not Requested' 'Nuisance/Truant' 'Homeless Issue'  
'Language Access Complaint' 'Disruptive Passenger' 'Animal Waste']  
Total no.of.unique value : 45  
Descriptor: True
```

```
-----  
Location Type: ['Street/Sidewalk' 'Club/Bar/Restaurant' 'Store/Commercia  
l'  
    'House of Worship' 'Residential Building/House' 'Residential Building'  
    'Park/Playground' 'Vacant Lot' 'House and Store' 'Highway' 'Commercial'  
    'Roadway Tunnel' 'Subway Station' 'Parking Lot' 'Bridge' 'Terminal' nan  
    'Ferry' 'Park']  
Total no.of.unique value : 18  
Location Type: True  
-----
```

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-----  
Incident Zip: [10034. 11105. 10458. 10461. 11373. 11215. 10032. 10457. 1  
1415. 11219.  
    11372. 10453. 11208. 11379. 11374. 11412. 11217. 11234. 10026. 10456.  
    10030. 10467. 11432. 10031. 11419. 10024. 11201. 11216. 10462.  nan  
    11385. 11414. 11213. 11375. 11211. 10312. 10017. 11417. 10002. 10027.  
    11209. 10035. 11418. 11421. 11205. 10468. 11355. 11358. 11210. 11368.  
    11427. 11436. 10308. 11364. 10011. 11423. 11230. 10003. 11221. 11416.  
    11378. 11236. 11218. 10029. 10028. 11214. 11207. 11369. 11223. 11220.  
    10302. 11420. 11354. 10473. 10301. 11103. 10465. 11377. 11212. 11365.  
    10472. 10452. 11203. 10469. 11237. 11434. 11101. 10460. 11229. 11206.  
    11102. 10466. 10009. 10033. 11694. 10022. 10470. 11433. 11428. 11413.  
    10463. 10471. 10474. 11228. 10014. 10475. 11225. 11233. 11370. 11204.  
    11435. 10459. 11238. 10304. 11367. 10306. 10305. 10001. 10314. 10019.  
    11222. 10023. 11356. 11235. 10018. 10036. 11106. 10075. 10025. 10451.  
    11366. 10005. 10303. 10455. 11361. 10016. 10309. 10013. 11226. 10012.  
    11224. 11249. 10039. 10128. 10454. 10010. 11360. 11004. 11691. 10307.  
    11232. 10038. 10310. 10040. 11426. 11362. 11411. 11429. 11422. 10007.  
    10065. 10021. 10004. 11104. 11231. 11357. 11239. 11363. 10037. 11693.  
    10280. 11430. 10464. 10006. 11692. 10044. 11001. 10282. 11371. 10281.  
    11109. 11040. 83. 10020. 10000. 11697. 11251. 10103. 10112. 10069.  
    11451. 10153. 10041. 11242. 10119. 10048. 10803. 11695. 10111. 10162.  
    10123. 11241.]  
Total no.of.unique value : 201  
Incident Zip: True  
-----
```

```
-----  
Incident Address: ['71 VERMILYEA AVENUE' '27-07 23 AVENUE' '2897 VALENTI  
NE AVENUE' ...  
    '77-03 79 PLACE' '81 HESTER STREET' '100-17 87 AVENUE']  
Total no.of.unique value : 107652  
Incident Address: True  
-----
```

```
-----  
Street Name: ['VERMILYEA AVENUE' '23 AVENUE' 'VALENTINE AVENUE' ... 'CRA  
FTON AVENUE'  
    'LANDIS AVENUE' 'COOPER AVE']  
Total no.of.unique value : 7320  
Street Name: True  
-----
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Cross Street 1: ['ACADEMY STREET' '27 STREET' 'EAST 198 STREET' ... '80T  
H STREET' 'E 186'  
    'EAST 186']  
Total no.of.unique value : 5982  
Cross Street 1: True  
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Cross Street 2: ['WEST 204 STREET' '28 STREET' 'EAST 199 STREET' ... 'BA  
RNARD AVENUE'
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'DEY STREET' 'GRAMERCY PARK']
Total no.of.unique value : 5823
Cross Street 2: True
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-----
Intersection Street 1: [nan 'GRAND CENTRAL PARKWAY' 'DEVOE STREET' ... 'E 186' 'BAXTER AVENUE'
'east 186']
Total no.of.unique value : 4413
Intersection Street 1: True
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Intersection Street 2: [nan '63 AVENUE' 'BUSHWICK AVENUE' ... 'MAYVILLE STREET' 'STERLING AVENUE'
'LAWTON STREET']
Total no.of.unique value : 4172
Intersection Street 2: True
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Address Type: ['ADDRESS' nan 'INTERSECTION' 'LATLONG' 'BLOCKFACE' 'PLACE NAME']
Total no.of.unique value : 5
Address Type: True
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-----
City: ['NEW YORK' 'ASTORIA' 'BRONX' 'ELMHURST' 'BROOKLYN' 'KEW GARDENS' 'JACKSON HEIGHTS' 'MIDDLE VILLAGE' 'REGO PARK' 'SAINT ALBANS' 'JAMAICA' 'SOUTH RICHMOND HILL' nan 'RIDGEWOOD' 'HOWARD BEACH' 'FOREST HILLS' 'STATEN ISLAND' 'OZONE PARK' 'RICHMOND HILL' 'WOODHAVEN' 'FLUSHING' 'CORONA' 'QUEENS VILLAGE' 'OAKLAND GARDENS' 'HOLLIS' 'MASPETH' 'EAST ELMHURST' 'SOUTH OZONE PARK' 'WOODSIDE' 'FRESH MEADOWS' 'LONG ISLAND CITY' 'ROCKAWAY PARK' 'SPRINGFIELD GARDENS' 'COLLEGE POINT'
'BAYSIDE' 'GLEN OAKS' 'FAR ROCKAWAY' 'BELLEROSE' 'LITTLE NECK' 'CAMBRIA HEIGHTS' 'ROSEDALE' 'SUNNYSIDE' 'WHitestone' 'ARVERNE' 'FLORAL PARK' 'NEW HYDE PARK' 'CENTRAL PARK' 'BREEZY POINT' 'QUEENS' 'Astoria' 'Long Island City' 'Woodside' 'East Elmhurst' 'Howard Beach']
Total no.of.unique value : 53
City: True
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Landmark: [nan 'MADISON SQUARE GARDEN' 'J F K AIRPORT' 'CLOVE LAKE' 'WIS E TOWERS'
'FERRY TERMINAL' 'BRONX ZOO' 'UNION SQUARE PARK' 'SERRANO PLAYGROUND' 'WASHINGTON SQUARE PARK' 'CENTRAL PARK' 'BETH ISRAEL MED CENTER' 'BARCLAYS CENTER' 'LA GUARDIA AIRPORT' 'HIGHLAND PARK' 'WAGNER COLLEGE' 'WORLDS FAIR MARINA' 'RODMANS NECK' 'SUNSET PARK' 'UNITED NATIONS HQ' 'CONNEY ISLAND HOSPITAL' 'WASHINGTON SQUARE' 'BRONX LEBANON HOSPITAL' 'MARCUS GARVEY MEMORIAL PARK' 'MANHATTAN COMMUNITY COLLEGE' 'BKLYN BATTERY TUNNEL' 'MARCUS GARVEY PARK' 'BKLYN PUBLIC LIBRARY CTR BRANCH' 'CITI FIELD' 'FLUSHING MEADOW PARK' 'LINCOLN TERRACE PARK' 'YANKEE STADIUM' 'MEADOW LAKE' 'MANHATTAN COLLEG E'
'PROSPECT PARK' 'PS 174' 'MERCER PLAYGROUND' 'CITY HALL' 'BROOKLYN BRIDGE' 'PIER 94' 'LEIF ERICSON PARK' 'FORT GREENE PARK' 'GRAND ARMY PLAZA' 'METROPOLITAN MUSEUM' 'SI FERRY TERMINAL' 'MADISON SQUARE PARK' 'TRANSMITTER PARK' 'JOHN JAY PARK' 'SOUNDVIEW PAR K'
'JOYCE KILMER PARK' 'QUEENSBRIDGE PARK' 'BROOKLYN MUSEUM' 'PIER 2' 'SOUTH STREET SEAPORT' 'COLUMBUS PARK' 'ST JOHN THE DIVINE'
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'VAN CORTLAND PARK' 'WOODHULL MEDICAL CENTER' 'SEWARD PARK'
'EAST RIVER PARK' 'KOLBERT PARK' 'ST JOHNS UNIVERSITY' 'BARRY PARK'
'RAILROAD PARK' 'BRIGHTON BEACH' 'COOPER PARK' 'VALENTINO PARK'
'MORNINGSIDE PARK' 'ST MARYS PARK' 'VAN CORTLANDT PARK'
'CADMAN PLAZA PARK' 'JACKIE ROBINSON PARK' 'ASTORIA PARK' 'GAELIC PARK'
'PARKSIDE PLAYGROUND' '79 STREET BOAT BASIN' 'GRAND CENTRAL TERM'
'RIVERSIDE PARK' 'SOUTH BEACH' 'ROBERTO CLEMENTE STATE PARK BRDG'
'ROY WILKINS PARK' 'MARINE PARK' 'PELHAM BAY PARK' 'LINCOLN CENTER'
'MAURICE PARK' 'HAFFEN PARK' 'CONEY ISLAND BEACH' 'FORT TRYON PARK'
'PORT AUTH 42 STREET' 'COOPER UNION' 'TANAHEY PLAYGROUND'
'HAMILTON METZ FIELD' 'BATTERY PARK' 'CUYLER GORE' 'INWOOD HILL PARK'
'BETH ABRAHAM HOSPITAL' 'SEANS PLACE' 'BK BOTANIC GARDENS'
'JUMEL MANSION' 'POWELL COVE' 'CLAREMONT PARK' 'FORT INDEPENDENCE PARK'
'AQUEDUCT RACE TRACK' 'THE CLOISTERS' 'J HOOD WRIGHT PARK'
'LEHMAN COLLEGE' 'GREENWOOD PLAYGROUND' 'JUNIPER VALLEY PARK'
'MARIA HERNANDEZ PARK' 'JOHN JAY HS HISTORICAL' 'VICTORY FIELD'
'KINGS COUNTY HOSPITAL' 'MUSEUM NATURAL HIST' 'FLATIRON BUILDING'
'ROCKEFELLER CENTER' 'QUEENS HOSPITAL CENTER' 'INTREPID MUSEUM']

Total no.of.unique value : 116

Landmark: True

Facility Type: ['Precinct' nan]

Total no.of.unique value : 1

Facility Type: True

Status: ['Closed' 'Open' 'Assigned' 'Draft']

Total no.of.unique value : 4

Status: False

Due Date: ['01-01-16 7:59' '01-01-16 7:57' '01-01-16 7:56' ...

'03/29/2015 08:33:03 AM' '03/29/2015 08:33:02 AM'

'03/29/2015 08:33:01 AM']

Total no.of.unique value : 259851

Due Date: True

Resolution Description: ['The Police Department responded and upon arrival those responsible for the condition were gone.'

'The Police Department responded to the complaint and with the information available observed no evidence of the violation at that time.'

'The Police Department responded to the complaint and took action to fix the condition.'

'The Police Department issued a summons in response to the complaint.'

'The Police Department responded to the complaint and determined that police action was not necessary.'

'The Police Department reviewed your complaint and provided additional information below.'

'Your request can not be processed at this time because of insufficient contact information. Please create a new Service Request on NYC.gov and provide more detailed contact information.'

"This complaint does not fall under the Police Department's jurisdiction."

'Your complaint has been forwarded to the New York Police Department for a non-emergency response. 311 will have additional information in 8 hours. Please note your service request number for future reference.'

'The Police Department responded to the complaint and a report was prepared.'

'The Police Department responded to the complaint but officers were unable to gain entry into the premises.'

'The Police Department made an arrest in response to the complaint.'

"Your complaint has been forwarded to the New York Police Department for a non-emergency response. If the police determine the vehicle is illegally parked, they will ticket the vehicle and then you may either contact a private towing company to remove the vehicle or ask your local precinct to contact 'rotation tow'. Any fees charged for towing will have to be paid by the vehicle owner. 311 will have additional information in 8 hours. Please note your service request number for future reference."

'Your complaint has been received by the Police Department and it has been determined that a long-term investigation may be necessary. Additional information will be available at the conclusion of the investigation.'

'The Department of Transportation contacted the customer and resolved the Service Request or provided the information requested.'

'The New York City Police Department received your comments and forwarded them to the appropriate unit for resolution. You may follow up by calling (646) 610-6952 after 60 days from submitting your agency issue.'

'The Department of Transportation requires 30 days to respond to this type of complaint. Please note your Service Request number for future reference.'

'The condition was determined to be an issue appropriate for handling by an alternate entity. The Department of Parks and Recreation has notified the appropriate resource.]'

Total no.of.unique value : 18

Resolution Description: False

Resolution Action Updated Date: ['01-01-16 0:55' '01-01-16 1:26' '01-01-16 4:51' ...

'03/29/2015 02:33:59 AM' '03/29/2015 04:38:35 AM'

'03/29/2015 04:41:50 AM']

Total no.of.unique value : 237895

Resolution Action Updated Date: True

Community Board: ['12 MANHATTAN' '01 QUEENS' '07 BRONX' '10 BRONX' '04 QUEENS'

'07 BROOKLYN' '03 BRONX' '09 QUEENS' '11 BROOKLYN' '03 QUEENS' '05 BRONX'

'05 BROOKLYN' '05 QUEENS' '06 QUEENS' '12 QUEENS' '06 BROOKLYN'

'18 BROOKLYN' '10 MANHATTAN' '04 BRONX' '12 BRONX' '09 MANHATTAN'

'10 QUEENS' '07 MANHATTAN' '02 BROOKLYN' '03 BROOKLYN' '11 BRONX'

'0 Unspecified' '08 BROOKLYN' '01 BROOKLYN' '03 STATEN ISLAND'

'06 MANHATTAN' '03 MANHATTAN' '10 BROOKLYN' '11 MANHATTAN' '07 QUEENS'

'11 QUEENS' '17 BROOKLYN' '13 QUEENS' '06 BRONX' '04 MANHATTAN'

'14 BROOKLYN' '12 BROOKLYN' '08 MANHATTAN' '13 BROOKLYN' '15 BROOKLYN'

'01 STATEN ISLAND' '09 BRONX' '02 STATEN ISLAND' '02 QUEENS'

'16 BROOKLYN' '08 QUEENS' '09 BROOKLYN' '04 BROOKLYN' '14 QUEENS'

'05 MANHATTAN' '08 BRONX' '02 BRONX' '02 MANHATTAN' '01 BRONX'

'01 MANHATTAN' '83 QUEENS' '95 STATEN ISLAND' '81 QUEENS' '27 BRONX'

'Unspecified STATEN ISLAND' '64 MANHATTAN' '80 QUEENS' '55 BROOKLYN'

'26 BRONX' '82 QUEENS' '56 BROOKLYN' '28 BRONX' 'Unspecified QUEENS'

'Unspecified MANHATTAN' '84 QUEENS']

Total no.of.unique value : 75

Community Board: False

Borough: ['MANHATTAN' 'QUEENS' 'BRONX' 'BROOKLYN' 'Unspecified' 'STATEN

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ISLAND']
Total no.of.unique value : 6
Borough: False
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X Coordinate (State Plane): [1005409. 1007766. 1015081. ... 1003221. 101
6065. 1016436.]
Total no.of.unique value : 63226
X Coordinate (State Plane): True
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Y Coordinate (State Plane): [254678. 221986. 256380. ... 178766. 222214.
222234.]
Total no.of.unique value : 73694
Y Coordinate (State Plane): True
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Park Facility Name: ['Unspecified' 'Alley Pond Park - Nature Center']
Total no.of.unique value : 2
Park Facility Name: False
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-----
Park Borough: ['MANHATTAN' 'QUEENS' 'BRONX' 'BROOKLYN' 'Unspecified' 'ST
ATEN ISLAND']
Total no.of.unique value : 6
Park Borough: False
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School Name: ['Unspecified' 'Alley Pond Park - Nature Center']
Total no.of.unique value : 2
School Name: False
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School Number: ['Unspecified' 'Q001']
Total no.of.unique value : 2
School Number: False
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School Phone Number: ['Unspecified' '7182176034']
Total no.of.unique value : 2
School Phone Number: False
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School Address: ['Unspecified' 'Grand Central Parkway, near the soccer f
ield']
Total no.of.unique value : 2
School Address: False
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School City: ['Unspecified' 'QUEENS']
Total no.of.unique value : 2
School City: False
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-----
School State: ['Unspecified' 'NY']
Total no.of.unique value : 2
School State: False
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Bridge Highway Name: [nan 'BQE/Gowanus Expwy' 'Grand Central Pkwy' 'Cros
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s Bronx Expwy'
'Park Ave Tunnel - E 34th St./Grand Central' 'Long Island Expwy' 'FDR D
r'
'Prospect Expwy' 'Jackie Robinson/Interboro Pkwy' 'Staten Island Expwy'
'Hutchinson River Pkwy' 'Belt Pkwy' 'First Ave Tunnel - UN Plaza'
'Van Wyck Expwy' 'West Street' 'FDR Southbound' 'Battery Park Underpass
'
'Harlem River Dr' 'Bronx River Pkwy' 'Richmond Pkwy/Korean War Vets'
'Nassau Expwy' 'Henry Hudson Pkwy/Rt 9A' 'Third Ave Br - Fifth St Basin
'
'Major Deegan Expwy' 'Sheridan Expwy' 'Whitestone Expwy'
'Cross Island Pkwy' 'Bruckner Expwy' 'Third Ave Br - E 129th St'
'Clearview Expwy']
Total no.of.unique value : 29
Bridge Highway Name: True
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Bridge Highway Direction: [nan 'East/Queens Bound' 'West/Toward Triborou
gh Br'
'North/Westbound (To GW Br)' 'West/Staten Island Bound' 'North Bound'
'West/Manhattan Bound' 'Northbound/Uptown' 'Westbound/To BQE' 'Westboun
d'
'Westbound/To Goethals Br' 'North/Westchester County Bound'
'East/Brooklyn Bound' 'West/Brooklyn Bound' 'Southbound/Downtown'
'East/Long Island Bound' 'East/Bronx Bound' 'South/JFK Airport Bound'
'South Bound' 'Eastbound/To Ocean Pkwy' 'North/Bronx Bound'
'To West St/West Side' 'South/Downtown' 'To FDR/East Side' 'Eastbound'
'Northbound' 'South/Toward Triborough Br' 'Southbound'
'Southbound/To Triborough Br' 'South/East (To Throgs Neck Br)'
'Manhattan Bound' 'North/Eastbound' 'South/New Jersey Bound'
'South/Queens Bound' 'South/Long Island Bound']
Total no.of.unique value : 34
Bridge Highway Direction: True
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Road Ramp: [nan 'Roadway' 'Ramp']
Total no.of.unique value : 2
Road Ramp: True
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Bridge Highway Segment: [nan
'Brooklyn-Queens Expwy(I-278) (Exit 25) - Brooklyn-Battery Tunnel (I-47
8)'
'La Guardia Airport-Main Terminal (Exit 7) - La Guardia Airport/Steinwa
y St (Exit 5)'
'Whitestone Br (I-678) (Exit 6A) - Cross Bronx Expwy Extension (I-295)
(Exit 6B)'
'Meeker Ave/Morgan Ave (Exit 34)' 'Grand Central Pkwy (Exit 22 A-B)'
'38th St / 39th St (Exit 23) - Prospect Expwy (NY 27) (Exit 24)'
'East 96th St (Exit 14) - Triborough Br (Exit 17)'
'4th Ave (Exit 2B) - Hamilton Ave (Exit 2A)'
'Cypress Ave Vermont Place (Exit 2) - Bushwick Ave (Exit 1)'
'Clove Rd/Richmond Rd (Exit 13) - Todt Hill Road/Slossen Ave (Exit 12)'
'East Tremont Ave / Westchester Ave (Exit 2) - Pelham Pkwy (Exit 3E)'
'Victory Blvd (Exit 8) - Dr Martin Luther King Jr Expwy (NY 440) (Exit
9)'
'Van Wyck Expwy (I-678) (Exit 19) - Lefferts Blvd. (Exit 18)'
'East 42nd St (Exit 9) - East 61st St / East 63rd St (Exit 12)'
'Triborough Br (Exit 17) - East 116th St (Exit 16)'
'Cross Bay Blvd (Exit 17 S-N) - Nassau Expwy (NY 878)/Van Wyck Expwy (I
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-678) (Exit 19)'
'Roosevelt Ave / Broadway (Exit 37) - Northern Blvd (NY 25A) (Exit 38)'
'McGuinness Blvd / Humboldt St (Exit 33) - Kosciuszko Br (to Queens)'
'Hillside Ave/Jamaica Ave (Exit 6)'
'Jackie Robinson Pkwy (Exit 7) - Hillside Ave/Jamaica Ave (Exit 6)'
'East 96th St (Exit 14) - East 71st St (Exit 13)'
'BEGIN Staten Island Expwy (Exit 15N) - Lily Pond Ave/Bay St (Exit 15S)'
'31st St (Exit 3)' 'Clove Rd/Richmond Rd (Exit 13)'
'END FDR Dr/Battery Park Underpass'
'10Ave/11Ave (Exit 4) - Park Circle (Exit 5)'
'Flushing Meadows-Corona Park (Exit 9P) - Whitestone Expwy (I-678) (Exit 9E)'
'Nassau Expwy (NY 878) (Exit 1A) - Belt Pkwy (1 E-W)'
'E 125th St 2nd Ave (Exit 19)'
'Flushing Ave (Exit 30) - Williamsburg Br / Metropolitan Ave (Exit 32)'
'East 71st St (Exit 13) - East 61st St / East 63rd St (Exit 12)'
'BEGIN Staten Island Expwy - Forest Ave (Exit 4)'
'Ocean Pkwy (Exit 7 S-N) - Coney Island Ave (Exit 8)'
'East 61st St / East 63rd St (Exit 12) - East 96th St (Exit 14)'
'Forest Ave (Exit 4) - West Shore Expwy (NY 440) (Exit 5)'
'East 71st St (Exit 13)' 'East 20th St/East 23rd St (Exit 7)'
'Rockaway Pkwy (Exit 13) - Flatbush Ave (Exit 11N)'
'Entrance Bronx River Pkwy'
'Cypress Hills St (Exit 3) - Forest Park Dr (Exit 4)'
'Arden Ave - Richmond Ave'
'Houston St (Exit 5) - East 20th St / East 23rd St (Exit 7)'
'Castle Hill Ave (Exit 5B) - Bronx-Whitestone Br (I-678) (Exit 6A)'
'JFK Expwy (Exit 2S)- JFK Expwy (Exit 2N)'
'Flatbush Ave (Exit 11N) - Flatbush Ave (Exit 11S)'
'W 57 St - W 72 St (Exit 9)'
'Gateway National Recreation Area (Exit 12) - Rockaway Pkwy (Exit 13)'
'East 106th St (Exit 15) - East 96th St (Exit 14)'
'Grand Central Pkwy (Exit 22 A-B) - Junction Blvd (Exit 20)' 'Roadway'
'Kissena Blvd (Exit 24)'
'Jerome Ave (Exit 2A) - Webster Ave (US 1) (Exit 2B)'
'Metropolitan Ave (Exit 6) -Van Wyck Expwy (I-678) (Exit 7)'
'Bronx River Pkwy (Exit 4B) - Westchester Ave / White Plains Road (Exit 5A)'
'Cross Bronx / GWB (Exit 14) - Riverside Dr (Exit 15)'
'Grand Central Pkwy (Split) (Exit 39)'
'Brooklyn-Queens Expwy (I-278) (Exit 4) - La Guardia Airport/Astoria Blvd. (Exit 5)'
'East 96th St (Exit 14)'
'Westchester Ave / White Plains Road (Exit 5A) - Castle Hill Ave (Exit 5B)'
'E 161St (Exit 6) - E 155th St/W 153rd St (Exit 5)'
'Bradley Ave (Exit 11) - Todt Hill Road/Slossen Ave (Exit 12)'
'Richmond Ave (Exit 7) - Victory Blvd (Exit 8)'
'Entrance ramp from George Washington Bridge'
'BEGIN Sheridan Expwy - Westchester Ave'
'Bronx River Pkwy/Westchester County'
'92nd St (From Lower Level) (Exit 17)' 'Entrance Staten Island Expwy'
'Triborough Bridge Connector (I-278) (Exit 17)'
'78th Ave Queens Blvd (NY 25) (Exit 12) - Van Wyck Expwy (I-678) (Exit 13)'
'Triborough Bridge (Exit 17)'
'Amsterdam Ave. W. 179th St. / George Washington Br (Exit 24) - Dyckman St 10th Ave'
'Van Cortlandt Park South (Exit 11) - W 230th St (Exit 10)'

'20th Ave (Exit 15) - Cross Island Pkwy (Exit 16)'
'South St (Exit 1) - Battery Park Underpass'
'Throgs Neck Br/Pennyfield Ave (Exit 8) - Throgs Neck Expwy (I-695) (Exit 10)'
'South St (Exit 3) - Pearl St / Brooklyn Br (Exit 2)'
'Crospey Ave Stillwell Ave (Exit 6N) - Crospey Ave Stillwell Ave (Exit 6S)'
'Belt Pkwy (1 E-W) - Rockaway Blvd (Exit 2)'
'East 61st St/East 63rd St (Exit 12)'
'Northern Blvd (NY 25A) (Exit 31E) - Northern Blvd (NY 25A) (Exit 31W)'
'3rd Ave (Exit 21)'
'Sheridan Expwy (I-895) (Exit 4A) - Bronx River Pkwy (Exit 4B)'
'Westchester Ave (Exit 8A) - East Tremont Ave (Exit 7B)'
'BEGIN Cross Bronx Expwy (Extension) - Randall Ave (Exit 11)'
'Springfield Blvd. (Exit 22) - Sunrise Highway(NY 27) (Exit 23)'
'8Ave/7Ave (Exit 3) - 4th Ave (Exit 2B)' 'Entrance Belt Pkwy'
'7th Ave/65th St (Exit 20) - 3rd Ave (Exit 21)' 'Entrance FDR Dr'
'Webster Ave (US 1) (Exit 2B) - Sheridan Expwy (I-895) (Exit 4A)' 'Ramp'
'Linden Place (Exit 14) - 20th Ave (Exit 15)'
'Wythe Ave / Kent Ave (Exit 31) - Tillary St /Manhattan Br (Exit 29)'
'Begin Brooklyn-Queens Expwy'
'Boston Post Road (US 1N) (Exit 6) - East 177th St / Sheridan Expwy (I-895) (Exit 5)'
'Flatbush Ave (Exit 11S) - Flatbush Ave (Exit 11N)'
'Cross Bay Blvd (Exit 17N) - Cross Bay Blvd (Exit 17S)'
'Clove Rd/Richmond Rd (Exit 13) - Lily Pond Ave/Bay St (Exit 15 S-N)'
'Westchester Ave - END Sheridan Expwy (Bruckner Expwy) (I-278)'
'Todt Hill Road/Slossen Ave (Exit 12) - Bradley Ave (Exit 11)'
'W. Fordham Rd (Exit 9) - I95 / US 1 (Exit 7 N-S)'
'Van Wyck Service Roads - Federal Circle'
'Dr Martin Luther King Jr Expwy (NY 440) (Exit 9) - Bradley Ave (Exit 1)'
'Queens Blvd (NY 25) / Woodhaven Blvd (Exit 19) - 108th St (Exit 21)'
'Hoyt Ave (Exit 3) - Triboro Br' 'Maurice Ave (Exit 18)'
'30th Ave (Exit 40) West Leg - Astoria Blvd (Exit 41) West Leg'
'Francis Lewis Blvd. (Exit 24A) - 130th Ave. (Exit 24B)'
'JFK Expwy (Exit 20) - Van Wyck Expwy (I-678) (Exit 19)'
'Clearview Expwy (I-295) (Exit 21 S-N) - Union Trnpke (Exit 22)'
'South St (Exit 1)' 'Erskine St (Exit 15) - Pennsylvania Ave (Exit 14)'
'Crospey Ave Stillwell Ave (Exit 6 S-N) - Ocean Pkwy (Exit 7 S-N)'
'W 79 St (Exit 10) - W 57 St'
'Knapp St (Exits 9 A-B) - Coney Island Ave (Exit 8)'
'Bay Pkwy (Exit 5) - Bay 8th St 14th Ave (Exit 4)'
'Northern Blvd (Exit 5) - 35th Ave (Exit 6A)' 'Rockaway Pkwy (Exit 13)'
'N. Conduit Ave. (NY27) (Exit 17W) - Cross Bay Blvd (Exit 17N)'
'Castle Hill Ave (Exit 5B)' 'W 79 St (Exit 10) - W 96 St (Exit 11)'
'Bronx River Pkwy (Exit 48 S-N) - White Plains Road / Westchester Ave (Exit 49)'
'Cross Island Pkwy (Exit 30S) - Little Neck Pkwy (Exit 32)'
'150th St (Exit 20) - Farmers Blvd. Guy R. Brewer Blvd. (Exit 21B)'
'Begin Korean War Vets Pkwy/Arthur Kill Rd - Arden Ave'
'130th Ave. (Exit 24B) - Southern State Pkwy (Exit 25A)'
'East 177th St/Sheridan Expwy (I-895) (Exit 5)'
'End Major Deegan Expwy/Westchester'
'Lafayette Ave - END Hutchinson River Pkwy' 'Bushwick Ave (Exit 1)'
'I95/US 1 (Exit 7 N-S)' '6th Ave/65th St (Exit 20)'
'6th Ave (Exit 20) - 86th St (Exit 19)'
'Southern State Pkwy (Exit 25A) - END Cross Island Pkwy'
'Clearview Expwy (I-295) (Exit 27 S-N) - Utopia Pkwy (Exit 25)'

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'Van Dam St (Exit 15) - Queens Midtown Tunnel'  
'Flatbush Ave (Exit 11N) - Gateway National Recreation Area (Exit 12)'  
'South Ave (Exit 6) - West Shore Expwy (NY 440) (Exit 5)'  
'Brooklyn-Queens Expwy (I-278) (Exit 17 E-W) - Queens Blvd (NY 25) / Wo  
odhaven Blvd (Exit 19)'  
'Brooklyn-Queens Expwy (I-278) (Exit 17W) - Greenpoint Ave (Exit 16)'  
'Hamilton Ave (Exit 26) - Atlantic Ave (Exit 27)'  
'East 61st St / East 63rd St (Exit 12) - East 53rd St (Exit 11)'  
'92nd St (Exit 17) - Fort Hamilton Pkwy (Exit 18)'  
'Entrance Major Deegan Expwy' 'W 125 St (Exit 12) - W 95 St (Exit 11)'  
'W 237th St/W 239th St (Exit 20) - W 246th St/W 250th St (Exit 21)'  
'Belt Pkwy - 65th St - 67th St (Exit 1)'  
'Westchester Ave/White Plains Road (Exit 5A)'  
'30th Ave (From East Leg) (Exit 40)'  
'Brooklyn Br (Exit 28B) - Manhattan Br (Exit 29A)'  
'Van Wyck Expwy (I-678) (Exit 7)'  
'Hamilton Ave (Exit 2A) - Gowanus Expwy (I-278) (Exit 1)'  
'East 233rd St (Exit 10) - Westchester County'  
'W 230th (Exit 10) - Van Cortlandt Park South (Exit 11)'  
'END Brooklyn-Queens Expwy' '38th St/39th St (Exit 23)'  
'W 125 St (Exit 12) - W 158 St (Exit 13)'  
'Queens Blvd (NY 25)/Woodhaven Blvd (Exit 19)'  
'Wythe Ave/Kent Ave (Exit 31)'  
'20th Ave (Exit 15) - Linden Place (Exit 14)']  
Total no.of.unique value : 160  
Bridge Highway Segment: True
```

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-----  
Ferry Direction: [nan 'Manhattan Bound']  
Total no.of.unique value : 1  
Ferry Direction: True
```

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-----  
Ferry Terminal Name: [nan 'St. George Terminal (Staten Island)' 'Barberi  
' ]
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Total no.of.unique value : 2  
Ferry Terminal Name: True
```

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-----  
Latitude: [40.86568154 40.77594531 40.87032452 ... 40.77664592 40.706352  
59  
40.71605291]  
Total no.of.unique value : 125122
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```
Latitude: True
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-----  
Longitude: [-73.92350096 -73.91509394 -73.88852464 ... -73.94880526 -73.  
87124456  
-73.9913785 ]
```

```
Total no.of.unique value : 125216  
Longitude: True
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-----  
Location: ['(40.86568153633767, -73.92350095571744)'  
'(40.775945312321085, -73.91509393898605)'  
'(40.870324522111424, -73.88852464418646)' ...  
'(40.77664591586459, -73.94880525662063)'  
'(40.70635259429073, -73.8712445609601)'  
'(40.71605290789855, -73.99137850370803)']  
Total no.of.unique value : 126048
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Location: True
```

```
-----  
-----  
Request_Closing_Time: [ -3315000000000 -5176000000000 -17491000000000  
... -1709200000000  
-3508400000000 -5654600000000]  
Total no.of.unique value : 47608
```

```
In [ ]: data.isnull().sum()
```

```
Out[ ]: Created Date          0  
Closed Date        2164  
Agency             0  
Agency Name        0  
Complaint Type    0  
Descriptor         5914  
Location Type     131  
Incident Zip      2615  
Incident Address   44410  
Street Name        44410  
Cross Street 1    49279  
Cross Street 2    49779  
Intersection Street 1  256840  
Intersection Street 2  257336  
Address Type       2815  
City               2614  
Landmark           300349  
Facility Type      2171  
Status              0  
Due Date            3  
Resolution Description  0  
Resolution Action Updated Date  2187  
Community Board     0  
Borough             0  
X Coordinate (State Plane) 3540  
Y Coordinate (State Plane) 3540  
Park Facility Name  0  
Park Borough        0  
School Name          0  
School Number        0  
School Phone Number  0  
School Address        0  
School City           0  
School State          0  
Bridge Highway Name  300455  
Bridge Highway Direction 300455  
Road Ramp            300485  
Bridge Highway Segment 300485  
Ferry Direction      300697  
Ferry Terminal Name  300696  
Latitude             3540  
Longitude            3540  
Location              3540  
Request_Closing_Time 2164  
dtype: int64
```

```
In [ ]: data['Closed Date'].shape
```

```
Out[ ]: (300698,)
```

```
In [ ]: data.shape
```

```
Out[ ]: (300698, 44)
```

Utilize missing value treatment

Analyze the date column and remove the entries if it has an incorrect timeline

```
In [ ]: data = data.dropna(subset=['Created Date', 'Closed Date', 'Request_Closing_Time'])
```

```
In [ ]: data.isnull().sum()
```

```
Out[ ]: Created Date          0  
Closed Date           0  
Agency                0  
Agency Name            0  
Complaint Type         0  
Descriptor             5909  
Location Type          128  
Incident Zip           507  
Incident Address        44397  
Street Name             44397  
Cross Street 1          47563  
Cross Street 2          47653  
Intersection Street 1   255094  
Intersection Street 2   255180  
Address Type            707  
City                   506  
Landmark               298185  
Facility Type           15  
Status                 0  
Due Date                1  
Resolution Description    0  
Resolution Action Updated Date 39  
Community Board          0  
Borough                 0  
X Coordinate (State Plane) 1432  
Y Coordinate (State Plane) 1432  
Park Facility Name       0  
Park Borough              0  
School Name               0  
School Number              0  
School Phone Number        0  
School Address              0  
School City                 0  
School State                 0  
Bridge Highway Name        298291  
Bridge Highway Direction    298291  
Road Ramp                  298321  
Bridge Highway Segment      298321  
Ferry Direction             298534  
Ferry Terminal Name         298534  
Latitude                   1432  
Longitude                  1432  
Location                   1432  
Request_Closing_Time        0  
dtype: int64
```

```
In [ ]: data.shape
```

```
Out[ ]: (298534, 44)
```

```
In [ ]: #fix those NAN with "unknown city" value instead  
data['City'].fillna('Unknow City', inplace=True)
```

```
In [ ]: data.isnull().sum()
```

```
Out[ ]: Created Date          0  
Closed Date           0  
Agency                0  
Agency Name            0  
Complaint Type         0  
Descriptor             5909  
Location Type          128  
Incident Zip           507  
Incident Address        44397  
Street Name             44397  
Cross Street 1          47563  
Cross Street 2          47653  
Intersection Street 1   255094  
Intersection Street 2   255180  
Address Type            707  
City                   0  
Landmark               298185  
Facility Type           15  
Status                 0  
Due Date                1  
Resolution Description    0  
Resolution Action Updated Date 39  
Community Board          0  
Borough                 0  
X Coordinate (State Plane) 1432  
Y Coordinate (State Plane) 1432  
Park Facility Name       0  
Park Borough              0  
School Name               0  
School Number              0  
School Phone Number        0  
School Address              0  
School City                 0  
School State                 0  
Bridge Highway Name        298291  
Bridge Highway Direction    298291  
Road Ramp                  298321  
Bridge Highway Segment      298321  
Ferry Direction             298534  
Ferry Terminal Name         298534  
Latitude                   1432  
Longitude                  1432  
Location                   1432  
Request_Closing_Time        0  
dtype: int64
```

```
In [ ]: data['City'].value_counts()
```

```
Out[ ]: BROOKLYN          98295  
NEW YORK           65972  
BRONX              40697  
STATEN ISLAND       12338  
JAMAICA             7294  
ASTORIA             6330  
FLUSHING             5970  
RIDGEWOOD            5162  
CORONA               4295  
WOODSIDE              3544  
SOUTH RICHMOND HILL  2774  
OZONE PARK            2755  
EAST ELMHURST         2733  
ELMHURST              2673  
WOODHAVEN             2463  
MASPETH                2461  
LONG ISLAND CITY       2436  
SOUTH OZONE PARK        2173  
RICHMOND HILL           1902  
FRESH MEADOWS           1899  
QUEENS VILLAGE          1814  
MIDDLE VILLAGE          1765  
FOREST HILLS             1688  
JACKSON HEIGHTS          1688  
REGO PARK                1486  
BAYSIDE                  1221  
COLLEGE POINT             1220  
FAR ROCKAWAY              1179  
WHitestone                 1098  
HOLLIS                     1012  
HOWARD BEACH                 931  
ROSEDALE                   922  
SPRINGFIELD GARDENS          883  
SAINT ALBANS                 834  
KEW GARDENS                  771  
ROCKAWAY PARK                 745  
SUNNYSIDE                      723  
Astoria                      716  
LITTLE NECK                      559  
OAKLAND GARDENS                  551  
Unknow City                      506  
CAMBRIA HEIGHTS                  477  
BELLEROSE                      375  
GLEN OAKS                        306  
ARVERNE                         220  
FLORAL PARK                      152  
Long Island City                    134  
Woodside                          120  
NEW HYDE PARK                      98  
CENTRAL PARK                      97  
QUEENS                           32  
BREEZY POINT                      30  
East Elmhurst                      14  
Howard Beach                       1  
Name: City, dtype: int64
```

```
In [ ]: complaint_Type_City = pd.DataFrame({'Count':data.groupby(['Complaint Type', 'City']).size()}).reset_index()
complaint_Type_City
```

Out[]:

	Complaint Type	City	Count
0	Agency Issues	Unknow City	6
1	Animal Abuse	ARVERNE	38
2	Animal Abuse	ASTORIA	125
3	Animal Abuse	BAYSIDE	37
4	Animal Abuse	BELLEROSE	7
5	Animal Abuse	BREEZY POINT	2
6	Animal Abuse	BRONX	1415
7	Animal Abuse	BROOKLYN	2394
8	Animal Abuse	CAMBRIA HEIGHTS	11
9	Animal Abuse	COLLEGE POINT	28
10	Animal Abuse	CORONA	61
11	Animal Abuse	EAST ELMHURST	59
12	Animal Abuse	ELMHURST	38
13	Animal Abuse	FAR ROCKAWAY	89
14	Animal Abuse	FLORAL PARK	2
15	Animal Abuse	FLUSHING	143
16	Animal Abuse	FOREST HILLS	45
17	Animal Abuse	FRESH MEADOWS	45
18	Animal Abuse	GLEN OAKS	5
19	Animal Abuse	HOLLIS	33
20	Animal Abuse	HOWARD BEACH	31
21	Animal Abuse	JACKSON HEIGHTS	42
22	Animal Abuse	JAMAICA	229
23	Animal Abuse	KEW GARDENS	19
24	Animal Abuse	LITTLE NECK	15
25	Animal Abuse	LONG ISLAND CITY	30
26	Animal Abuse	MASPETH	36
27	Animal Abuse	MIDDLE VILLAGE	22
28	Animal Abuse	NEW HYDE PARK	1
29	Animal Abuse	NEW YORK	1525
30	Animal Abuse	OAKLAND GARDENS	19
31	Animal Abuse	OZONE PARK	48
32	Animal Abuse	QUEENS VILLAGE	66
33	Animal Abuse	REGO PARK	26
34	Animal Abuse	RICHMOND HILL	32
35	Animal Abuse	RIDGEWOOD	117
36	Animal Abuse	ROCKAWAY PARK	30

	Complaint Type	City	Count
37	Animal Abuse	ROSEDALE	33
38	Animal Abuse	SAINT ALBANS	30
39	Animal Abuse	SOUTH OZONE PARK	55
40	Animal Abuse	SOUTH RICHMOND HILL	26
41	Animal Abuse	SPRINGFIELD GARDENS	24
42	Animal Abuse	STATEN ISLAND	557
43	Animal Abuse	SUNNYSIDE	35
44	Animal Abuse	Unknow City	1
45	Animal Abuse	WHitestone	28
46	Animal Abuse	WOODHAVEN	45
47	Animal Abuse	WOODSIDE	69
48	Animal in a Park	QUEENS	1
49	Bike/Roller/Skate Chronic	ASTORIA	15
50	Bike/Roller/Skate Chronic	BELLEROSE	1
51	Bike/Roller/Skate Chronic	BRONX	20
52	Bike/Roller/Skate Chronic	BROOKLYN	111
53	Bike/Roller/Skate Chronic	EAST ELMHURST	1
54	Bike/Roller/Skate Chronic	ELMHURST	2
55	Bike/Roller/Skate Chronic	FLUSHING	3
56	Bike/Roller/Skate Chronic	FOREST HILLS	5
57	Bike/Roller/Skate Chronic	HOWARD BEACH	1
58	Bike/Roller/Skate Chronic	JACKSON HEIGHTS	2
59	Bike/Roller/Skate Chronic	JAMAICA	2
60	Bike/Roller/Skate Chronic	LONG ISLAND CITY	3
61	Bike/Roller/Skate Chronic	MASPETH	1
62	Bike/Roller/Skate Chronic	MIDDLE VILLAGE	1
63	Bike/Roller/Skate Chronic	NEW YORK	225
64	Bike/Roller/Skate Chronic	OAKLAND GARDENS	2
65	Bike/Roller/Skate Chronic	OZONE PARK	1
66	Bike/Roller/Skate Chronic	RIDGEWOOD	3
67	Bike/Roller/Skate Chronic	ROSEDALE	2
68	Bike/Roller/Skate Chronic	SOUTH OZONE PARK	1
69	Bike/Roller/Skate Chronic	SOUTH RICHMOND HILL	1
70	Bike/Roller/Skate Chronic	STATEN ISLAND	7
71	Bike/Roller/Skate Chronic	SUNNYSIDE	2
72	Bike/Roller/Skate Chronic	Unknow City	2
73	Bike/Roller/Skate Chronic	WHitestone	4
74	Bike/Roller/Skate Chronic	WOODHAVEN	2

	Complaint Type	City	Count
75	Bike/Roller/Skate Chronic	WOODSIDE	4
76	Blocked Driveway	ARVERNE	35
77	Blocked Driveway	ASTORIA	2618
78	Blocked Driveway	Astoria	116
79	Blocked Driveway	BAYSIDE	377
80	Blocked Driveway	BELLEROSE	95
81	Blocked Driveway	BREEZY POINT	3
82	Blocked Driveway	BRONX	12754
83	Blocked Driveway	BROOKLYN	28147
84	Blocked Driveway	CAMBRIA HEIGHTS	147
85	Blocked Driveway	COLLEGE POINT	435
86	Blocked Driveway	CORONA	2761
87	Blocked Driveway	EAST ELMHURST	1408
88	Blocked Driveway	ELMHURST	1446
89	Blocked Driveway	FAR ROCKAWAY	284
90	Blocked Driveway	FLORAL PARK	20
91	Blocked Driveway	FLUSHING	2794
92	Blocked Driveway	FOREST HILLS	663
93	Blocked Driveway	FRESH MEADOWS	503
94	Blocked Driveway	GLEN OAKS	30
95	Blocked Driveway	HOLLIS	342
96	Blocked Driveway	HOWARD BEACH	167
97	Blocked Driveway	Howard Beach	1
98	Blocked Driveway	JACKSON HEIGHTS	568
99	Blocked Driveway	JAMAICA	2817
100	Blocked Driveway	KEW GARDENS	313
101	Blocked Driveway	LITTLE NECK	121
102	Blocked Driveway	LONG ISLAND CITY	772
103	Blocked Driveway	Long Island City	34
104	Blocked Driveway	MASPETH	732
105	Blocked Driveway	MIDDLE VILLAGE	457
106	Blocked Driveway	NEW HYDE PARK	53
107	Blocked Driveway	NEW YORK	2070
108	Blocked Driveway	OAKLAND GARDENS	132
109	Blocked Driveway	OZONE PARK	1259
110	Blocked Driveway	QUEENS	2
111	Blocked Driveway	QUEENS VILLAGE	585
112	Blocked Driveway	REGO PARK	611

	Complaint Type	City	Count
113	Blocked Driveway	RICHMOND HILL	871
114	Blocked Driveway	RIDGEWOOD	1693
115	Blocked Driveway	ROCKAWAY PARK	70
116	Blocked Driveway	ROSEDALE	211
117	Blocked Driveway	SAINT ALBANS	244
118	Blocked Driveway	SOUTH OZONE PARK	942
119	Blocked Driveway	SOUTH RICHMOND HILL	1548
120	Blocked Driveway	SPRINGFIELD GARDENS	262
121	Blocked Driveway	STATEN ISLAND	2142
122	Blocked Driveway	SUNNYSIDE	206
123	Blocked Driveway	Unknow City	58
124	Blocked Driveway	WHitestone	208
125	Blocked Driveway	WOODHAVEN	1059
126	Blocked Driveway	WOODSIDE	1613
127	Blocked Driveway	Woodside	11
128	Derelict Vehicle	ARVERNE	27
129	Derelict Vehicle	ASTORIA	351
130	Derelict Vehicle	Astoria	12
131	Derelict Vehicle	BAYSIDE	198
132	Derelict Vehicle	BELLEROSE	89
133	Derelict Vehicle	BREEZY POINT	3
134	Derelict Vehicle	BRONX	1952
135	Derelict Vehicle	BROOKLYN	5179
136	Derelict Vehicle	CAMBRIA HEIGHTS	115
137	Derelict Vehicle	COLLEGE POINT	184
138	Derelict Vehicle	CORONA	57
139	Derelict Vehicle	EAST ELMHURST	113
140	Derelict Vehicle	ELMHURST	78
141	Derelict Vehicle	East Elmhurst	1
142	Derelict Vehicle	FAR ROCKAWAY	187
143	Derelict Vehicle	FLORAL PARK	56
144	Derelict Vehicle	FLUSHING	440
145	Derelict Vehicle	FOREST HILLS	52
146	Derelict Vehicle	FRESH MEADOWS	291
147	Derelict Vehicle	GLEN OAKS	49
148	Derelict Vehicle	HOLLIS	143
149	Derelict Vehicle	HOWARD BEACH	138
150	Derelict Vehicle	JACKSON HEIGHTS	29

	Complaint Type	City	Count
151	Derelict Vehicle	JAMAICA	953
152	Derelict Vehicle	KEW GARDENS	14
153	Derelict Vehicle	LITTLE NECK	61
154	Derelict Vehicle	LONG ISLAND CITY	195
155	Derelict Vehicle	Long Island City	4
156	Derelict Vehicle	MASPETH	434
157	Derelict Vehicle	MIDDLE VILLAGE	296
158	Derelict Vehicle	NEW HYDE PARK	14
159	Derelict Vehicle	NEW YORK	537
160	Derelict Vehicle	OAKLAND GARDENS	86
161	Derelict Vehicle	OZONE PARK	420
162	Derelict Vehicle	QUEENS	1
163	Derelict Vehicle	QUEENS VILLAGE	370
164	Derelict Vehicle	REGO PARK	81
165	Derelict Vehicle	RICHMOND HILL	166
166	Derelict Vehicle	RIDGEWOOD	330
167	Derelict Vehicle	ROCKAWAY PARK	9
168	Derelict Vehicle	ROSEDALE	208
169	Derelict Vehicle	SAINT ALBANS	202
170	Derelict Vehicle	SOUTH OZONE PARK	358
171	Derelict Vehicle	SOUTH RICHMOND HILL	289
172	Derelict Vehicle	SPRINGFIELD GARDENS	210
173	Derelict Vehicle	STATEN ISLAND	1766
174	Derelict Vehicle	SUNNYSIDE	10
175	Derelict Vehicle	Unknow City	46
176	Derelict Vehicle	WHitestone	227
177	Derelict Vehicle	WOODHAVEN	308
178	Derelict Vehicle	WOODSIDE	247
179	Derelict Vehicle	Woodside	2
180	Disorderly Youth	ARVERNE	2
181	Disorderly Youth	ASTORIA	3
182	Disorderly Youth	BAYSIDE	1
183	Disorderly Youth	BELLEROSE	2
184	Disorderly Youth	BRONX	63
185	Disorderly Youth	BROOKLYN	72
186	Disorderly Youth	COLLEGE POINT	1
187	Disorderly Youth	CORONA	6
188	Disorderly Youth	EAST ELMHURST	1

	Complaint Type	City	Count
189	Disorderly Youth	ELMHURST	2
190	Disorderly Youth	FAR ROCKAWAY	1
191	Disorderly Youth	FLORAL PARK	1
192	Disorderly Youth	FLUSHING	2
193	Disorderly Youth	FOREST HILLS	1
194	Disorderly Youth	HOLLIS	1
195	Disorderly Youth	HOWARD BEACH	1
196	Disorderly Youth	JAMAICA	8
197	Disorderly Youth	LITTLE NECK	2
198	Disorderly Youth	LONG ISLAND CITY	1
199	Disorderly Youth	MASPETH	2
200	Disorderly Youth	NEW YORK	69
201	Disorderly Youth	OAKLAND GARDENS	1
202	Disorderly Youth	OZONE PARK	4
203	Disorderly Youth	RIDGEWOOD	3
204	Disorderly Youth	ROCKAWAY PARK	4
205	Disorderly Youth	SAINT ALBANS	1
206	Disorderly Youth	SOUTH OZONE PARK	2
207	Disorderly Youth	SOUTH RICHMOND HILL	2
208	Disorderly Youth	STATEN ISLAND	23
209	Disorderly Youth	SUNNYSIDE	2
210	Disorderly Youth	WHitestone	1
211	Disorderly Youth	WOODSIDE	1
212	Drinking	ARVERNE	1
213	Drinking	ASTORIA	35
214	Drinking	BAYSIDE	1
215	Drinking	BELLEROSE	1
216	Drinking	BREEZY POINT	1
217	Drinking	BRONX	188
218	Drinking	BROOKLYN	257
219	Drinking	CORONA	33
220	Drinking	EAST ELMHURST	9
221	Drinking	ELMHURST	13
222	Drinking	FAR ROCKAWAY	4
223	Drinking	FLORAL PARK	1
224	Drinking	FLUSHING	40
225	Drinking	FOREST HILLS	1
226	Drinking	FRESH MEADOWS	2

	Complaint Type	City	Count
227	Drinking	HOLLIS	3
228	Drinking	HOWARD BEACH	4
229	Drinking	JACKSON HEIGHTS	9
230	Drinking	JAMAICA	34
231	Drinking	KEW GARDENS	1
232	Drinking	LITTLE NECK	1
233	Drinking	LONG ISLAND CITY	7
234	Drinking	MASPETH	9
235	Drinking	MIDDLE VILLAGE	2
236	Drinking	NEW YORK	295
237	Drinking	OAKLAND GARDENS	1
238	Drinking	OZONE PARK	19
239	Drinking	QUEENS VILLAGE	5
240	Drinking	REGO PARK	4
241	Drinking	RICHMOND HILL	9
242	Drinking	RIDGEWOOD	10
243	Drinking	ROCKAWAY PARK	20
244	Drinking	ROSEDALE	2
245	Drinking	SAINT ALBANS	3
246	Drinking	SOUTH OZONE PARK	13
247	Drinking	SOUTH RICHMOND HILL	23
248	Drinking	SPRINGFIELD GARDENS	6
249	Drinking	STATEN ISLAND	175
250	Drinking	SUNNYSIDE	10
251	Drinking	Unknow City	3
252	Drinking	WHitestone	2
253	Drinking	WOODHAVEN	3
254	Drinking	WOODSIDE	15
255	Graffiti	ARVERNE	1
256	Graffiti	ASTORIA	4
257	Graffiti	BAYSIDE	3
258	Graffiti	BRONX	9
259	Graffiti	BROOKLYN	43
260	Graffiti	COLLEGE POINT	1
261	Graffiti	CORONA	2
262	Graffiti	EAST ELMHURST	3
263	Graffiti	FLUSHING	4
264	Graffiti	FOREST HILLS	3

	Complaint Type	City	Count
265	Graffiti	JAMAICA	3
266	Graffiti	LONG ISLAND CITY	2
267	Graffiti	NEW YORK	22
268	Graffiti	QUEENS VILLAGE	1
269	Graffiti	REGO PARK	1
270	Graffiti	RICHMOND HILL	1
271	Graffiti	RIDGEWOOD	2
272	Graffiti	ROSEDALE	1
273	Graffiti	STATEN ISLAND	2
274	Graffiti	SUNNYSIDE	1
275	Graffiti	WHitestone	1
276	Graffiti	WOODSIDE	3
277	Homeless Encampment	ARVERNE	4
278	Homeless Encampment	ASTORIA	32
279	Homeless Encampment	BAYSIDE	2
280	Homeless Encampment	BELLEROSE	1
281	Homeless Encampment	BRONX	247
282	Homeless Encampment	BROOKLYN	857
283	Homeless Encampment	CAMBRIA HEIGHTS	5
284	Homeless Encampment	COLLEGE POINT	3
285	Homeless Encampment	CORONA	19
286	Homeless Encampment	EAST ELMHURST	2
287	Homeless Encampment	ELMHURST	32
288	Homeless Encampment	FAR ROCKAWAY	14
289	Homeless Encampment	FLUSHING	26
290	Homeless Encampment	FOREST HILLS	18
291	Homeless Encampment	FRESH MEADOWS	5
292	Homeless Encampment	HOLLIS	9
293	Homeless Encampment	HOWARD BEACH	3
294	Homeless Encampment	JACKSON HEIGHTS	11
295	Homeless Encampment	JAMAICA	79
296	Homeless Encampment	KEW GARDENS	5
297	Homeless Encampment	LONG ISLAND CITY	10
298	Homeless Encampment	MASPETH	10
299	Homeless Encampment	MIDDLE VILLAGE	5
300	Homeless Encampment	NEW YORK	2775
301	Homeless Encampment	OAKLAND GARDENS	1
302	Homeless Encampment	OZONE PARK	6

	Complaint Type	City	Count
303	Homeless Encampment	QUEENS	2
304	Homeless Encampment	QUEENS VILLAGE	15
305	Homeless Encampment	REGO PARK	6
306	Homeless Encampment	RICHMOND HILL	28
307	Homeless Encampment	RIDGEWOOD	23
308	Homeless Encampment	ROCKAWAY PARK	4
309	Homeless Encampment	ROSEDALE	4
310	Homeless Encampment	SAINT ALBANS	8
311	Homeless Encampment	SOUTH OZONE PARK	4
312	Homeless Encampment	SOUTH RICHMOND HILL	11
313	Homeless Encampment	SPRINGFIELD GARDENS	5
314	Homeless Encampment	STATEN ISLAND	71
315	Homeless Encampment	SUNNYSIDE	11
316	Homeless Encampment	Unknow City	1
317	Homeless Encampment	WOODHAVEN	9
318	Homeless Encampment	WOODSIDE	33
319	Illegal Fireworks	ASTORIA	4
320	Illegal Fireworks	BELLEROSE	1
321	Illegal Fireworks	BRONX	24
322	Illegal Fireworks	BROOKLYN	61
323	Illegal Fireworks	CAMBRIA HEIGHTS	1
324	Illegal Fireworks	ELMHURST	1
325	Illegal Fireworks	FLUSHING	2
326	Illegal Fireworks	FOREST HILLS	1
327	Illegal Fireworks	HOWARD BEACH	3
328	Illegal Fireworks	JACKSON HEIGHTS	1
329	Illegal Fireworks	JAMAICA	4
330	Illegal Fireworks	MASPETH	1
331	Illegal Fireworks	NEW YORK	36
332	Illegal Fireworks	OZONE PARK	1
333	Illegal Fireworks	QUEENS VILLAGE	5
334	Illegal Fireworks	RICHMOND HILL	4
335	Illegal Fireworks	RIDGEWOOD	2
336	Illegal Fireworks	SOUTH OZONE PARK	1
337	Illegal Fireworks	SOUTH RICHMOND HILL	2
338	Illegal Fireworks	SPRINGFIELD GARDENS	1
339	Illegal Fireworks	STATEN ISLAND	10
340	Illegal Fireworks	WHITESTONE	1

	Complaint Type	City	Count
341	Illegal Fireworks	WOODSIDE	1
342	Illegal Parking	ARVERNE	58
343	Illegal Parking	ASTORIA	1068
344	Illegal Parking	Astoria	213
345	Illegal Parking	BAYSIDE	514
346	Illegal Parking	BELLEROSE	106
347	Illegal Parking	BREEZY POINT	15
348	Illegal Parking	BRONX	7859
349	Illegal Parking	BROOKLYN	27461
350	Illegal Parking	CAMBRIA HEIGHTS	76
351	Illegal Parking	CENTRAL PARK	2
352	Illegal Parking	COLLEGE POINT	352
353	Illegal Parking	CORONA	660
354	Illegal Parking	EAST ELMHURST	876
355	Illegal Parking	ELMHURST	621
356	Illegal Parking	East Elmhurst	13
357	Illegal Parking	FAR ROCKAWAY	295
358	Illegal Parking	FLORAL PARK	64
359	Illegal Parking	FLUSHING	1829
360	Illegal Parking	FOREST HILLS	505
361	Illegal Parking	FRESH MEADOWS	885
362	Illegal Parking	GLEN OAKS	74
363	Illegal Parking	HOLLIS	151
364	Illegal Parking	HOWARD BEACH	281
365	Illegal Parking	JACKSON HEIGHTS	183
366	Illegal Parking	JAMAICA	1421
367	Illegal Parking	KEW GARDENS	212
368	Illegal Parking	LITTLE NECK	249
369	Illegal Parking	LONG ISLAND CITY	794
370	Illegal Parking	Long Island City	52
371	Illegal Parking	MASPETH	976
372	Illegal Parking	MIDDLE VILLAGE	877
373	Illegal Parking	NEW HYDE PARK	28
374	Illegal Parking	NEW YORK	12125
375	Illegal Parking	OAKLAND GARDENS	263
376	Illegal Parking	OZONE PARK	619
377	Illegal Parking	QUEENS	8
378	Illegal Parking	QUEENS VILLAGE	578

	Complaint Type	City	Count
379	Illegal Parking	REGO PARK	537
380	Illegal Parking	RICHMOND HILL	394
381	Illegal Parking	RIDGEWOOD	1842
382	Illegal Parking	ROCKAWAY PARK	317
383	Illegal Parking	ROSEDALE	277
384	Illegal Parking	SAINT ALBANS	181
385	Illegal Parking	SOUTH OZONE PARK	494
386	Illegal Parking	SOUTH RICHMOND HILL	462
387	Illegal Parking	SPRINGFIELD GARDENS	238
388	Illegal Parking	STATEN ISLAND	4886
389	Illegal Parking	SUNNYSIDE	122
390	Illegal Parking	Unknow City	221
391	Illegal Parking	WHitestone	525
392	Illegal Parking	WOODHAVEN	682
393	Illegal Parking	WOODSIDE	891
394	Illegal Parking	Woodside	100
395	Noise - Commercial	ARVERNE	2
396	Noise - Commercial	ASTORIA	1293
397	Noise - Commercial	Astoria	261
398	Noise - Commercial	BAYSIDE	40
399	Noise - Commercial	BELLEROSE	37
400	Noise - Commercial	BREEZY POINT	4
401	Noise - Commercial	BRONX	2433
402	Noise - Commercial	BROOKLYN	11458
403	Noise - Commercial	CAMBRIA HEIGHTS	12
404	Noise - Commercial	COLLEGE POINT	35
405	Noise - Commercial	CORONA	248
406	Noise - Commercial	EAST ELMHURST	35
407	Noise - Commercial	ELMHURST	81
408	Noise - Commercial	FAR ROCKAWAY	48
409	Noise - Commercial	FLORAL PARK	3
410	Noise - Commercial	FLUSHING	175
411	Noise - Commercial	FOREST HILLS	141
412	Noise - Commercial	FRESH MEADOWS	14
413	Noise - Commercial	GLEN OAKS	78
414	Noise - Commercial	HOLLIS	25
415	Noise - Commercial	HOWARD BEACH	258
416	Noise - Commercial	JACKSON HEIGHTS	463

	Complaint Type	City	Count
417	Noise - Commercial	JAMAICA	429
418	Noise - Commercial	KEW GARDENS	164
419	Noise - Commercial	LITTLE NECK	76
420	Noise - Commercial	LONG ISLAND CITY	230
421	Noise - Commercial	Long Island City	18
422	Noise - Commercial	MASPETH	52
423	Noise - Commercial	MIDDLE VILLAGE	10
424	Noise - Commercial	NEW YORK	14544
425	Noise - Commercial	OZONE PARK	115
426	Noise - Commercial	QUEENS	6
427	Noise - Commercial	QUEENS VILLAGE	43
428	Noise - Commercial	REGO PARK	79
429	Noise - Commercial	RICHMOND HILL	216
430	Noise - Commercial	RIDGEWOOD	398
431	Noise - Commercial	ROCKAWAY PARK	63
432	Noise - Commercial	ROSEDALE	25
433	Noise - Commercial	SAINT ALBANS	29
434	Noise - Commercial	SOUTH OZONE PARK	70
435	Noise - Commercial	SOUTH RICHMOND HILL	198
436	Noise - Commercial	SPRINGFIELD GARDENS	36
437	Noise - Commercial	STATEN ISLAND	677
438	Noise - Commercial	SUNNYSIDE	161
439	Noise - Commercial	Unknow City	62
440	Noise - Commercial	WHitestone	16
441	Noise - Commercial	WOODHAVEN	175
442	Noise - Commercial	WOODSIDE	209
443	Noise - Commercial	Woodside	2
444	Noise - House of Worship	ARVERNE	11
445	Noise - House of Worship	ASTORIA	19
446	Noise - House of Worship	BAYSIDE	2
447	Noise - House of Worship	BELLEROSE	1
448	Noise - House of Worship	BRONX	79
449	Noise - House of Worship	BROOKLYN	340
450	Noise - House of Worship	CAMBRIA HEIGHTS	2
451	Noise - House of Worship	CORONA	3
452	Noise - House of Worship	EAST ELMHURST	18
453	Noise - House of Worship	ELMHURST	5
454	Noise - House of Worship	FAR ROCKAWAY	1

	Complaint Type	City	Count
455	Noise - House of Worship	FLUSHING	5
456	Noise - House of Worship	FOREST HILLS	1
457	Noise - House of Worship	HOLLIS	187
458	Noise - House of Worship	HOWARD BEACH	1
459	Noise - House of Worship	JACKSON HEIGHTS	2
460	Noise - House of Worship	JAMAICA	13
461	Noise - House of Worship	KEW GARDENS	1
462	Noise - House of Worship	MASPETH	2
463	Noise - House of Worship	NEW YORK	194
464	Noise - House of Worship	OZONE PARK	3
465	Noise - House of Worship	QUEENS	1
466	Noise - House of Worship	QUEENS VILLAGE	2
467	Noise - House of Worship	REGO PARK	1
468	Noise - House of Worship	RIDGEWOOD	2
469	Noise - House of Worship	ROSEDALE	2
470	Noise - House of Worship	SAINT ALBANS	1
471	Noise - House of Worship	SOUTH OZONE PARK	3
472	Noise - House of Worship	SOUTH RICHMOND HILL	3
473	Noise - House of Worship	SPRINGFIELD GARDENS	1
474	Noise - House of Worship	STATEN ISLAND	17
475	Noise - House of Worship	WOODHAVEN	3
476	Noise - House of Worship	WOODSIDE	3
477	Noise - Park	ARVERNE	2
478	Noise - Park	ASTORIA	61
479	Noise - Park	BAYSIDE	4
480	Noise - Park	BELLEROSE	1
481	Noise - Park	BRONX	547
482	Noise - Park	BROOKLYN	1555
483	Noise - Park	COLLEGE POINT	2
484	Noise - Park	CORONA	24
485	Noise - Park	EAST ELMHURST	5
486	Noise - Park	ELMHURST	34
487	Noise - Park	FAR ROCKAWAY	23
488	Noise - Park	FLUSHING	58
489	Noise - Park	FOREST HILLS	20
490	Noise - Park	FRESH MEADOWS	8
491	Noise - Park	GLEN OAKS	37
492	Noise - Park	HOLLIS	17

	Complaint Type	City	Count
493	Noise - Park	HOWARD BEACH	2
494	Noise - Park	JACKSON HEIGHTS	8
495	Noise - Park	JAMAICA	38
496	Noise - Park	LITTLE NECK	2
497	Noise - Park	LONG ISLAND CITY	54
498	Noise - Park	MASPETH	3
499	Noise - Park	MIDDLE VILLAGE	4
500	Noise - Park	NEW YORK	1210
501	Noise - Park	OAKLAND GARDENS	14
502	Noise - Park	OZONE PARK	18
503	Noise - Park	QUEENS VILLAGE	2
504	Noise - Park	REGO PARK	22
505	Noise - Park	RICHMOND HILL	4
506	Noise - Park	RIDGEWOOD	28
507	Noise - Park	ROCKAWAY PARK	2
508	Noise - Park	ROSEDALE	69
509	Noise - Park	SAINT ALBANS	1
510	Noise - Park	SOUTH OZONE PARK	4
511	Noise - Park	SOUTH RICHMOND HILL	2
512	Noise - Park	SPRINGFIELD GARDENS	1
513	Noise - Park	STATEN ISLAND	67
514	Noise - Park	SUNNYSIDE	15
515	Noise - Park	Unknow City	7
516	Noise - Park	WHitestone	6
517	Noise - Park	WOODHAVEN	3
518	Noise - Park	WOODSIDE	38
519	Noise - Street/Sidewalk	ARVERNE	29
520	Noise - Street/Sidewalk	ASTORIA	386
521	Noise - Street/Sidewalk	Astoria	114
522	Noise - Street/Sidewalk	BAYSIDE	15
523	Noise - Street/Sidewalk	BELLEROSE	13
524	Noise - Street/Sidewalk	BREEZY POINT	1
525	Noise - Street/Sidewalk	BRONX	8890
526	Noise - Street/Sidewalk	BROOKLYN	13354
527	Noise - Street/Sidewalk	CAMBRIA HEIGHTS	25
528	Noise - Street/Sidewalk	CENTRAL PARK	95
529	Noise - Street/Sidewalk	COLLEGE POINT	33
530	Noise - Street/Sidewalk	CORONA	238

	Complaint Type	City	Count
531	Noise - Street/Sidewalk	EAST ELMHURST	107
532	Noise - Street/Sidewalk	ELMHURST	224
533	Noise - Street/Sidewalk	FAR ROCKAWAY	136
534	Noise - Street/Sidewalk	FLORAL PARK	3
535	Noise - Street/Sidewalk	FLUSHING	225
536	Noise - Street/Sidewalk	FOREST HILLS	95
537	Noise - Street/Sidewalk	FRESH MEADOWS	42
538	Noise - Street/Sidewalk	GLEN OAKS	6
539	Noise - Street/Sidewalk	HOLLIS	41
540	Noise - Street/Sidewalk	HOWARD BEACH	21
541	Noise - Street/Sidewalk	JACKSON HEIGHTS	217
542	Noise - Street/Sidewalk	JAMAICA	339
543	Noise - Street/Sidewalk	KEW GARDENS	10
544	Noise - Street/Sidewalk	LITTLE NECK	8
545	Noise - Street/Sidewalk	LONG ISLAND CITY	123
546	Noise - Street/Sidewalk	Long Island City	26
547	Noise - Street/Sidewalk	MASPETH	121
548	Noise - Street/Sidewalk	MIDDLE VILLAGE	37
549	Noise - Street/Sidewalk	NEW YORK	20426
550	Noise - Street/Sidewalk	OAKLAND GARDENS	19
551	Noise - Street/Sidewalk	OZONE PARK	137
552	Noise - Street/Sidewalk	QUEENS	6
553	Noise - Street/Sidewalk	QUEENS VILLAGE	66
554	Noise - Street/Sidewalk	REGO PARK	57
555	Noise - Street/Sidewalk	RICHMOND HILL	87
556	Noise - Street/Sidewalk	RIDGEWOOD	433
557	Noise - Street/Sidewalk	ROCKAWAY PARK	189
558	Noise - Street/Sidewalk	ROSEDALE	24
559	Noise - Street/Sidewalk	SAINT ALBANS	79
560	Noise - Street/Sidewalk	SOUTH OZONE PARK	105
561	Noise - Street/Sidewalk	SOUTH RICHMOND HILL	91
562	Noise - Street/Sidewalk	SPRINGFIELD GARDENS	38
563	Noise - Street/Sidewalk	STATEN ISLAND	816
564	Noise - Street/Sidewalk	SUNNYSIDE	65
565	Noise - Street/Sidewalk	Unknow City	90
566	Noise - Street/Sidewalk	WHitestone	33
567	Noise - Street/Sidewalk	WOODHAVEN	86
568	Noise - Street/Sidewalk	WOODSIDE	250

	Complaint Type	City	Count
569	Noise - Street/Sidewalk	Woodside	5
570	Noise - Vehicle	ARVERNE	7
571	Noise - Vehicle	ASTORIA	204
572	Noise - Vehicle	BAYSIDE	16
573	Noise - Vehicle	BELLEROSE	10
574	Noise - Vehicle	BREEZY POINT	1
575	Noise - Vehicle	BRONX	3396
576	Noise - Vehicle	BROOKLYN	5176
577	Noise - Vehicle	CAMBRIA HEIGHTS	77
578	Noise - Vehicle	COLLEGE POINT	131
579	Noise - Vehicle	CORONA	100
580	Noise - Vehicle	EAST ELMHURST	61
581	Noise - Vehicle	ELMHURST	47
582	Noise - Vehicle	FAR ROCKAWAY	77
583	Noise - Vehicle	FLORAL PARK	2
584	Noise - Vehicle	FLUSHING	129
585	Noise - Vehicle	FOREST HILLS	57
586	Noise - Vehicle	FRESH MEADOWS	88
587	Noise - Vehicle	GLEN OAKS	4
588	Noise - Vehicle	HOLLIS	47
589	Noise - Vehicle	HOWARD BEACH	5
590	Noise - Vehicle	JACKSON HEIGHTS	58
591	Noise - Vehicle	JAMAICA	302
592	Noise - Vehicle	KEW GARDENS	18
593	Noise - Vehicle	LITTLE NECK	5
594	Noise - Vehicle	LONG ISLAND CITY	107
595	Noise - Vehicle	MASPETH	19
596	Noise - Vehicle	MIDDLE VILLAGE	42
597	Noise - Vehicle	NEW HYDE PARK	2
598	Noise - Vehicle	NEW YORK	5484
599	Noise - Vehicle	OAKLAND GARDENS	5
600	Noise - Vehicle	OZONE PARK	71
601	Noise - Vehicle	QUEENS	2
602	Noise - Vehicle	QUEENS VILLAGE	41
603	Noise - Vehicle	REGO PARK	43
604	Noise - Vehicle	RICHMOND HILL	64
605	Noise - Vehicle	RIDGEWOOD	217
606	Noise - Vehicle	ROCKAWAY PARK	27

	Complaint Type	City	Count
607	Noise - Vehicle	ROSEDALE	25
608	Noise - Vehicle	SAINT ALBANS	41
609	Noise - Vehicle	SOUTH OZONE PARK	85
610	Noise - Vehicle	SOUTH RICHMOND HILL	81
611	Noise - Vehicle	SPRINGFIELD GARDENS	42
612	Noise - Vehicle	STATEN ISLAND	356
613	Noise - Vehicle	SUNNYSIDE	48
614	Noise - Vehicle	Unknow City	6
615	Noise - Vehicle	WHitestone	28
616	Noise - Vehicle	WOODHAVEN	74
617	Noise - Vehicle	WOODSIDE	105
618	Panhandling	ARVERNE	1
619	Panhandling	ASTORIA	1
620	Panhandling	BELLEROSE	1
621	Panhandling	BRONX	19
622	Panhandling	BROOKLYN	49
623	Panhandling	CORONA	1
624	Panhandling	ELMHURST	3
625	Panhandling	FLUSHING	2
626	Panhandling	FOREST HILLS	5
627	Panhandling	FRESH MEADOWS	1
628	Panhandling	HOWARD BEACH	1
629	Panhandling	JACKSON HEIGHTS	1
630	Panhandling	JAMAICA	3
631	Panhandling	LONG ISLAND CITY	2
632	Panhandling	NEW YORK	193
633	Panhandling	OZONE PARK	7
634	Panhandling	QUEENS VILLAGE	1
635	Panhandling	SPRINGFIELD GARDENS	2
636	Panhandling	STATEN ISLAND	12
637	Posting Advertisement	ASTORIA	1
638	Posting Advertisement	BELLEROSE	1
639	Posting Advertisement	BRONX	17
640	Posting Advertisement	BROOKLYN	45
641	Posting Advertisement	CORONA	1
642	Posting Advertisement	EAST ELMHURST	1
643	Posting Advertisement	ELMHURST	1
644	Posting Advertisement	FLUSHING	1

	Complaint Type	City	Count
645	Posting Advertisement	FOREST HILLS	3
646	Posting Advertisement	JACKSON HEIGHTS	1
647	Posting Advertisement	JAMAICA	7
648	Posting Advertisement	LITTLE NECK	1
649	Posting Advertisement	LONG ISLAND CITY	1
650	Posting Advertisement	NEW YORK	41
651	Posting Advertisement	OZONE PARK	3
652	Posting Advertisement	QUEENS VILLAGE	1
653	Posting Advertisement	RICHMOND HILL	1
654	Posting Advertisement	RIDGEWOOD	1
655	Posting Advertisement	SOUTH OZONE PARK	1
656	Posting Advertisement	SPRINGFIELD GARDENS	2
657	Posting Advertisement	STATEN ISLAND	515
658	Posting Advertisement	SUNNYSIDE	2
659	Squeegee	NEW YORK	4
660	Traffic	ASTORIA	47
661	Traffic	BAYSIDE	9
662	Traffic	BELLEROSE	7
663	Traffic	BRONX	355
664	Traffic	BROOKLYN	1085
665	Traffic	CAMBRIA HEIGHTS	6
666	Traffic	COLLEGE POINT	14
667	Traffic	CORONA	12
668	Traffic	EAST ELMHURST	20
669	Traffic	ELMHURST	14
670	Traffic	FAR ROCKAWAY	10
671	Traffic	FLUSHING	47
672	Traffic	FOREST HILLS	60
673	Traffic	FRESH MEADOWS	13
674	Traffic	GLEN OAKS	3
675	Traffic	HOLLIS	11
676	Traffic	HOWARD BEACH	9
677	Traffic	JACKSON HEIGHTS	13
678	Traffic	JAMAICA	560
679	Traffic	KEW GARDENS	10
680	Traffic	LITTLE NECK	17
681	Traffic	LONG ISLAND CITY	72
682	Traffic	MASPETH	55

	Complaint Type	City	Count
683	Traffic	MIDDLE VILLAGE	12
684	Traffic	NEW YORK	1548
685	Traffic	OAKLAND GARDENS	6
686	Traffic	OZONE PARK	19
687	Traffic	QUEENS	2
688	Traffic	QUEENS VILLAGE	26
689	Traffic	REGO PARK	14
690	Traffic	RICHMOND HILL	7
691	Traffic	RIDGEWOOD	42
692	Traffic	ROCKAWAY PARK	7
693	Traffic	ROSEDALE	23
694	Traffic	SAINT ALBANS	11
695	Traffic	SOUTH OZONE PARK	28
696	Traffic	SOUTH RICHMOND HILL	11
697	Traffic	SPRINGFIELD GARDENS	11
698	Traffic	STATEN ISLAND	200
699	Traffic	SUNNYSIDE	16
700	Traffic	Unknow City	2
701	Traffic	WHitestone	17
702	Traffic	WOODHAVEN	6
703	Traffic	WOODSIDE	39
704	Urinating in Public	ARVERNE	1
705	Urinating in Public	ASTORIA	9
706	Urinating in Public	BELLEROSE	1
707	Urinating in Public	BRONX	51
708	Urinating in Public	BROOKLYN	136
709	Urinating in Public	CORONA	7
710	Urinating in Public	EAST ELMHURST	5
711	Urinating in Public	ELMHURST	10
712	Urinating in Public	FAR ROCKAWAY	1
713	Urinating in Public	FLUSHING	12
714	Urinating in Public	FOREST HILLS	2
715	Urinating in Public	FRESH MEADOWS	1
716	Urinating in Public	GLEN OAKS	2
717	Urinating in Public	HOLLIS	2
718	Urinating in Public	JACKSON HEIGHTS	2
719	Urinating in Public	JAMAICA	33
720	Urinating in Public	KEW GARDENS	3

	Complaint Type	City	Count
721	Urinating in Public	LITTLE NECK	1
722	Urinating in Public	LONG ISLAND CITY	3
723	Urinating in Public	MASPETH	2
724	Urinating in Public	NEW YORK	251
725	Urinating in Public	OZONE PARK	4
726	Urinating in Public	QUEENS	1
727	Urinating in Public	QUEENS VILLAGE	5
728	Urinating in Public	REGO PARK	1
729	Urinating in Public	RICHMOND HILL	5
730	Urinating in Public	RIDGEWOOD	8
731	Urinating in Public	ROCKAWAY PARK	1
732	Urinating in Public	SAINT ALBANS	1
733	Urinating in Public	SOUTH OZONE PARK	2
734	Urinating in Public	SPRINGFIELD GARDENS	3
735	Urinating in Public	STATEN ISLAND	14
736	Urinating in Public	SUNNYSIDE	2
737	Urinating in Public	WOODHAVEN	2
738	Urinating in Public	WOODSIDE	8
739	Vending	ARVERNE	1
740	Vending	ASTORIA	54
741	Vending	BAYSIDE	2
742	Vending	BRONX	379
743	Vending	BROOKLYN	515
744	Vending	COLLEGE POINT	1
745	Vending	CORONA	62
746	Vending	EAST ELMHURST	9
747	Vending	ELMHURST	21
748	Vending	FAR ROCKAWAY	9
749	Vending	FLUSHING	33

```
In [ ]: City = data.groupby('City')
Brooklyn = City.get_group('BROOKLYN')
```

In []: Brooklyn.head()

Out[]:

	Created Date	Closed Date	Agency	Agency Name	Complaint Type	Descriptor	Location Type	In
5	2015-12-31 23:56:30	2016-01-01 01:50:00	NYPD	New York City Police Department	Illegal Parking	Posted Parking Sign Violation	Street/Sidewalk	1
9	2015-12-31 23:53:58	2016-01-01 01:17:00	NYPD	New York City Police Department	Blocked Driveway	No Access	Street/Sidewalk	1
13	2015-12-31 23:47:58	2016-01-01 08:18:00	NYPD	New York City Police Department	Illegal Parking	Posted Parking Sign Violation	Street/Sidewalk	1
17	2015-12-31 23:44:52	2016-01-01 00:36:00	NYPD	New York City Police Department	Noise - Commercial	Loud Music/Party	Club/Bar /Restaurant	1
18	2015-12-31 23:40:59	2016-01-01 02:37:00	NYPD	New York City Police Department	Noise - Commercial	Loud Music/Party	Club/Bar /Restaurant	1

Draw a frequency plot for city-wise complaints

In []: cols = ['NEW YORK', 'ASTORIA', 'BRONX', 'ELMHURST', 'BROOKLYN', 'KEW GARDENS', 'JACKSON HEIGHTS', 'MIDDLE VILLAGE', 'REGO PARK', 'SAINT ALBANS', 'JAMAICA', 'SOUTH RICHMOND HILL', 'RIDGEWOOD', 'HOWARD BEACH', 'FOREST HILLS', 'STATEN ISLAND', 'OZONE PARK', 'RICHMOND HILL', 'WOODHAVEN', 'FLUSHING', 'CORONA', 'QUEENS VILLAGE', 'OAKLAND GARDENS', 'HOLLIS', 'MASPETH', 'EAST ELMHURST', 'SOUTH OZONE PARK', 'WOODSIDE', 'FRESH MEADOWS', 'LONG ISLAND CITY', 'ROCKAWAY PARK', 'SPRINGFIELD GARDENS', 'COLLEGE POINT', 'BAYSIDE', 'GLEN OAKS', 'FAR ROCKAWAY', 'BELLEROSE', 'LITTLE NECK', 'CAMBRIA HEIGHTS', 'ROSEDALE', 'SUNNYSIDE', 'WHitestone', 'ARVERNE', 'FLORAL PARK', 'NEW HYDE PARK', 'CENTRAL PARK', 'BREEZY POINT', 'QUEENS', 'Astoria', 'Long Island City', 'Woodside', 'East Elmhurst', 'Howard Beach']

```
In [ ]: for i in cols:  
    plt.figure(figsize=(10,5))  
    sns.countplot(data= City.get_group(i),x='Complaint Type')  
    plt.title(f'{i}')  
    plt.xticks(x=City[ 'Complaint Type'],rotation='vertical')
```

/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:2: RuntimeWarning: More than 20 figures have been opened. Figures created through the pyplot interface (`matplotlib.pyplot.figure`) are retained until explicitly closed and may consume too much memory. (To control this warning, see the rcParam `figure.max_open_warning`).

/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:2: RuntimeWarning: More than 20 figures have been opened. Figures created through the pyplot interface (`matplotlib.pyplot.figure`) are retained until explicitly closed and may consume too much memory. (To control this warning, see the rcParam `figure.max_open_warning`).

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/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:2: RuntimeWarning: More than 20 figures have been opened. Figures created through the pyplot interface (`matplotlib.pyplot.figure`) are retained until explicitly closed and may consume too much memory. (To control this warning, see the rcParam `figure.max_open_warning`).

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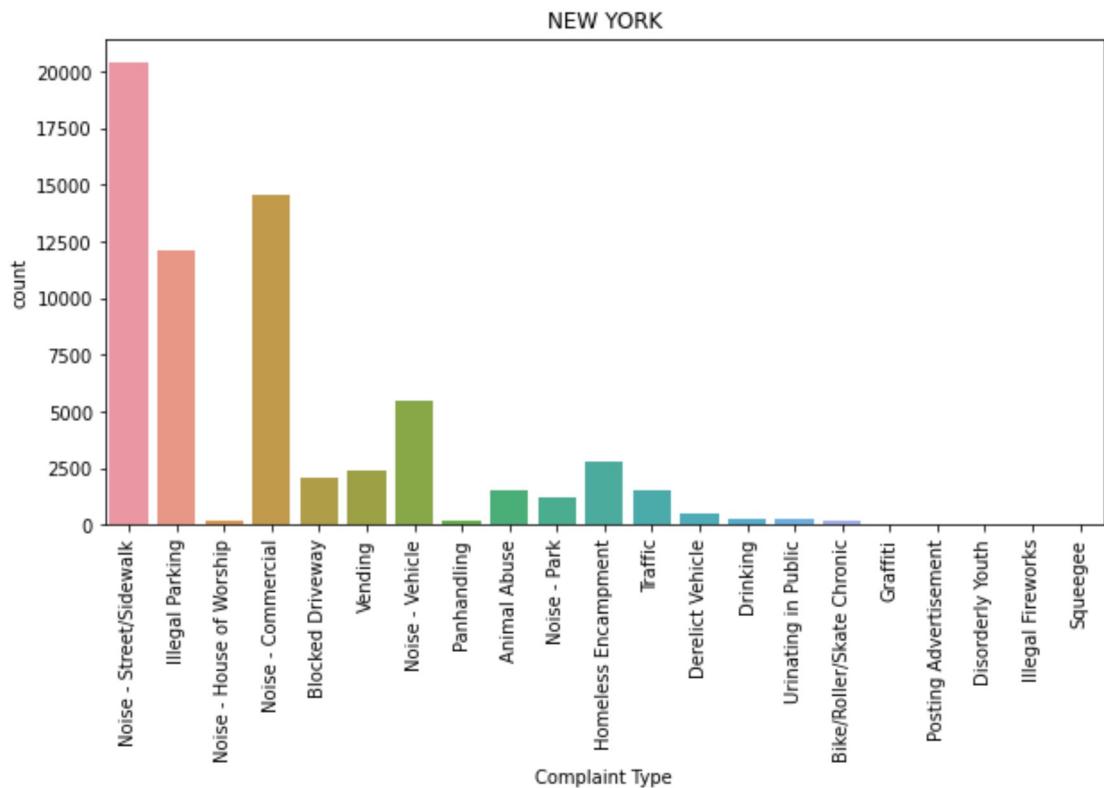
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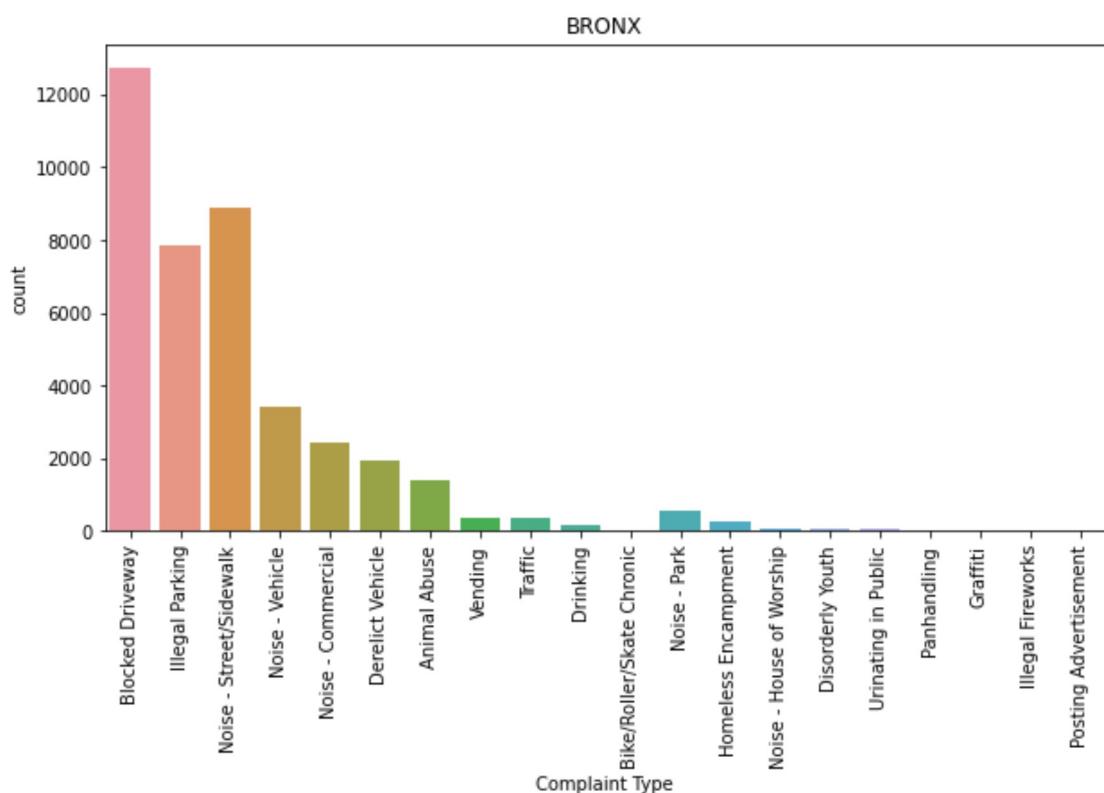
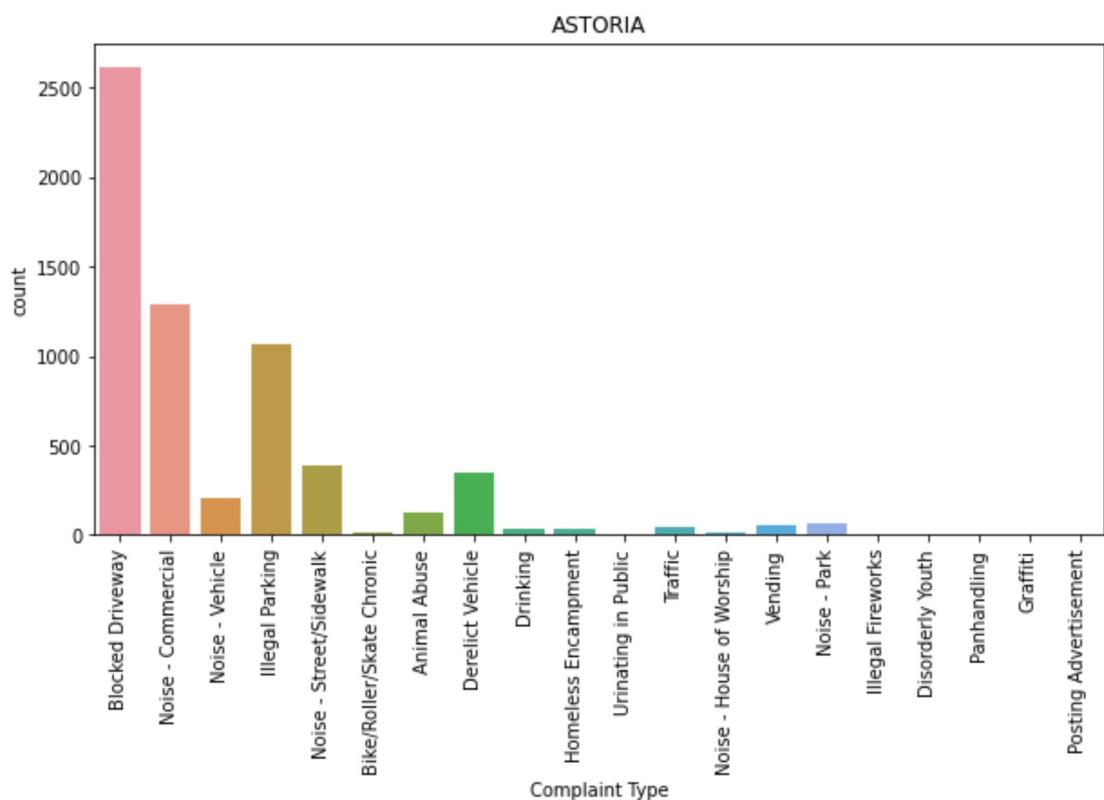
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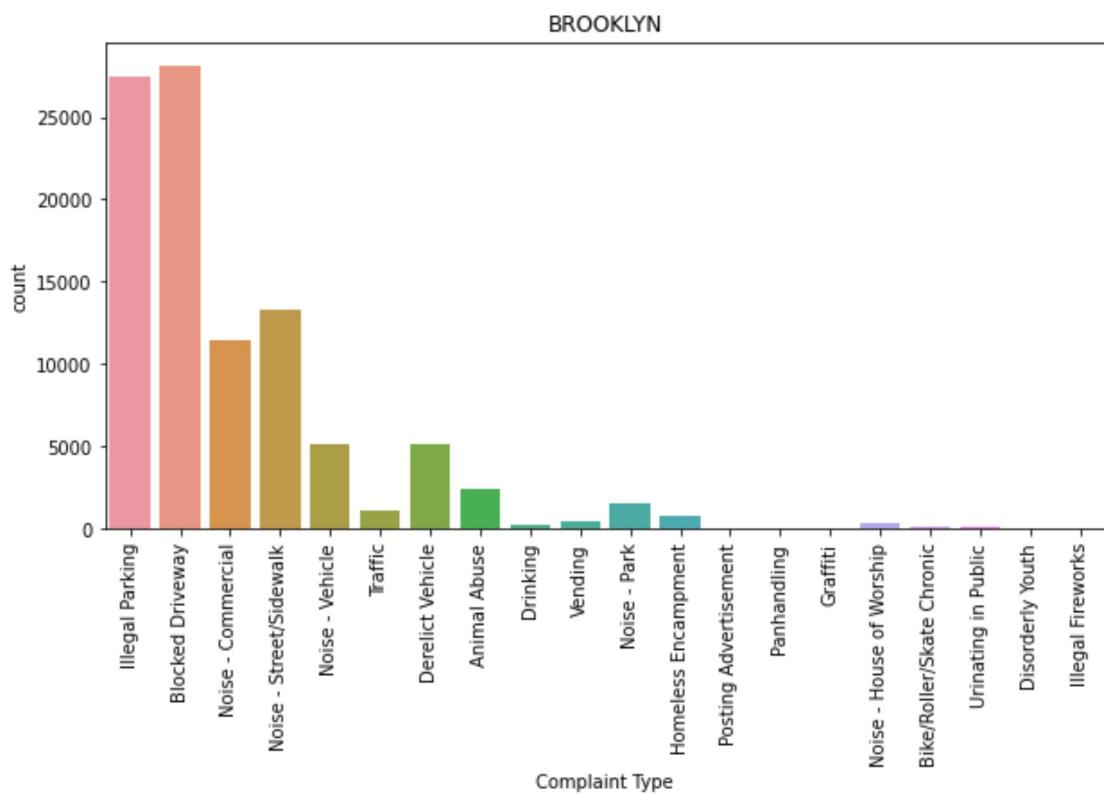
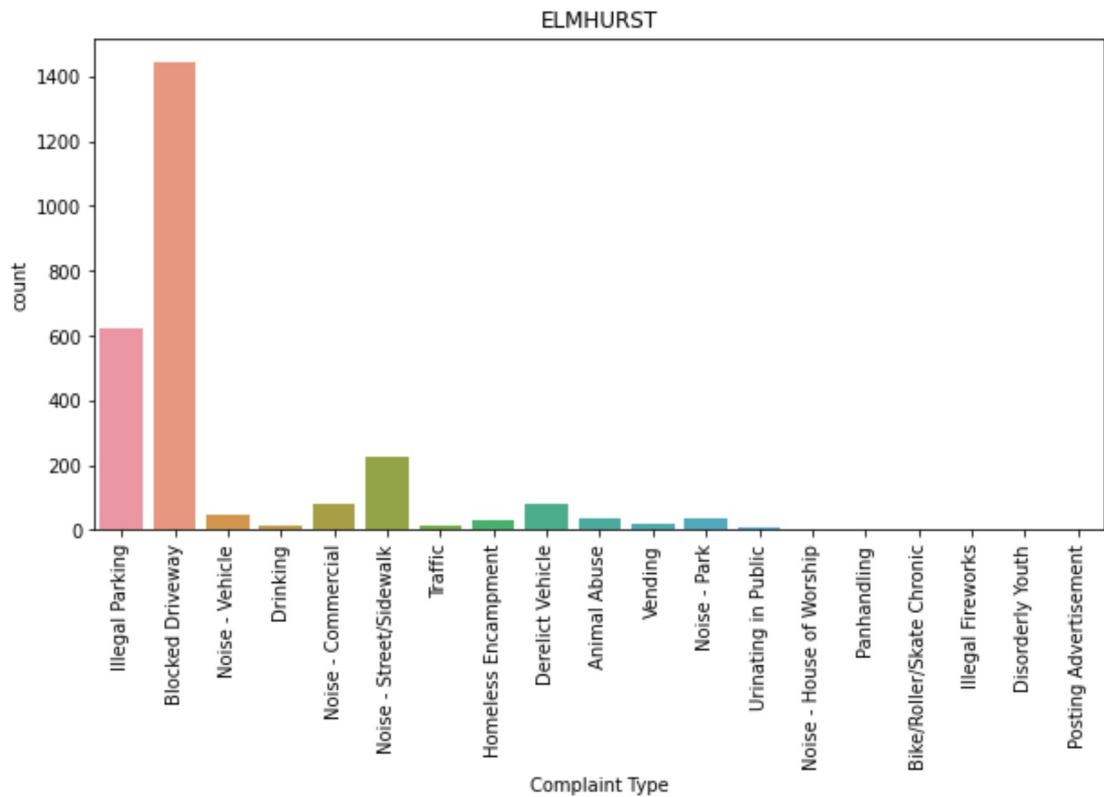
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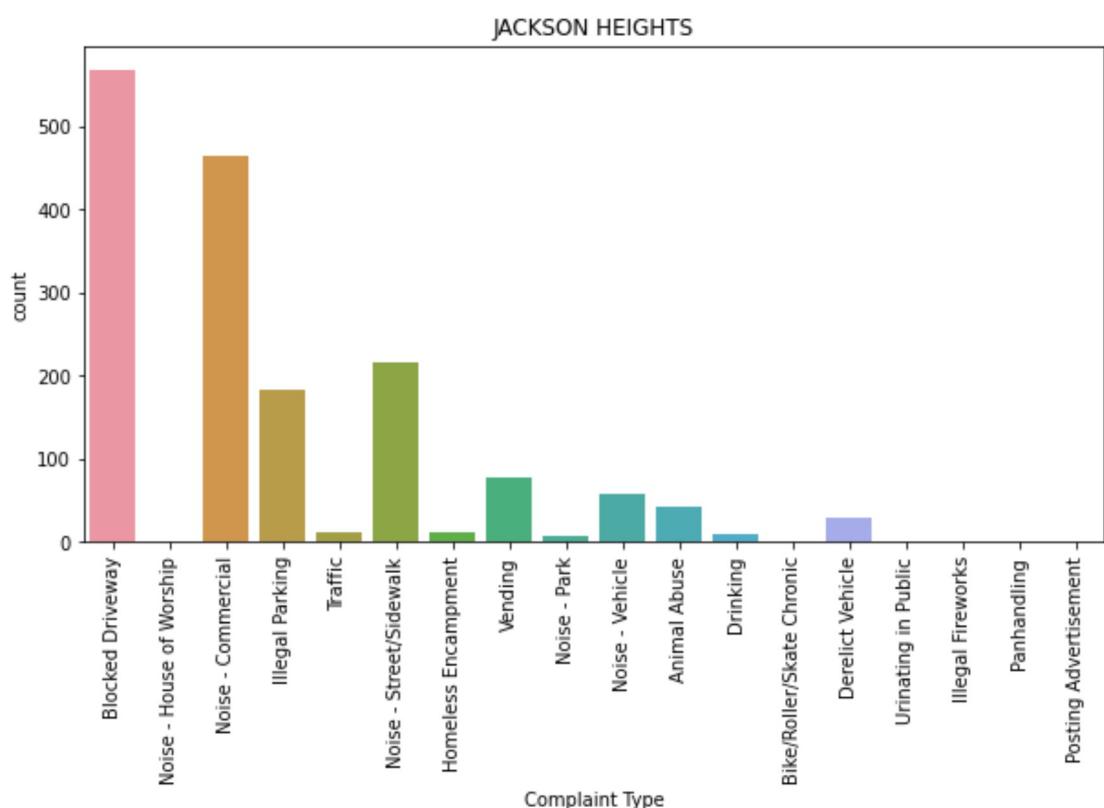
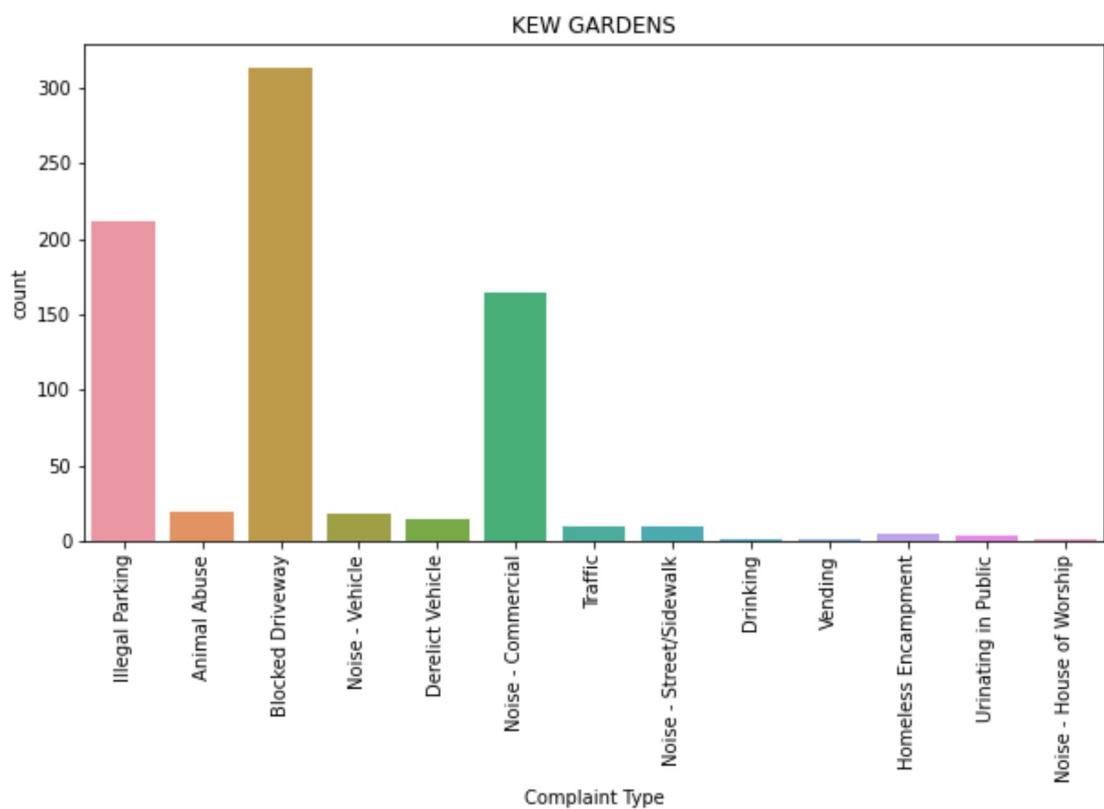
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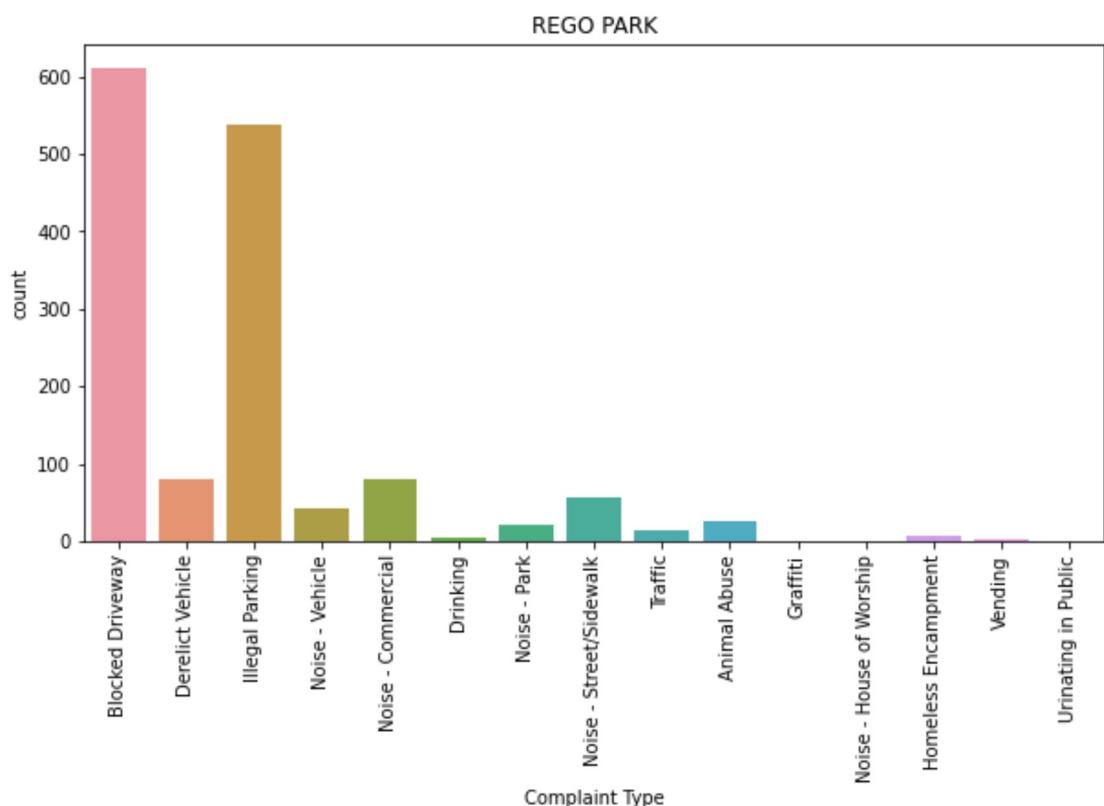
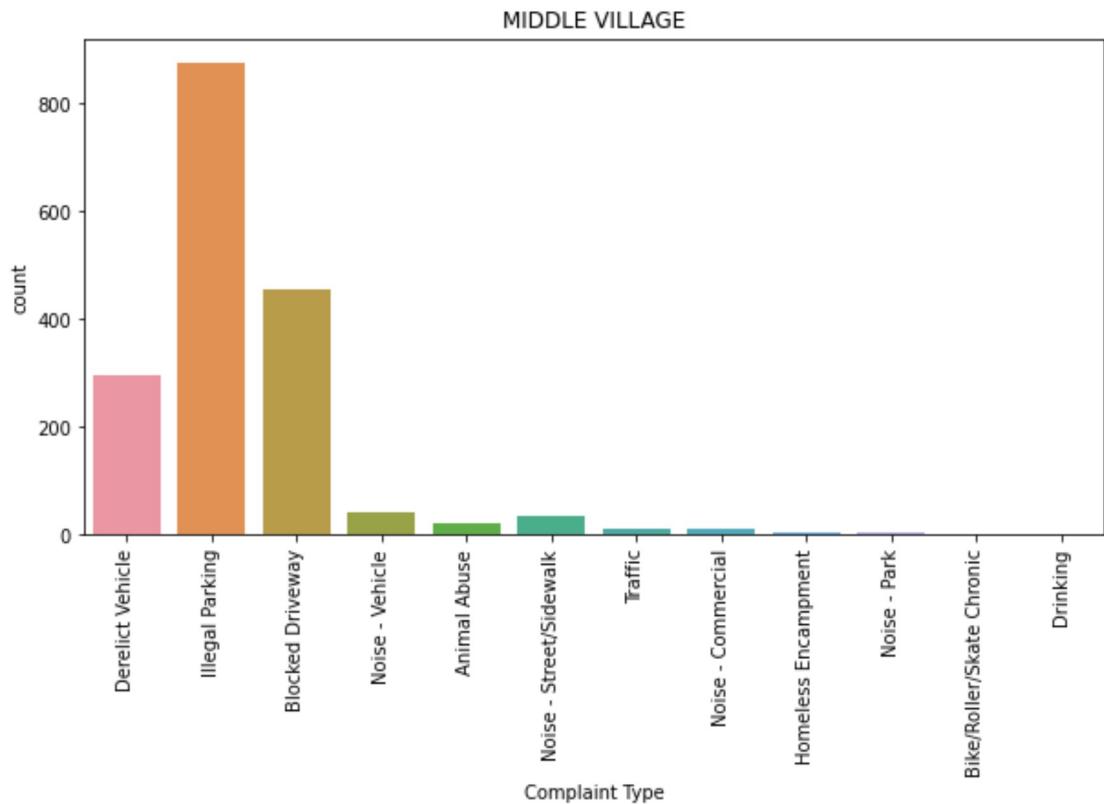
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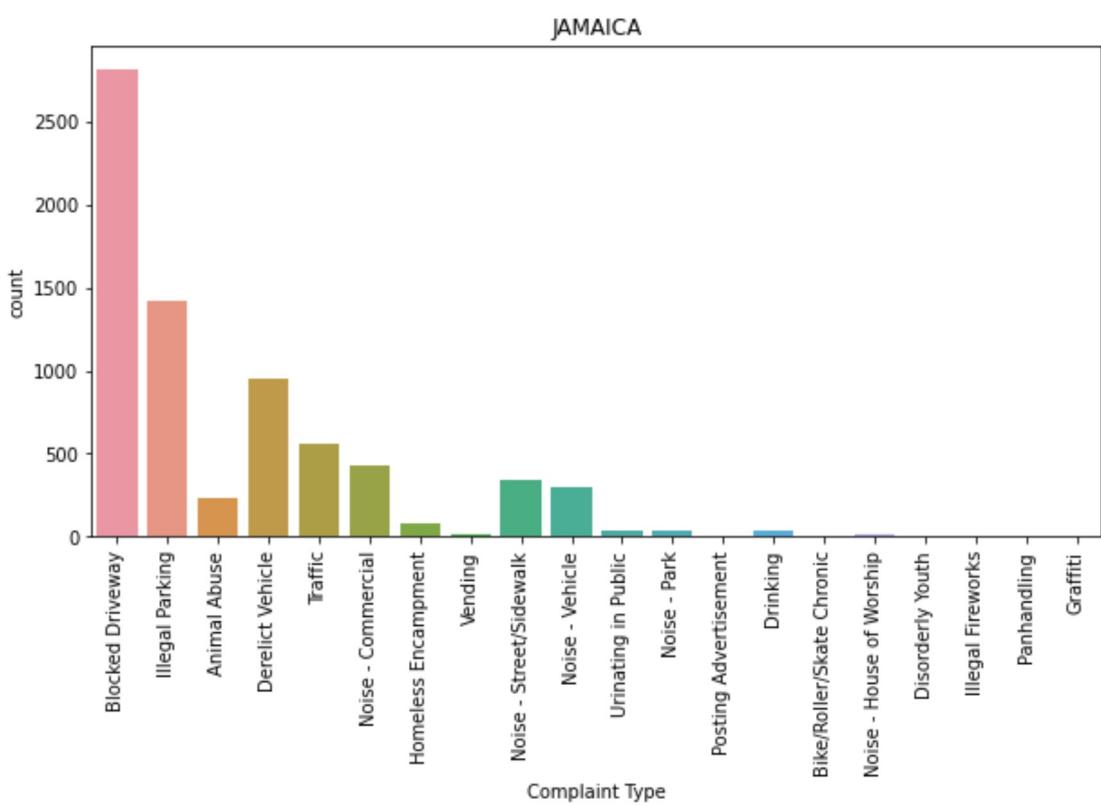
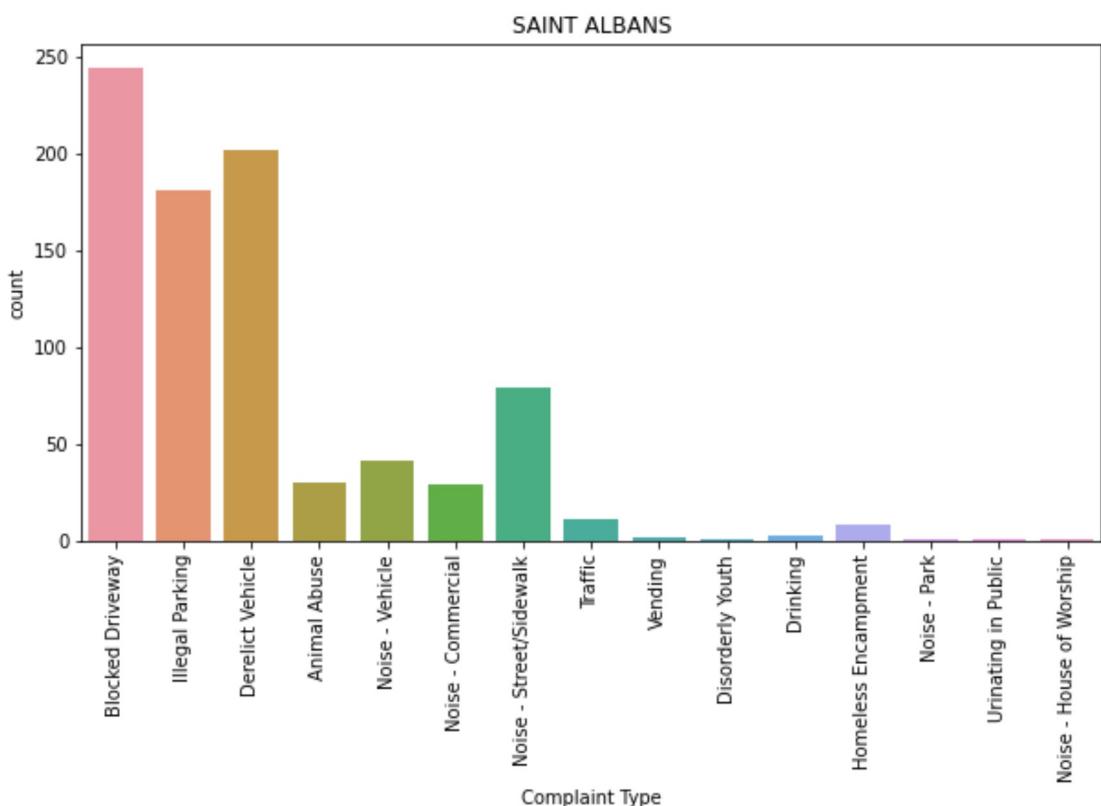


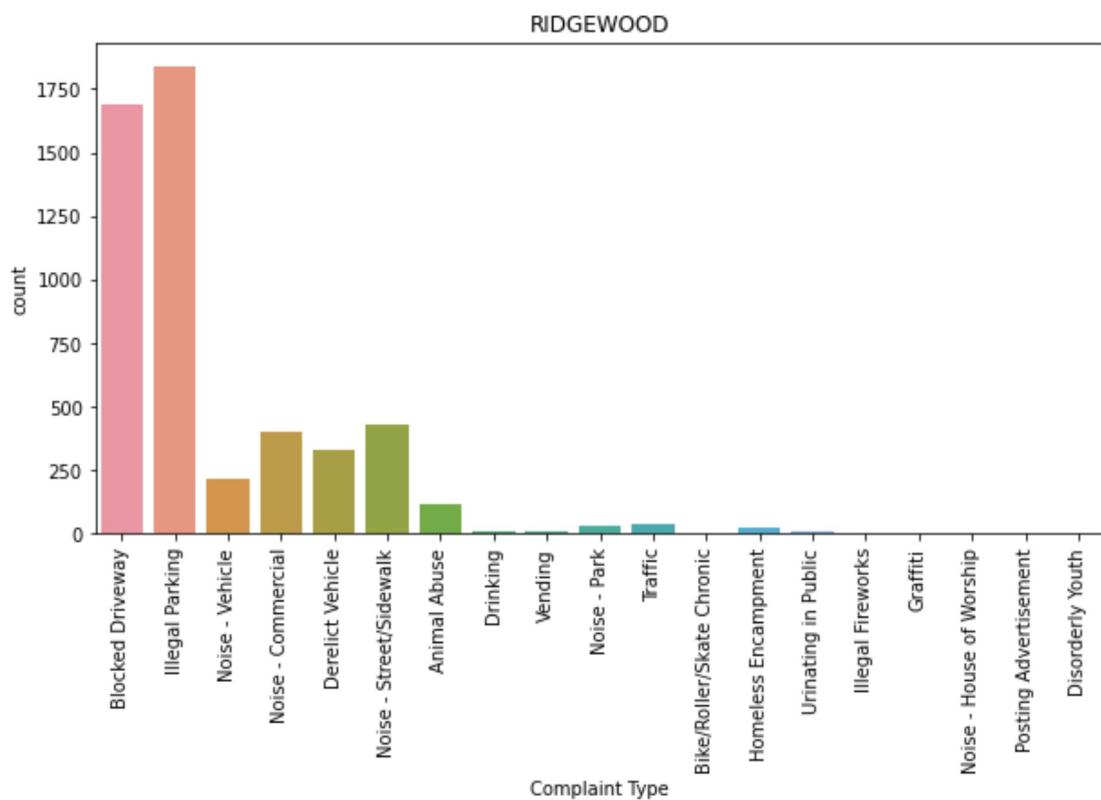
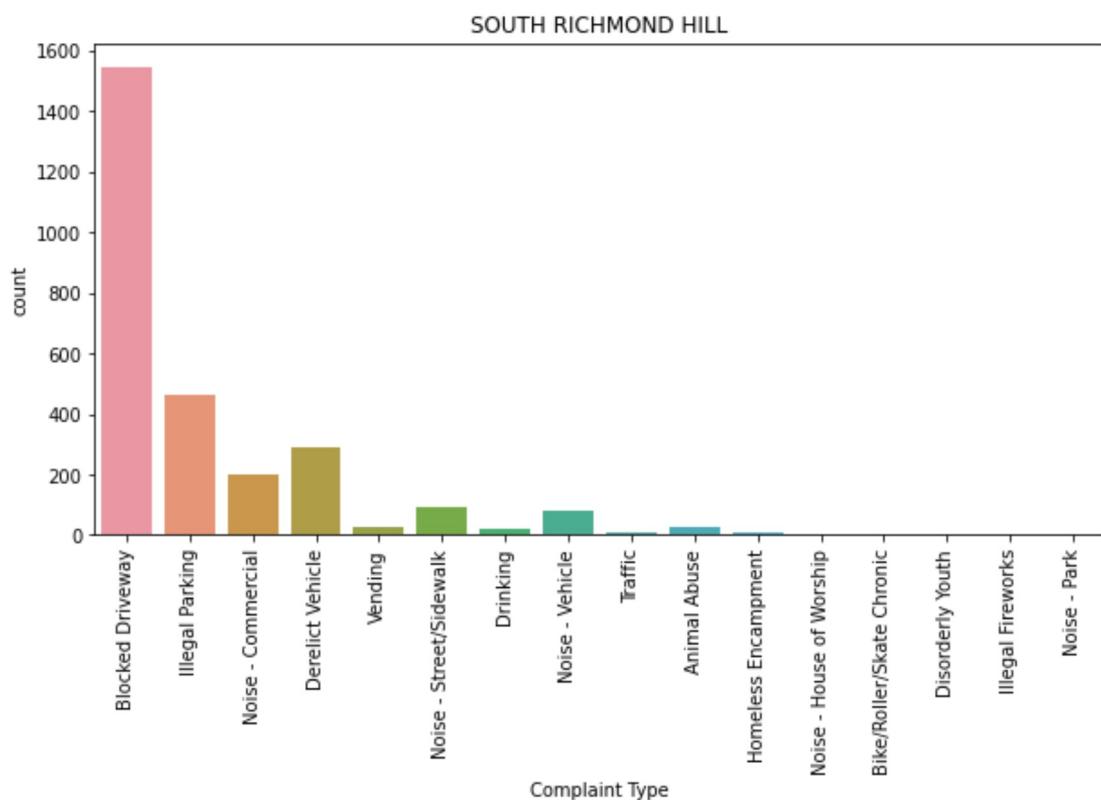




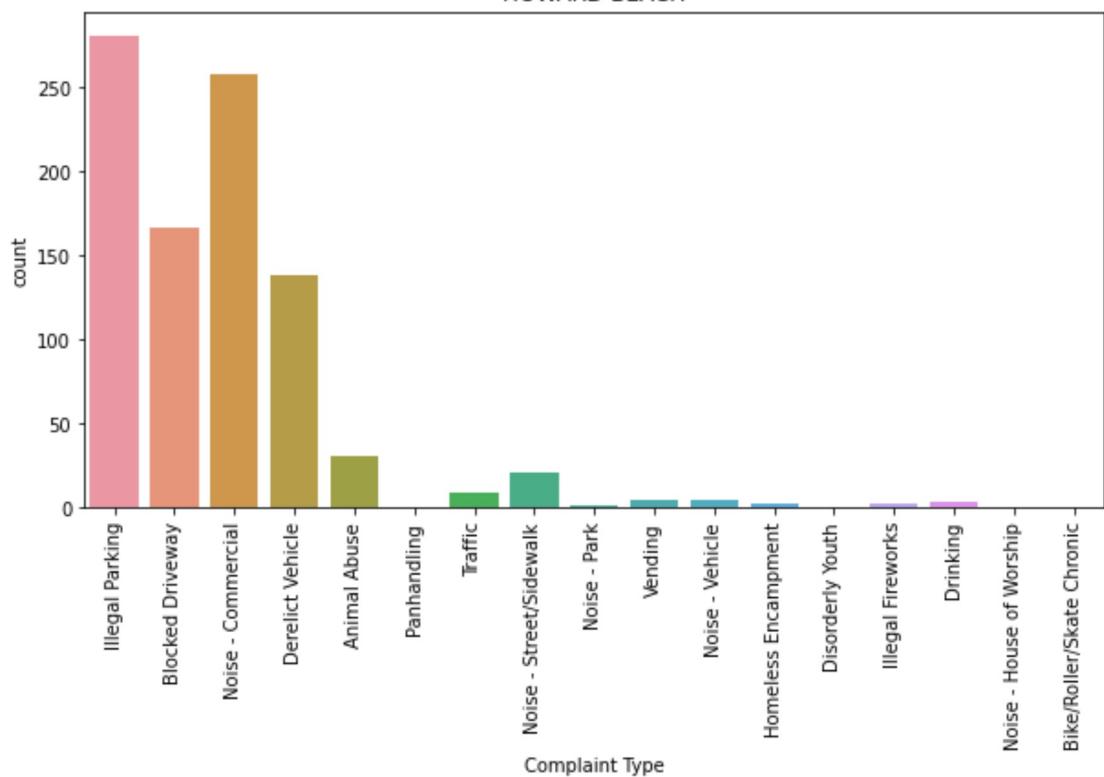




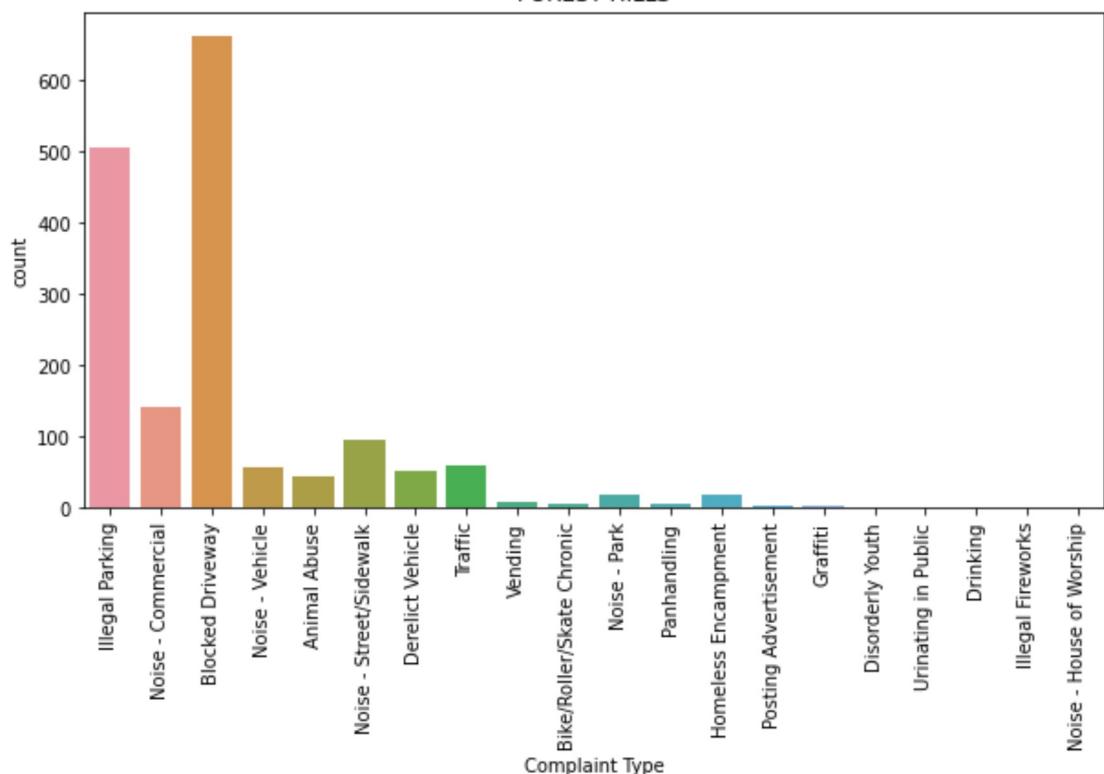


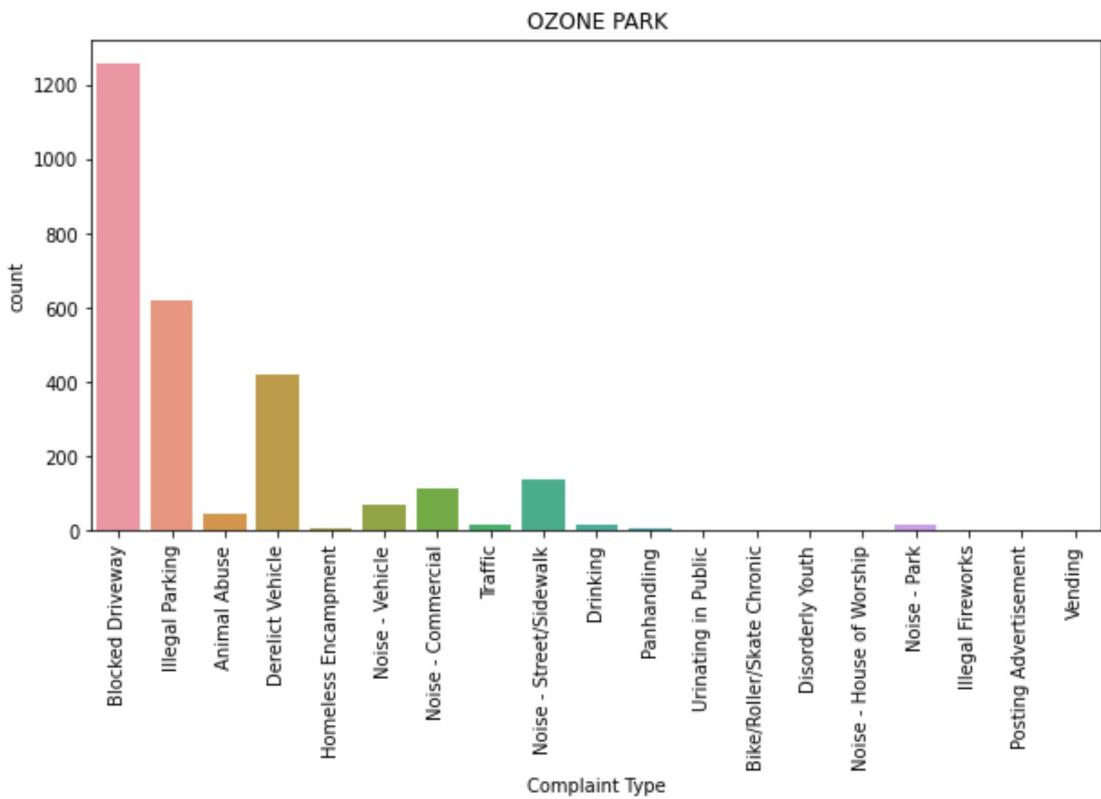
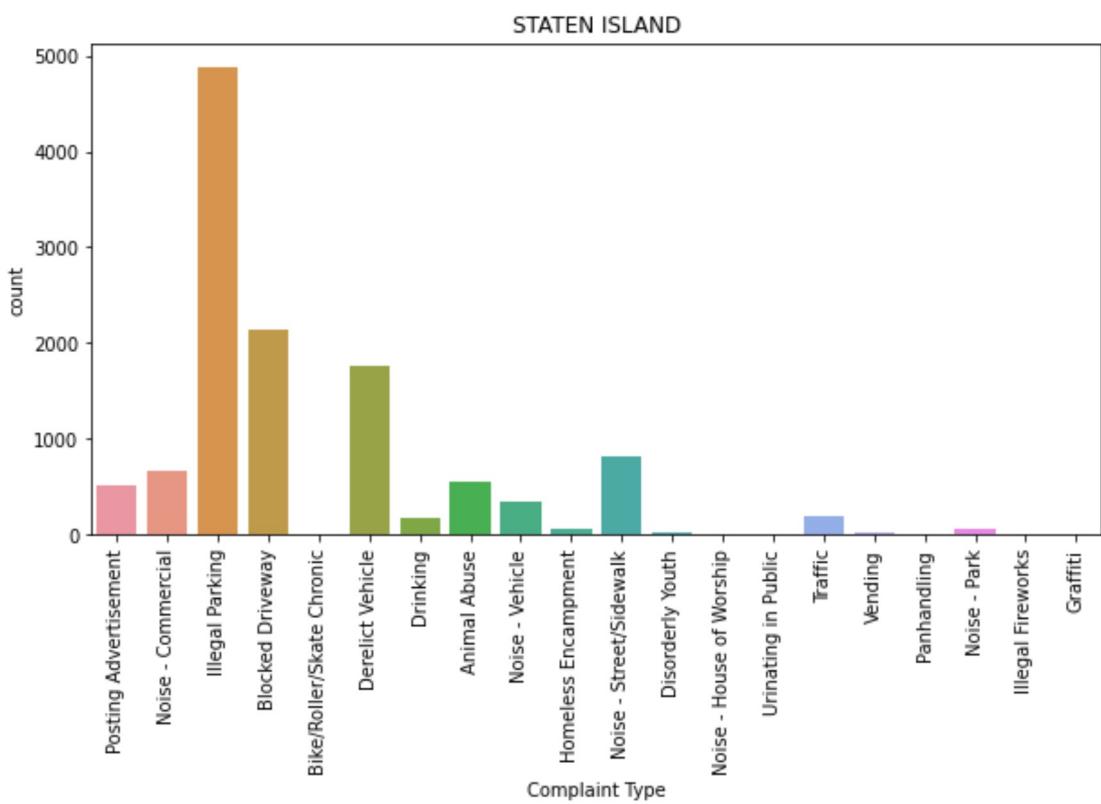


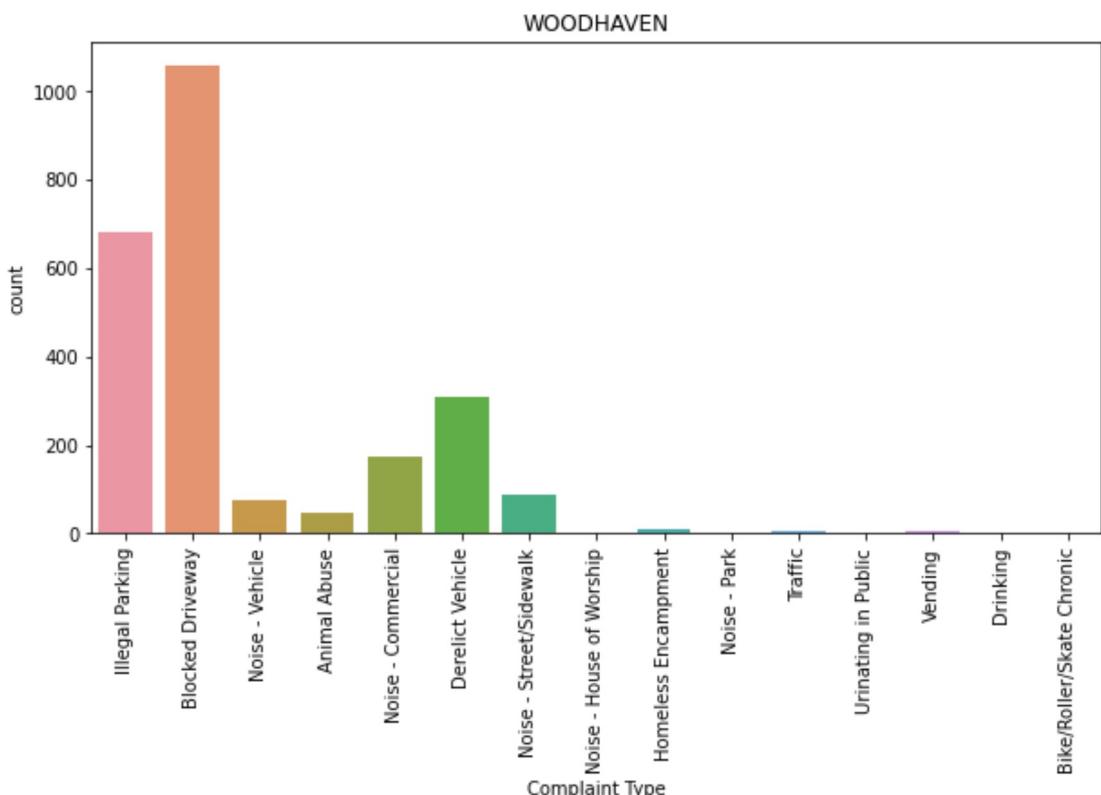
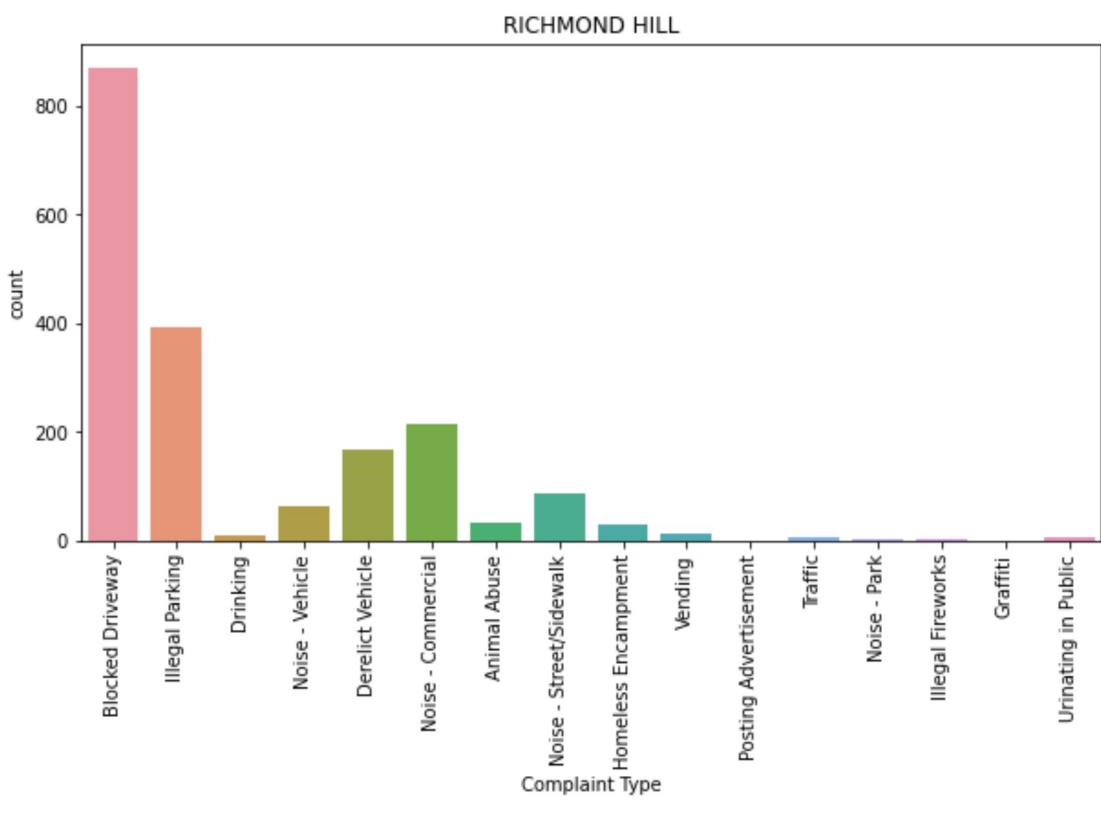
HOWARD BEACH

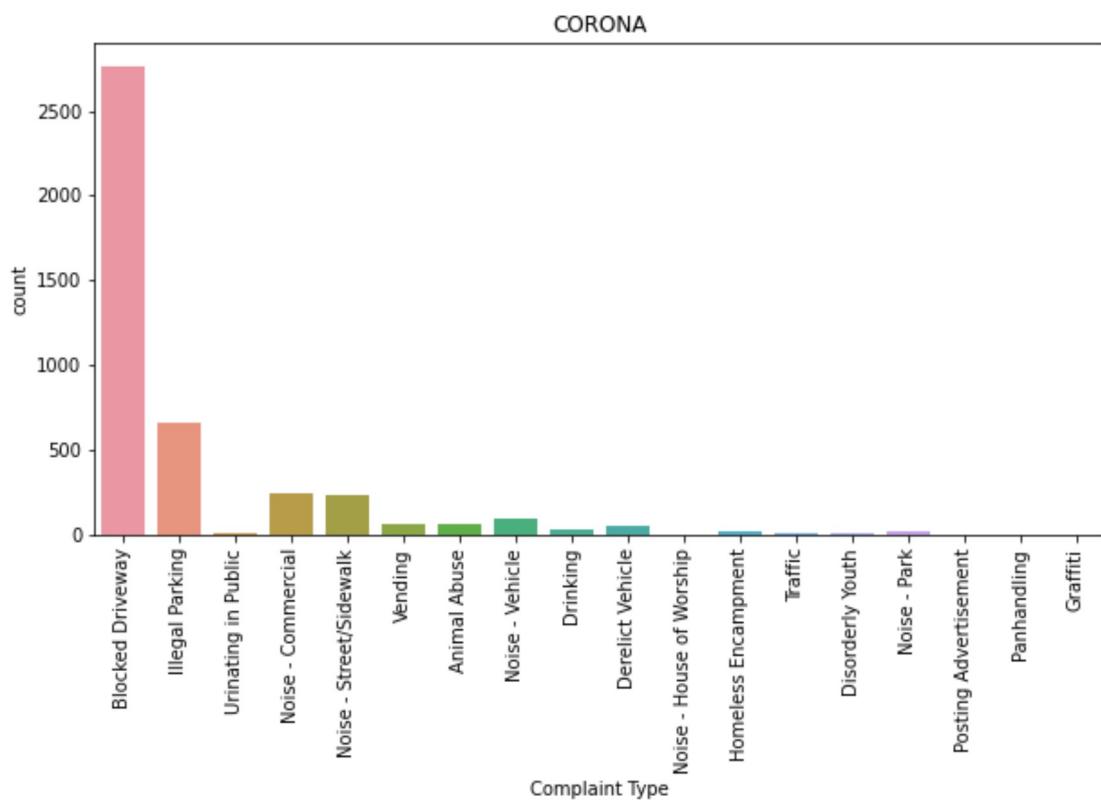
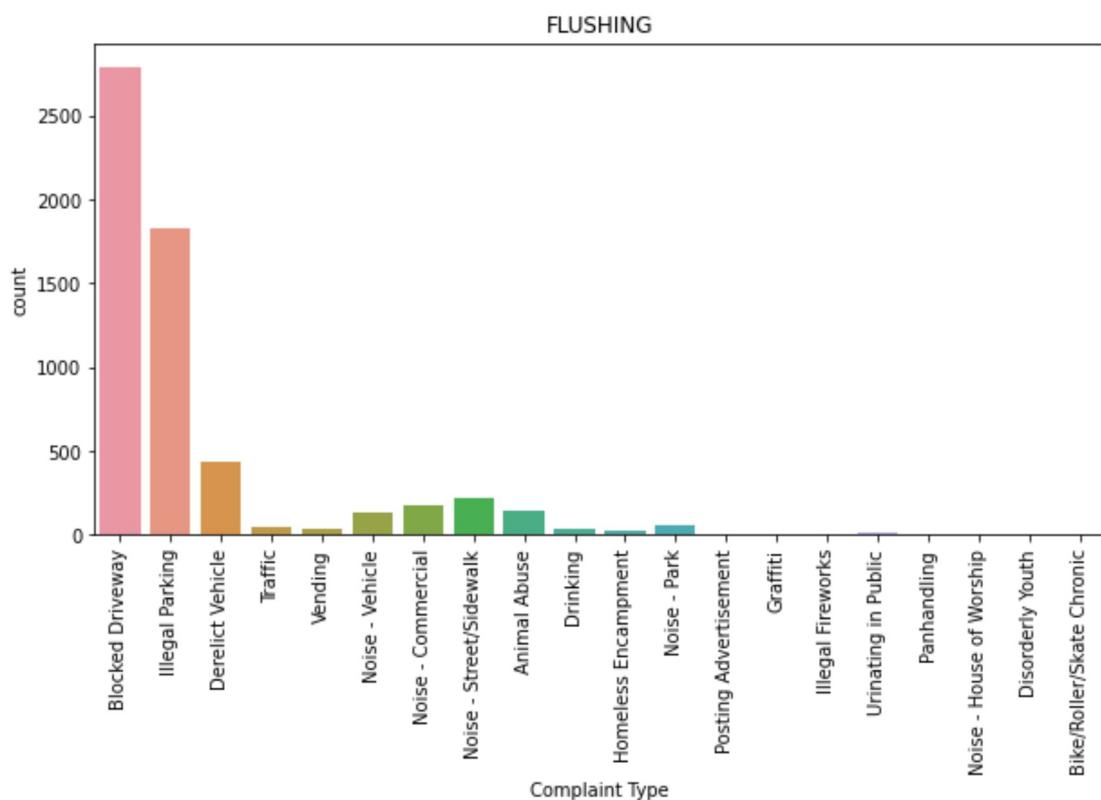


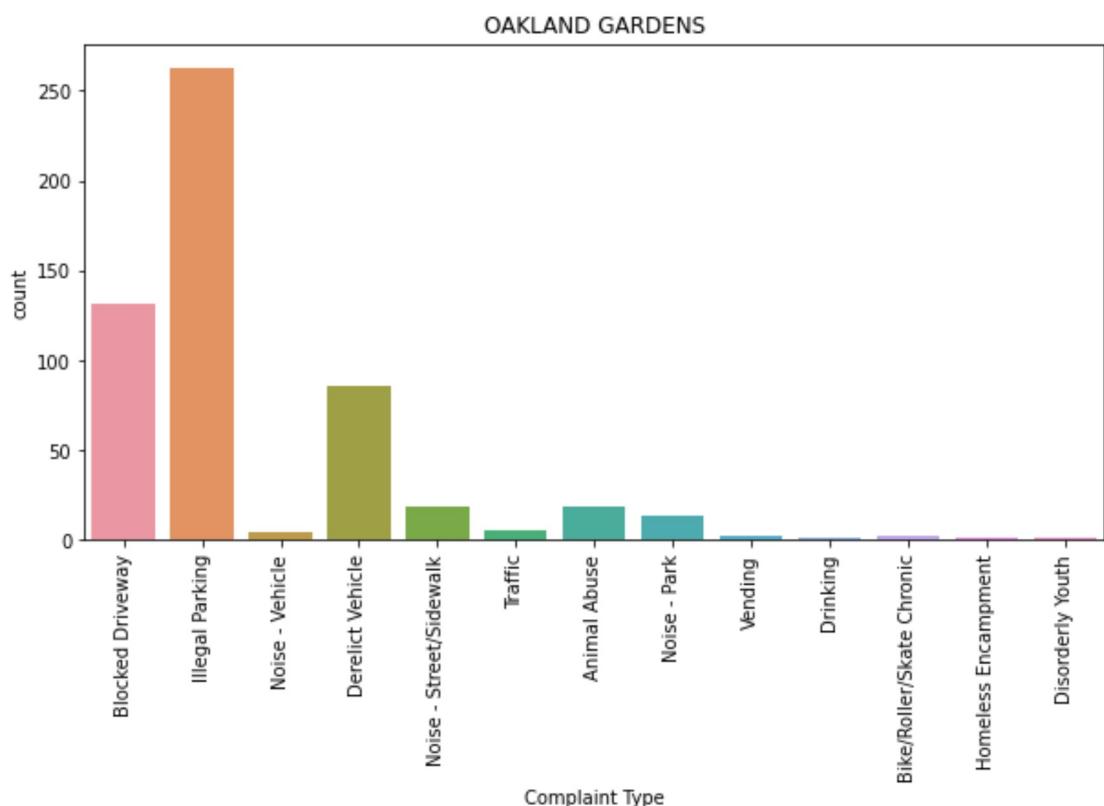
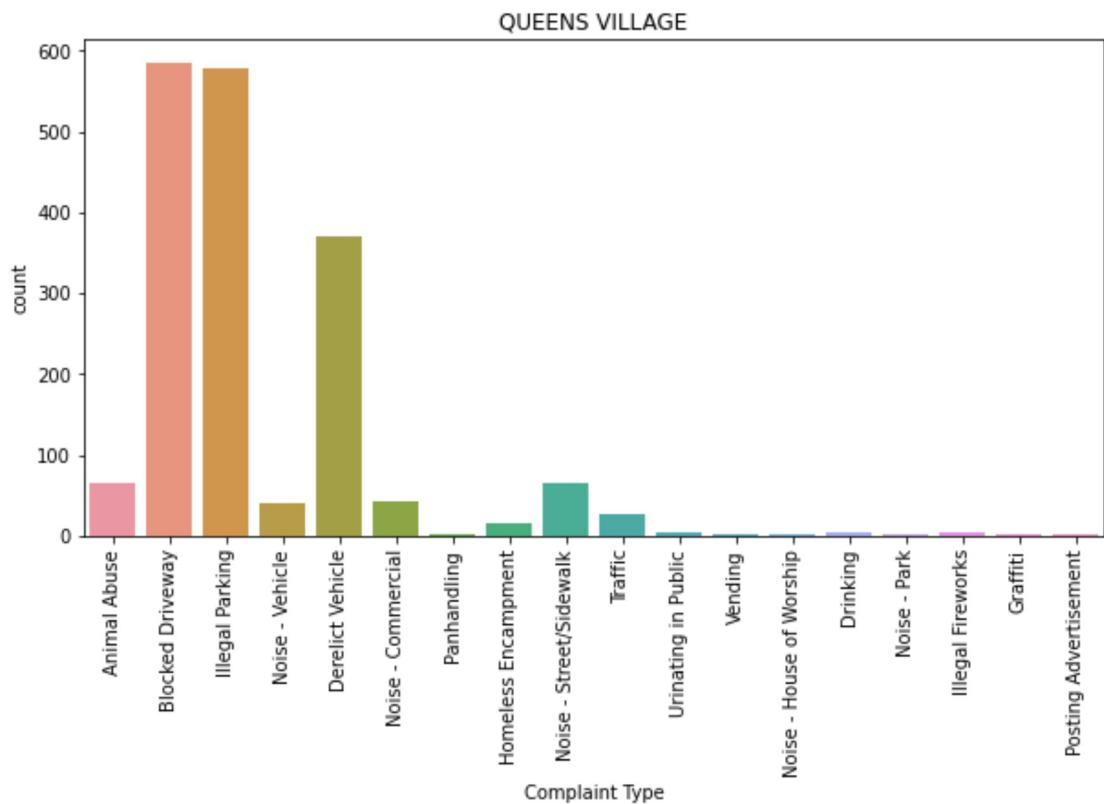
FOREST HILLS

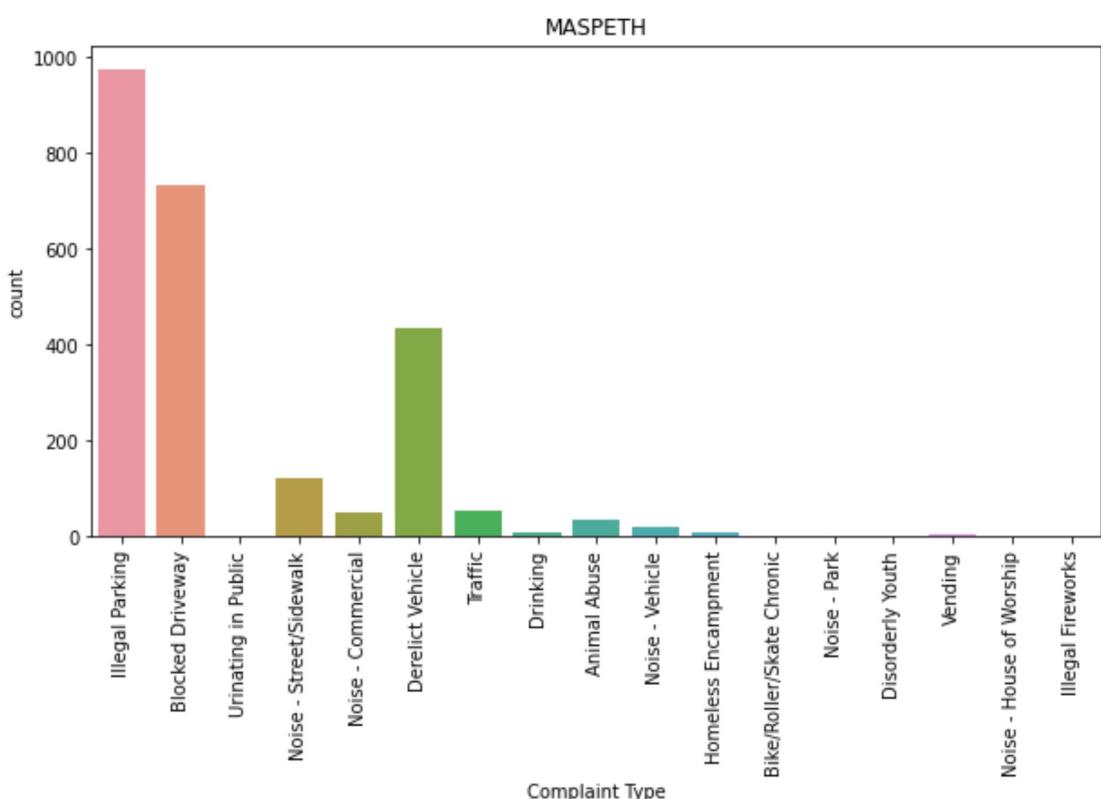
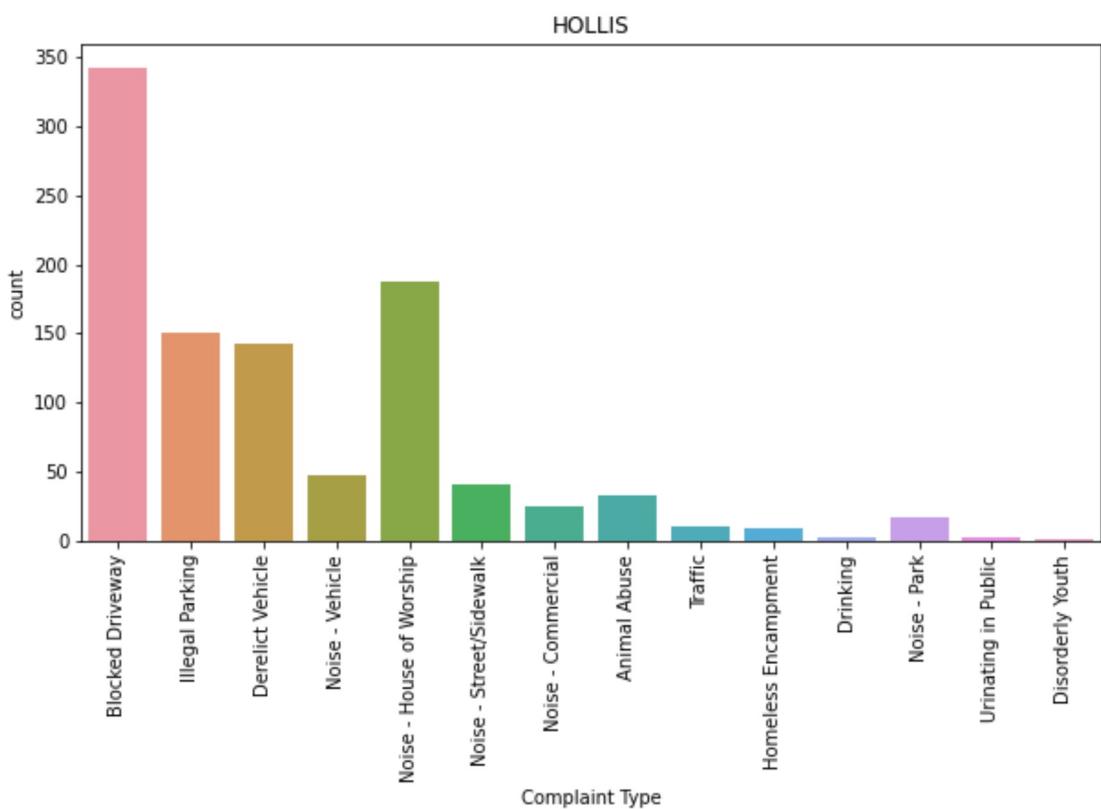


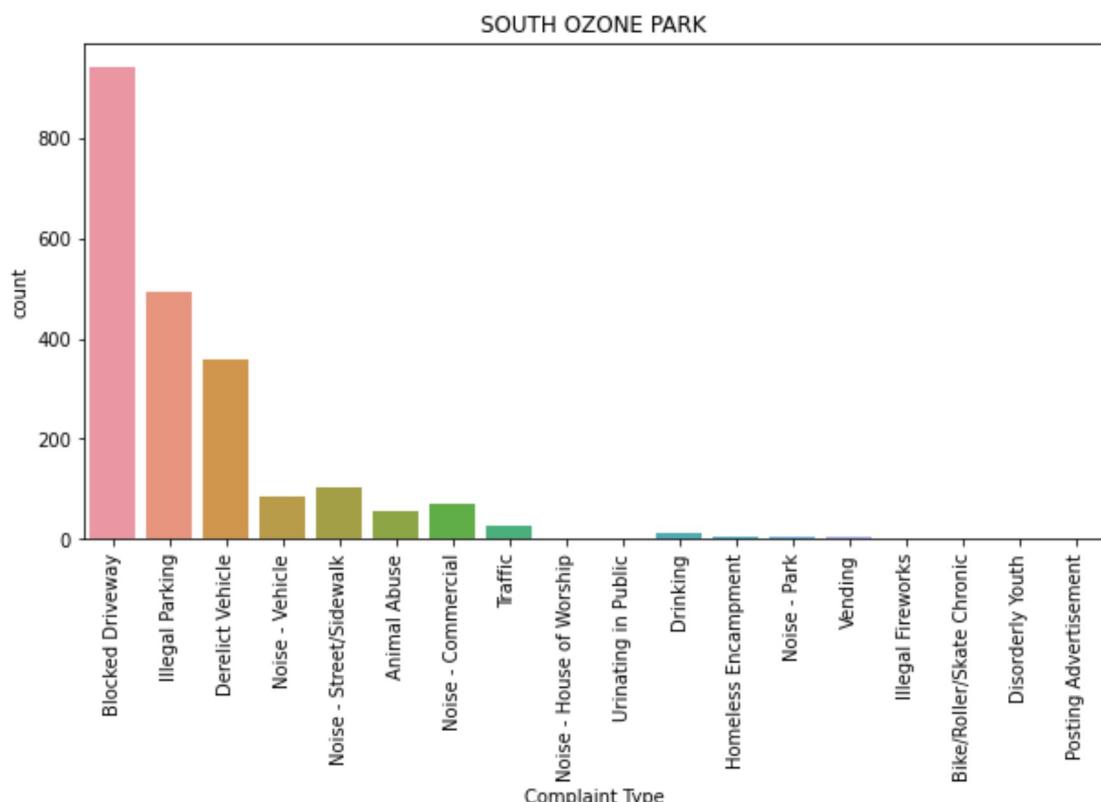
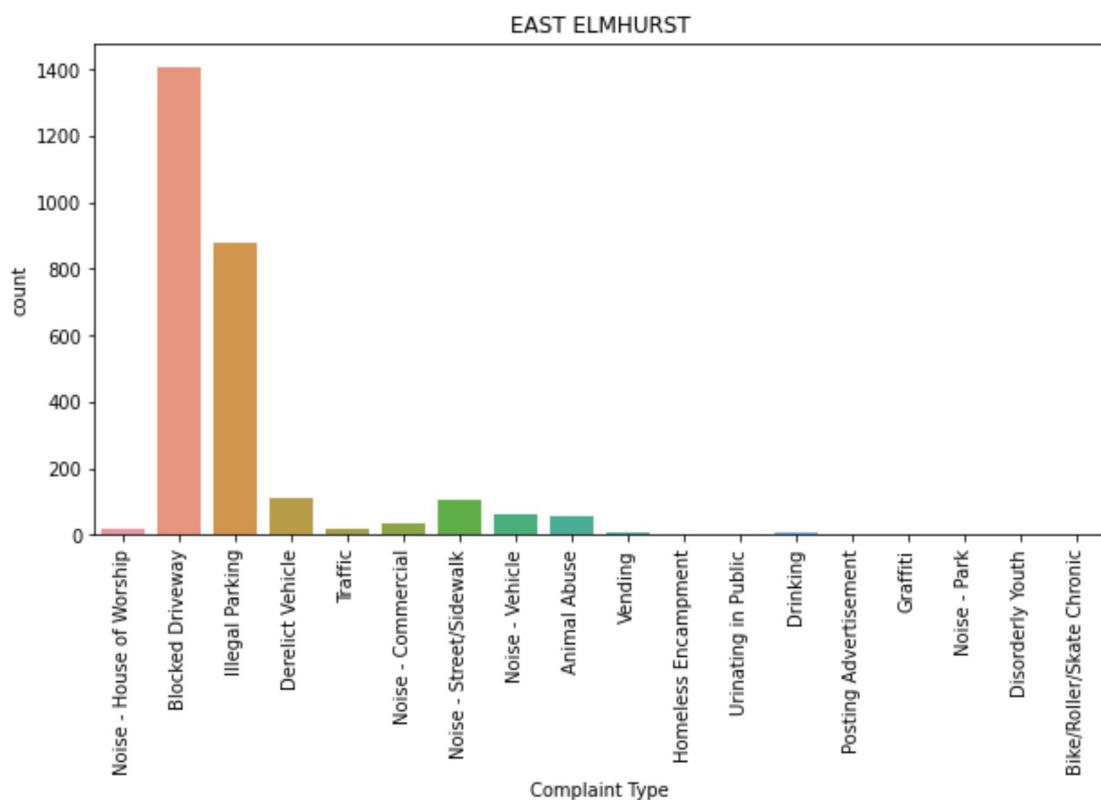


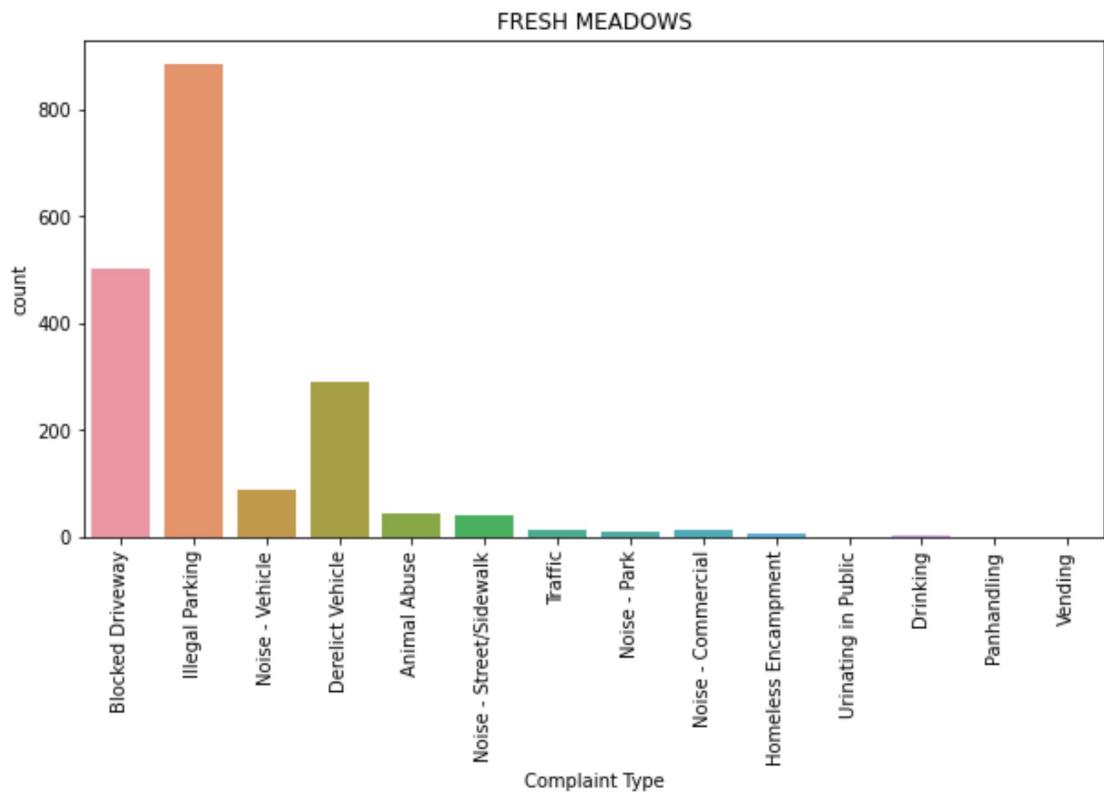
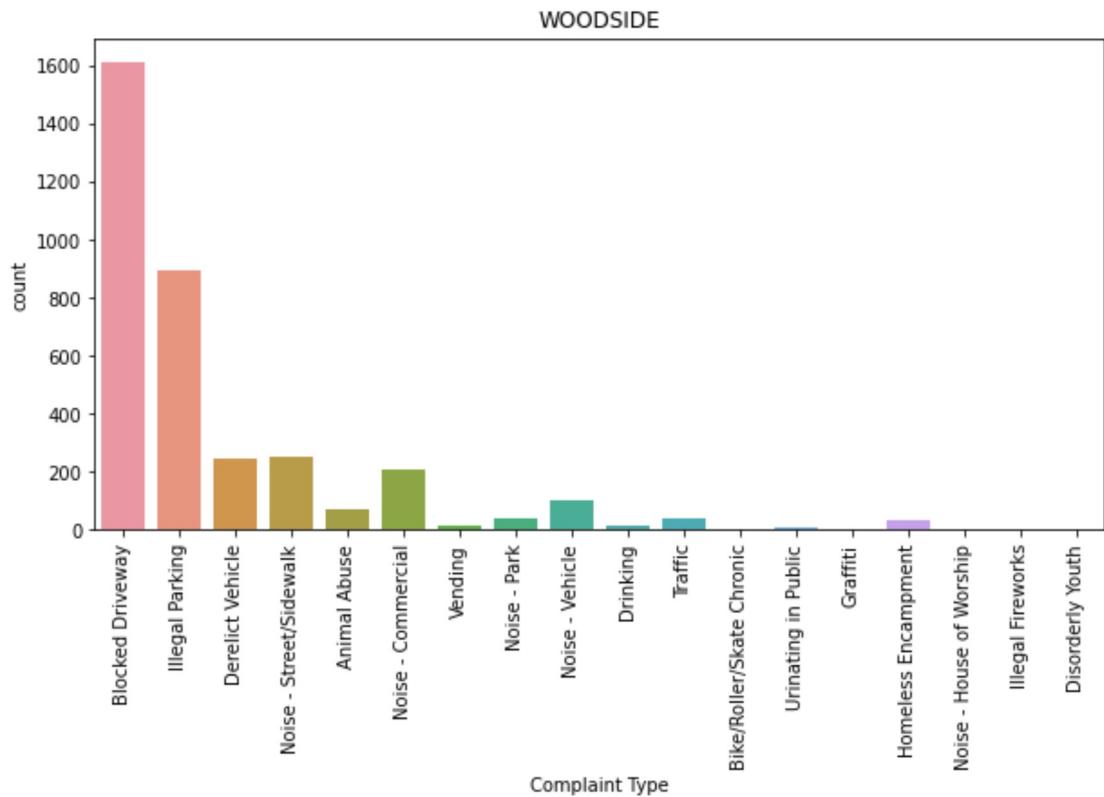


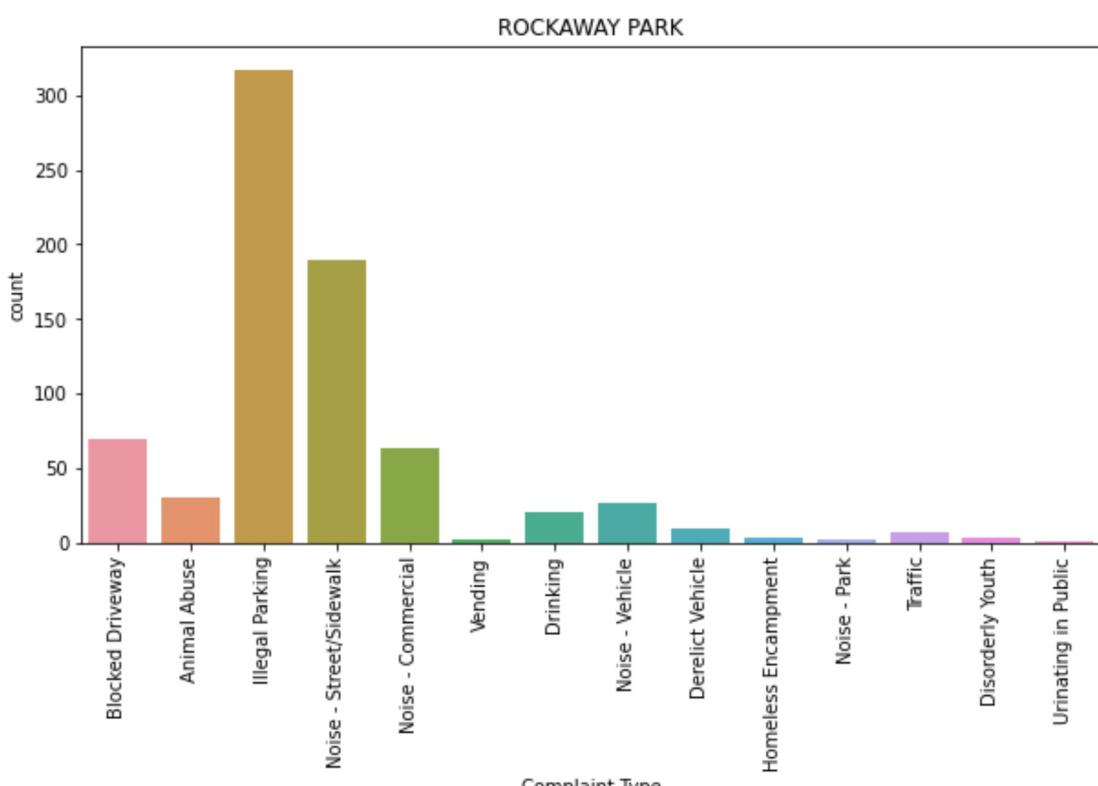
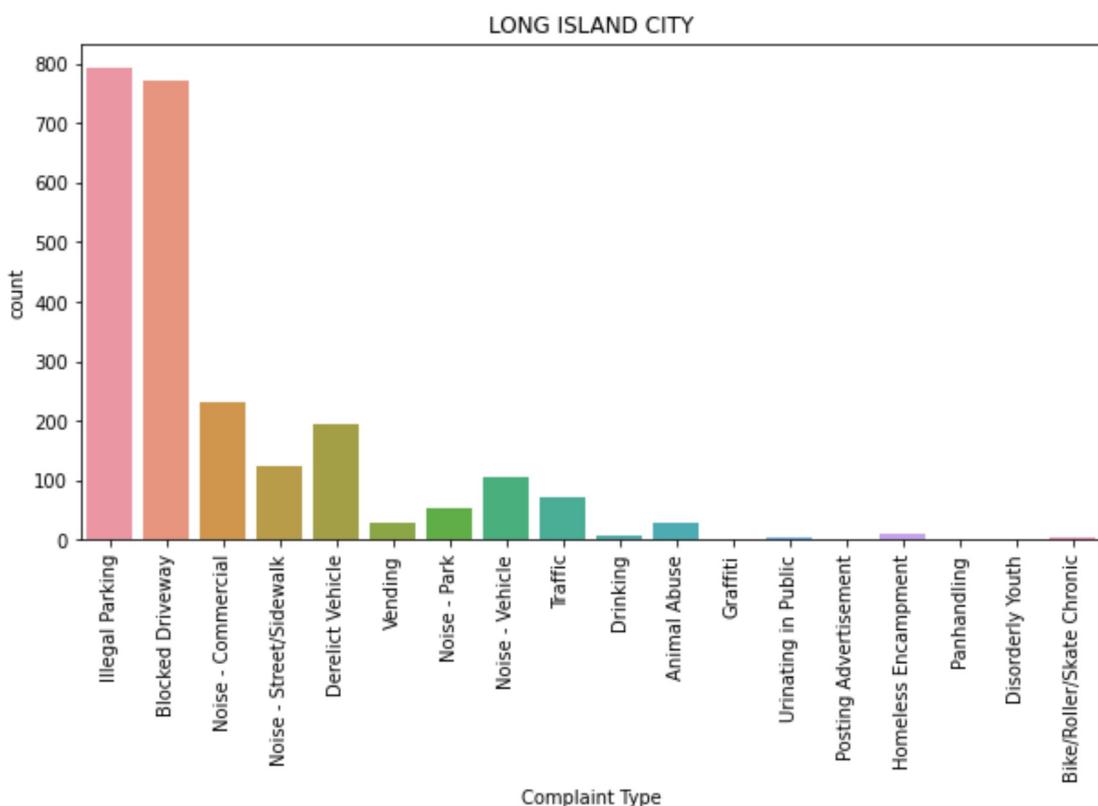


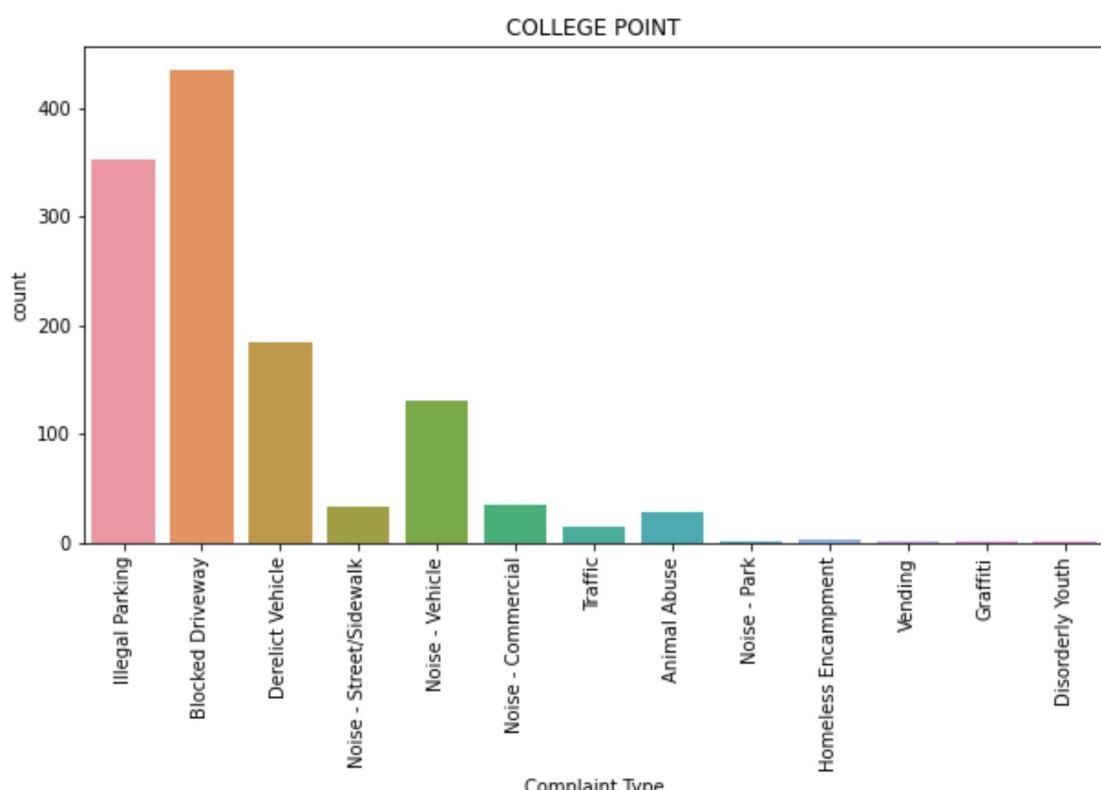
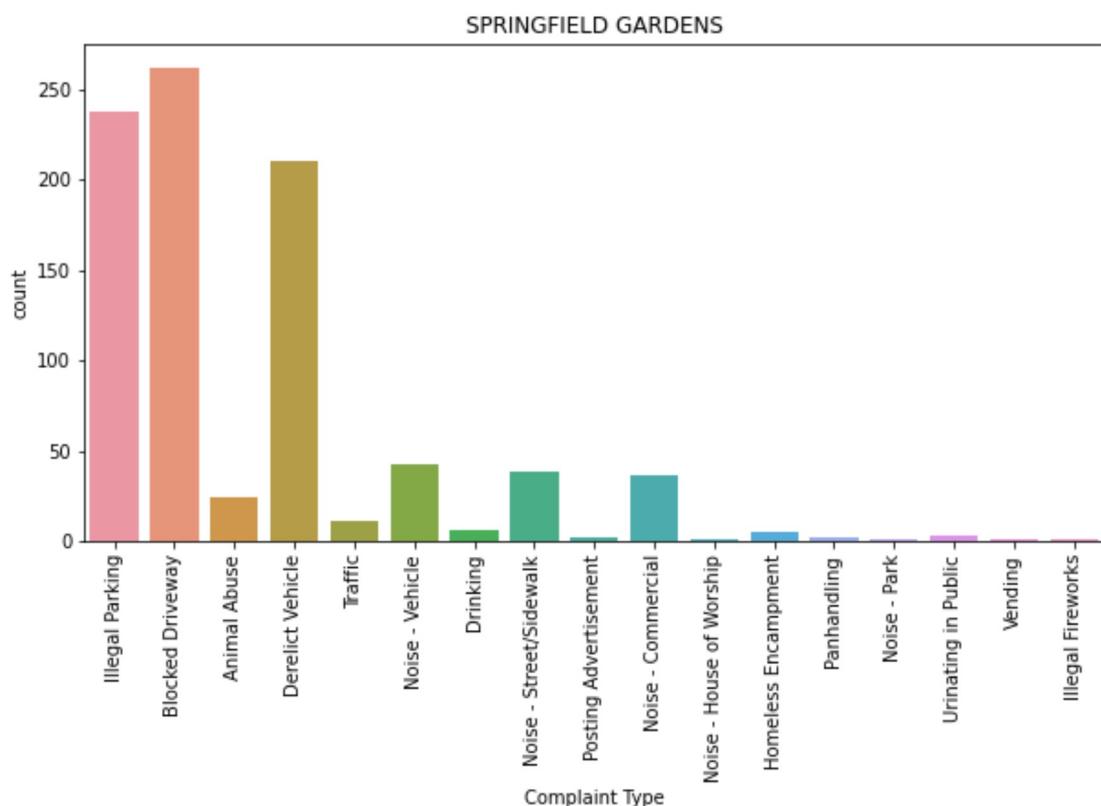


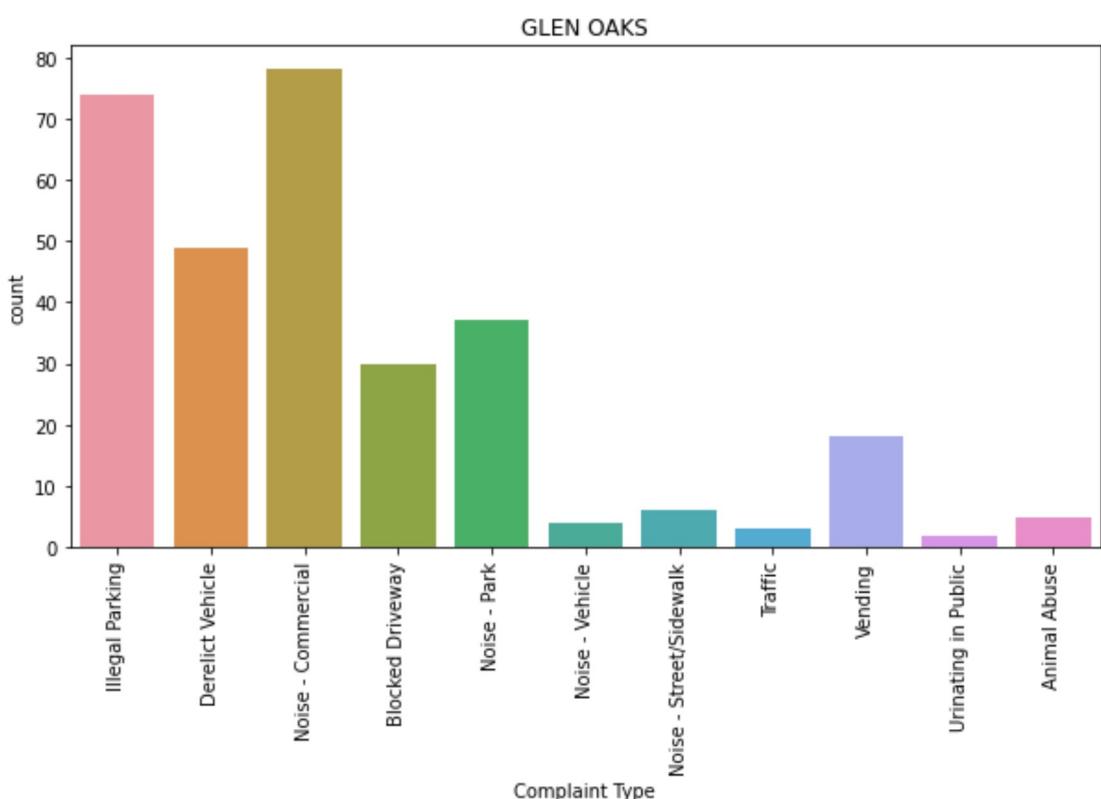
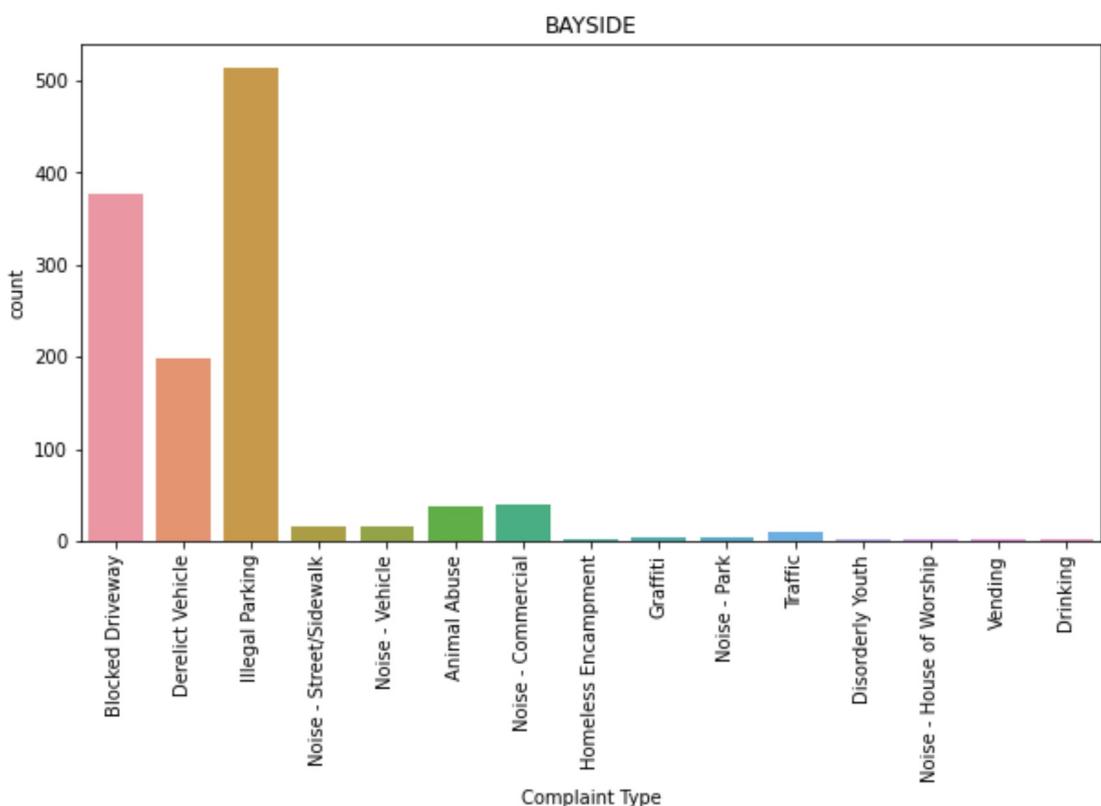




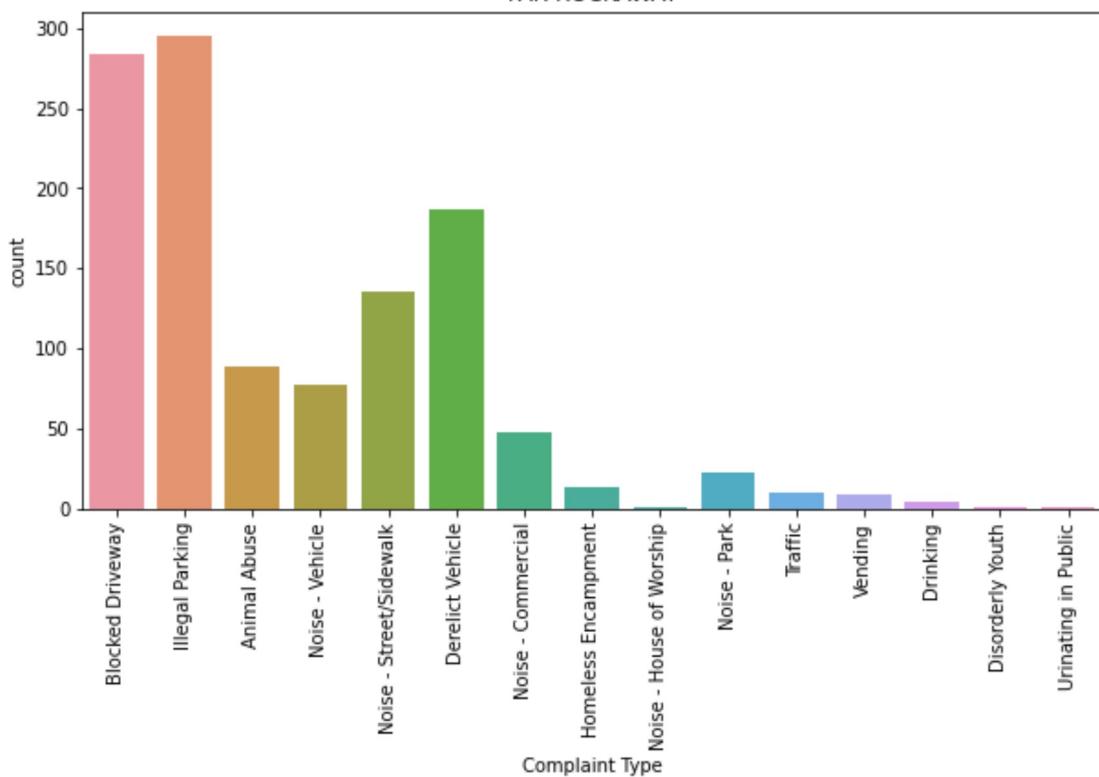




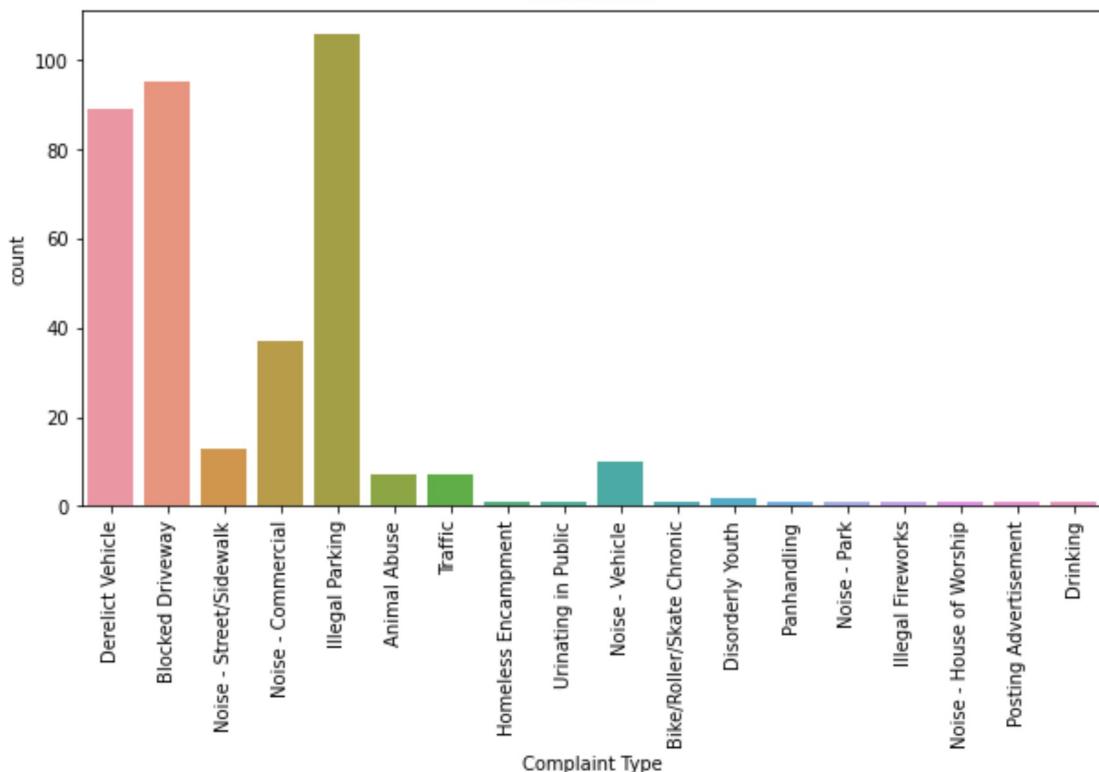


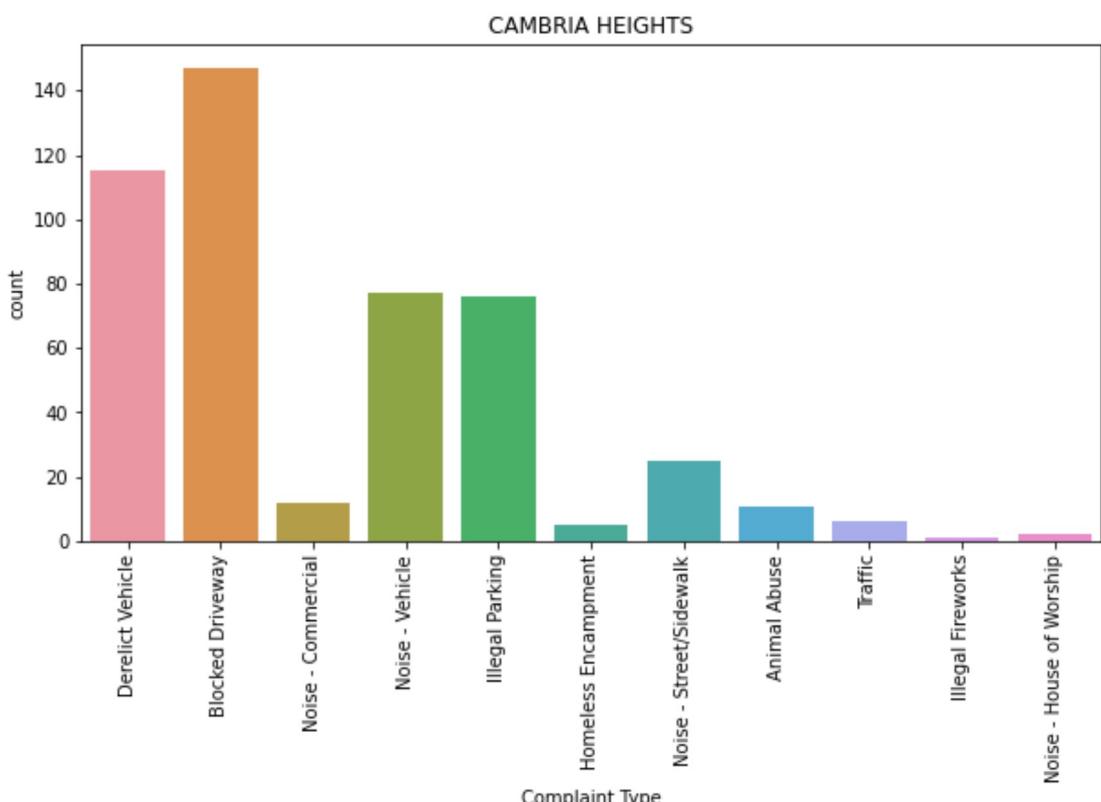
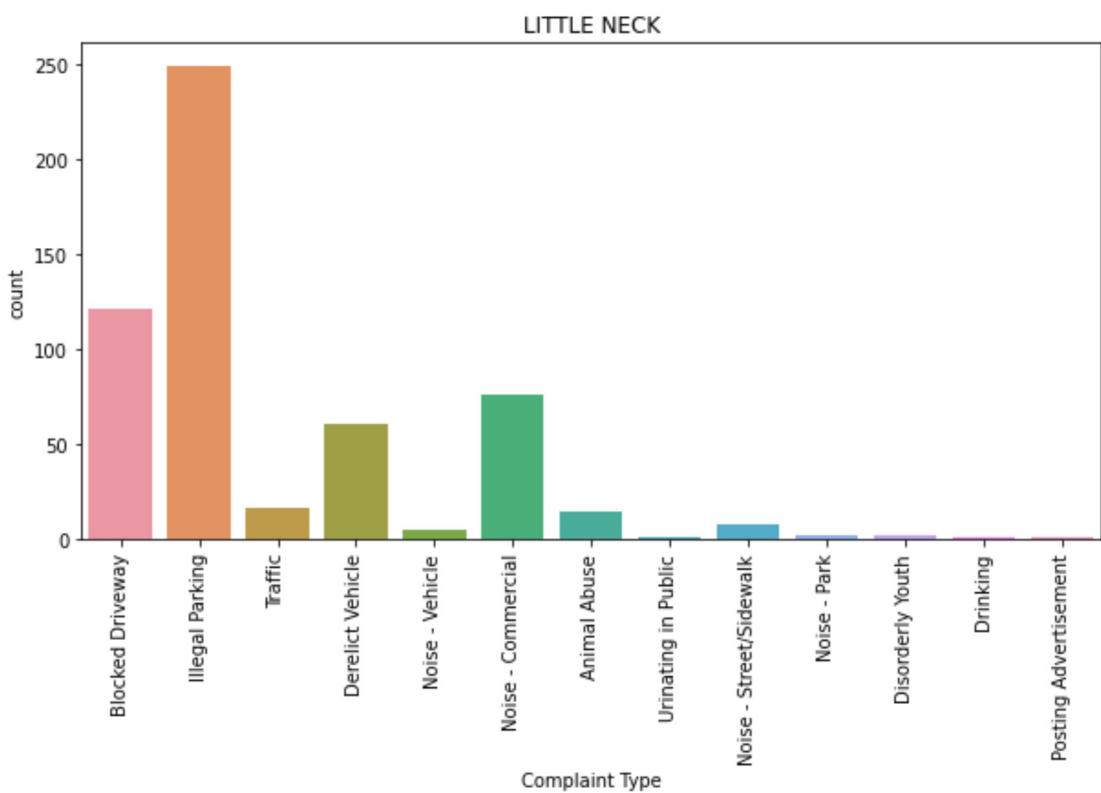


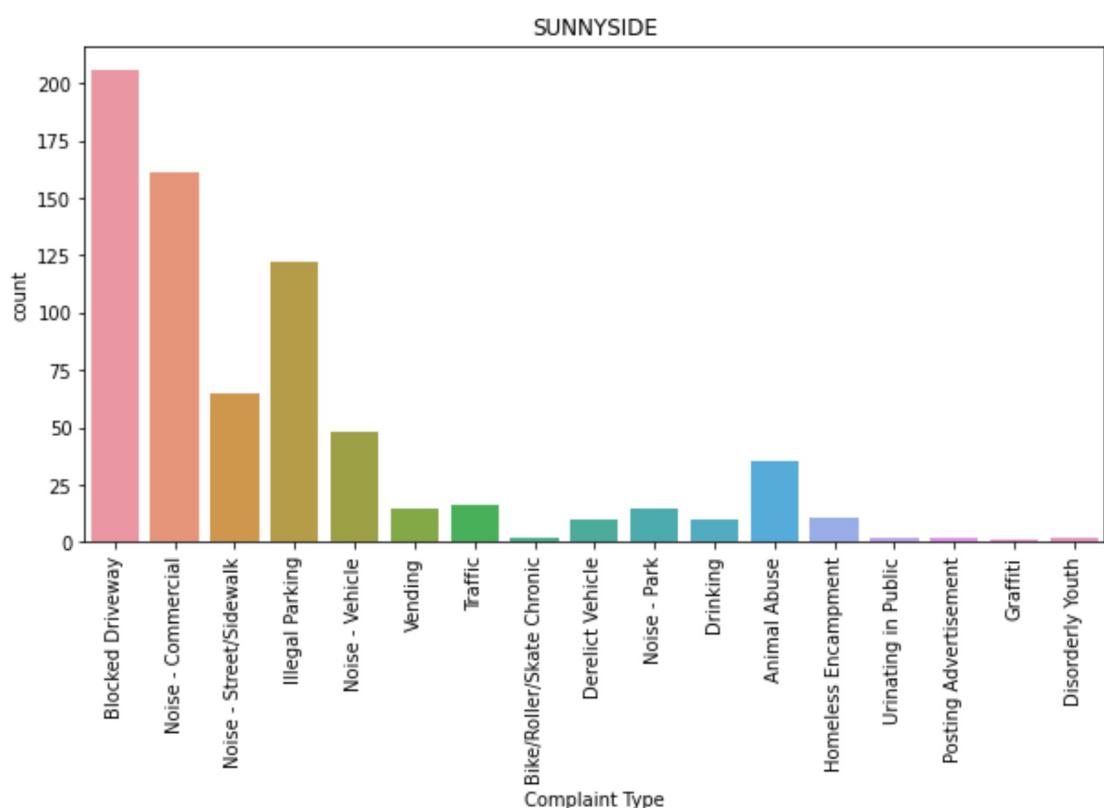
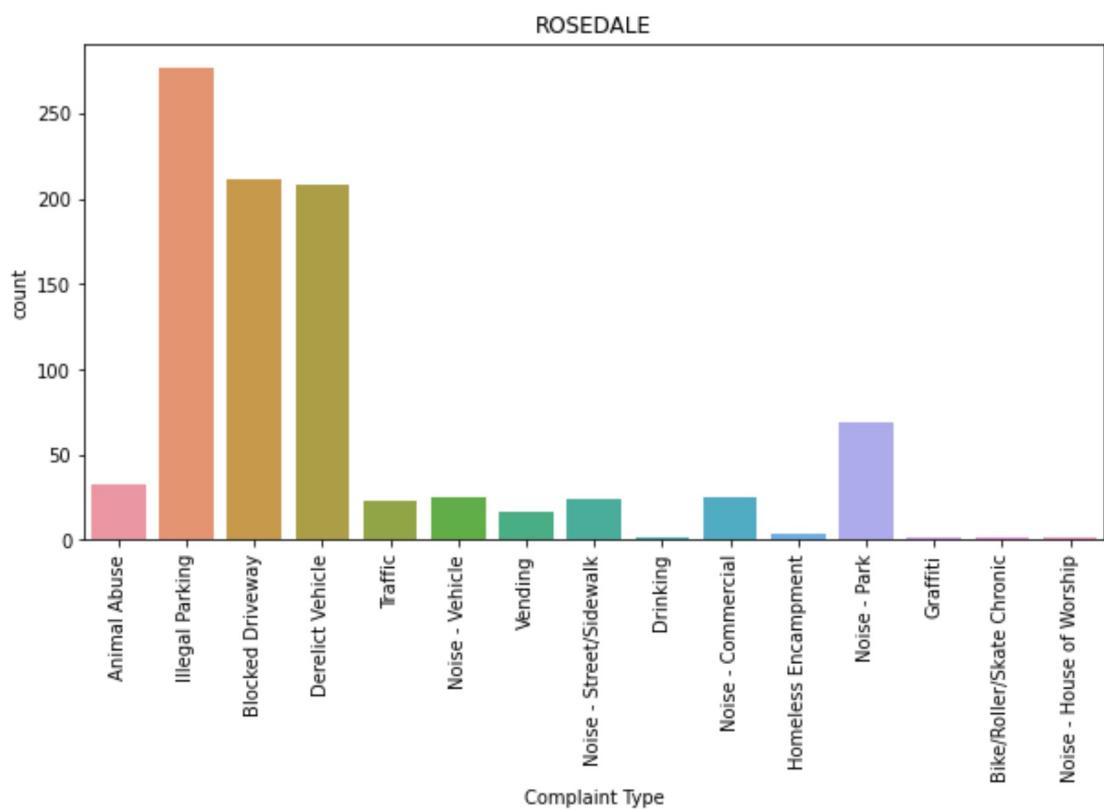
FAR ROCKAWAY

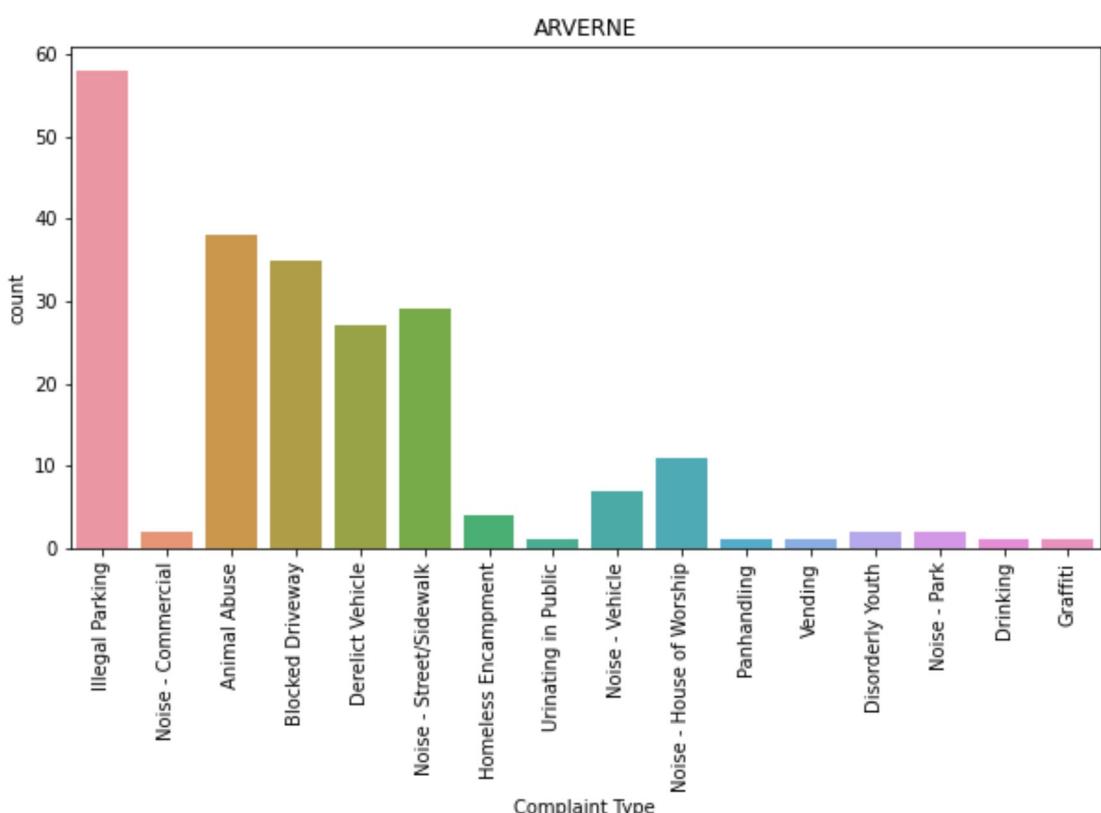
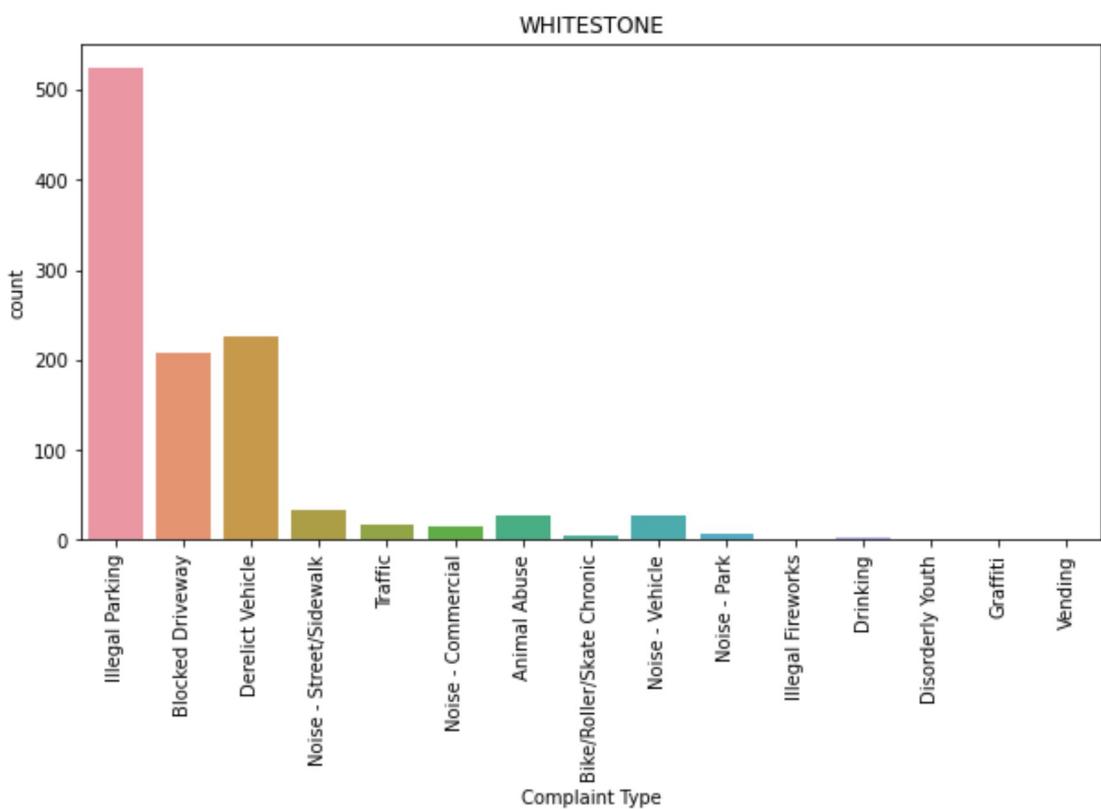


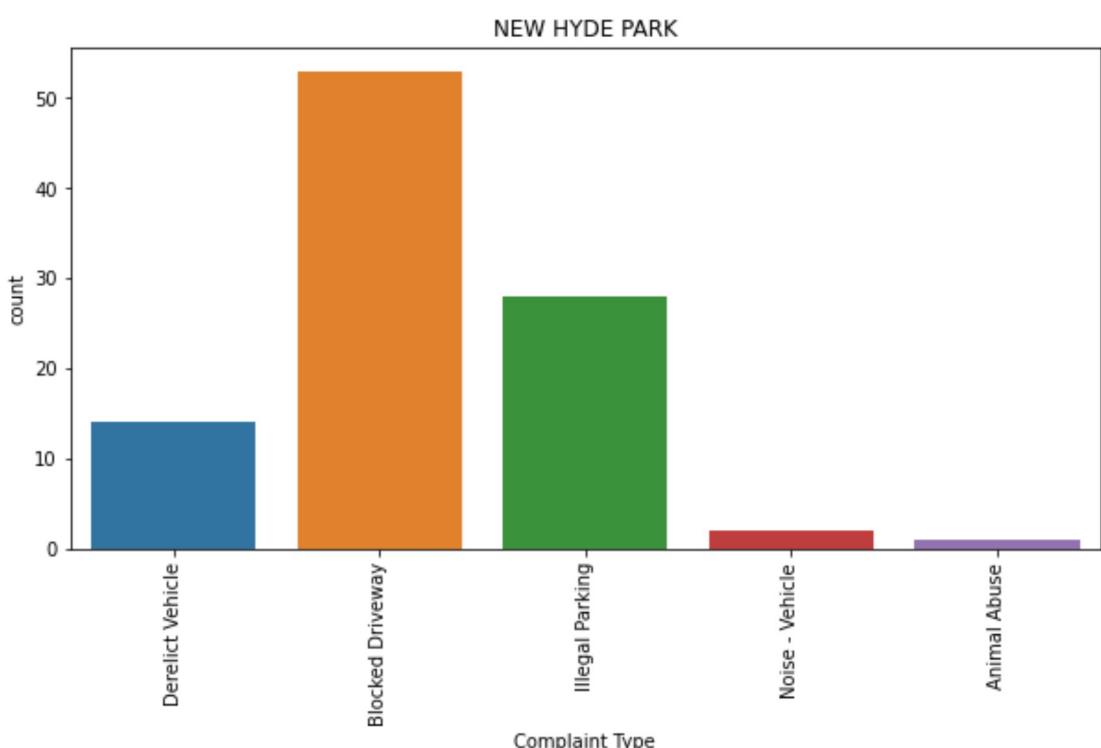
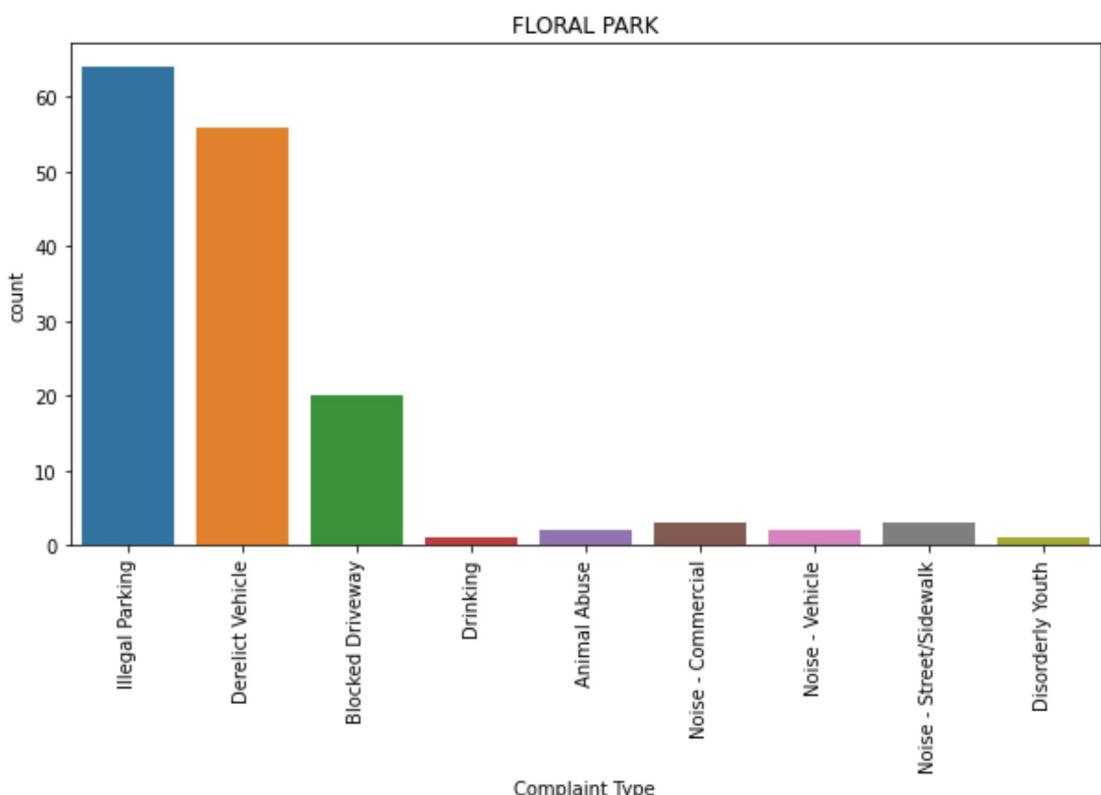
BELLEROSE

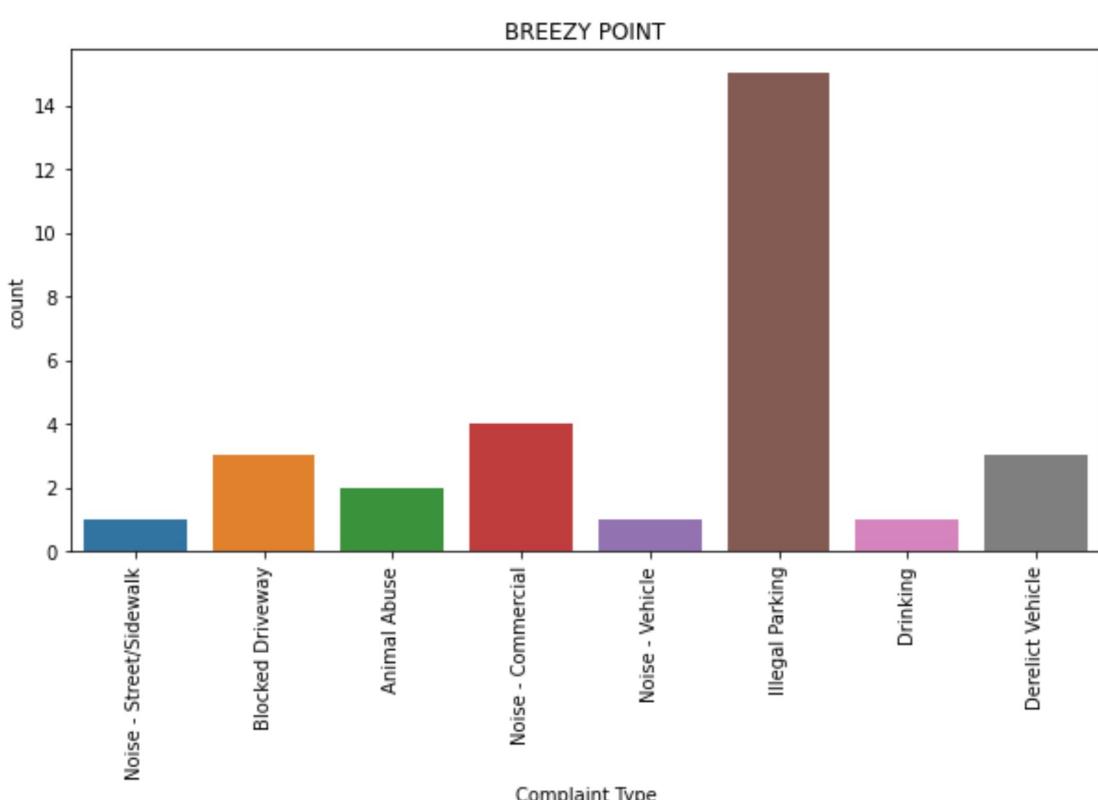
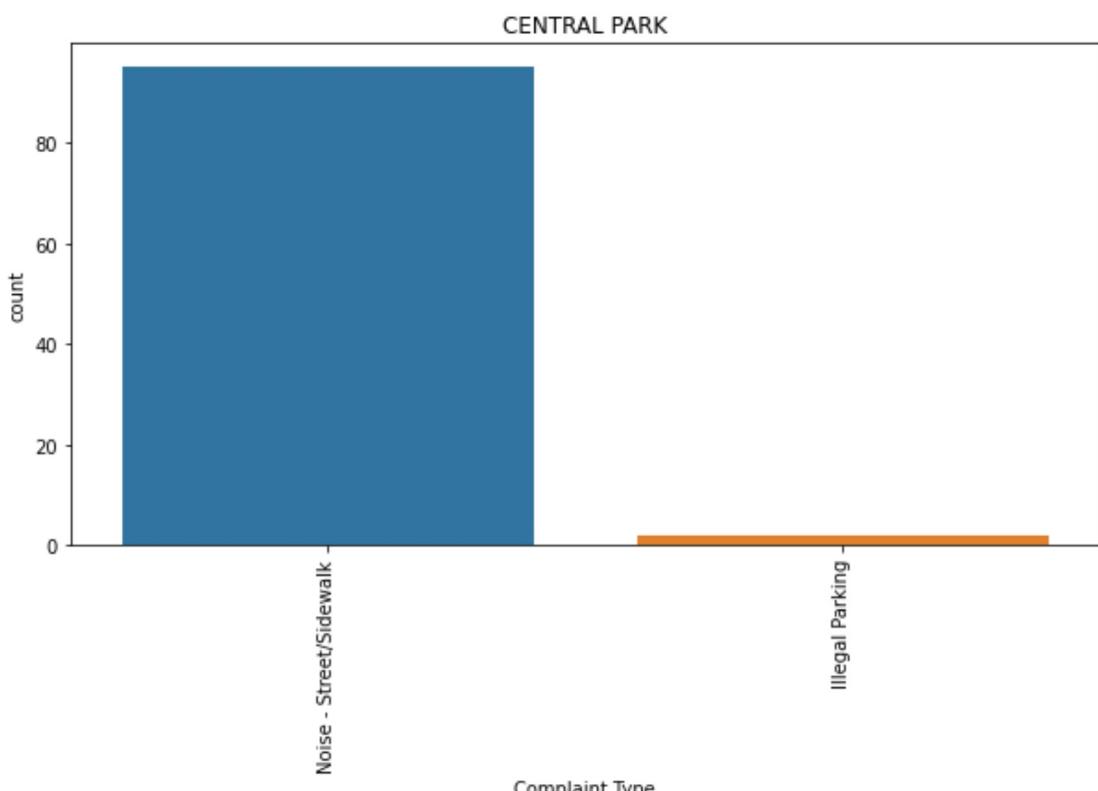


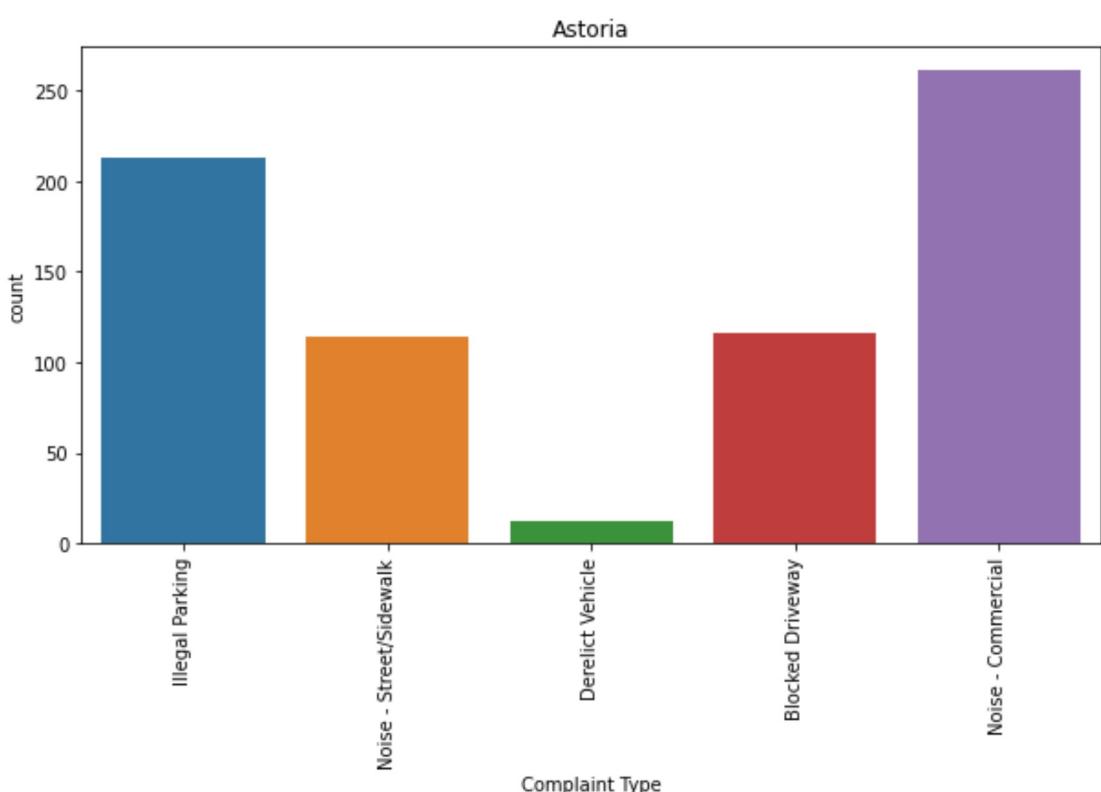
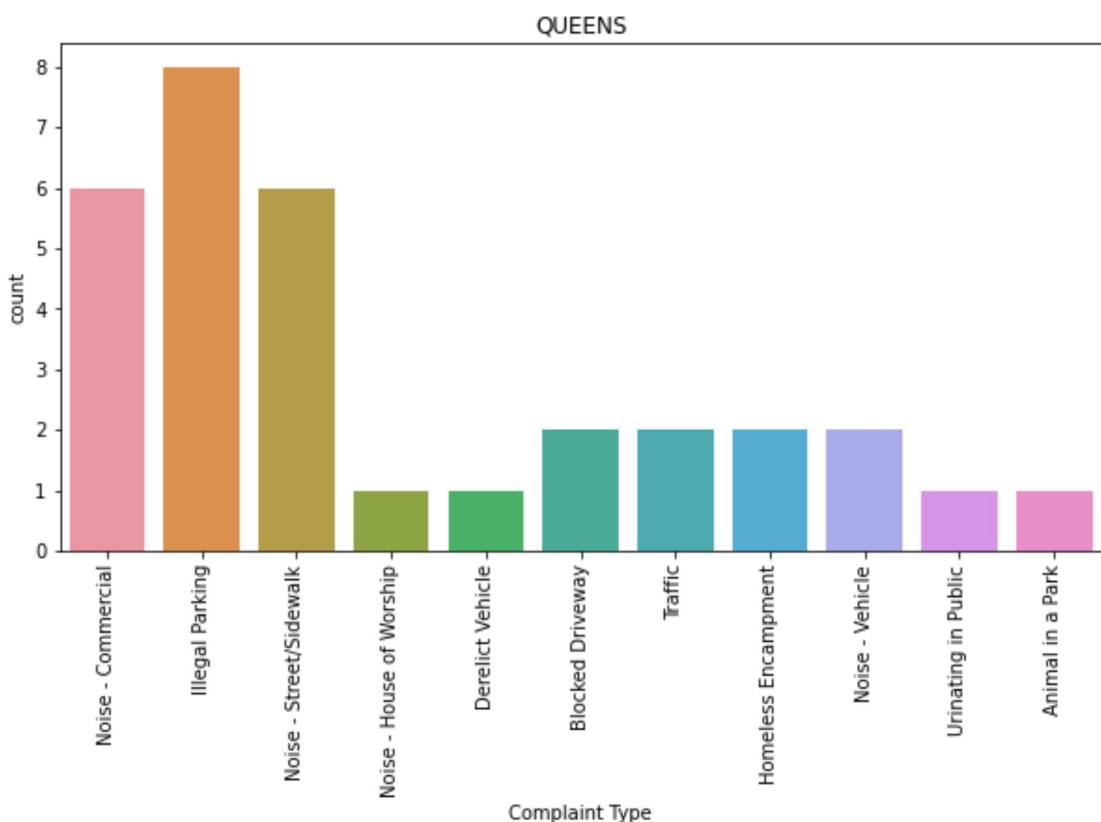


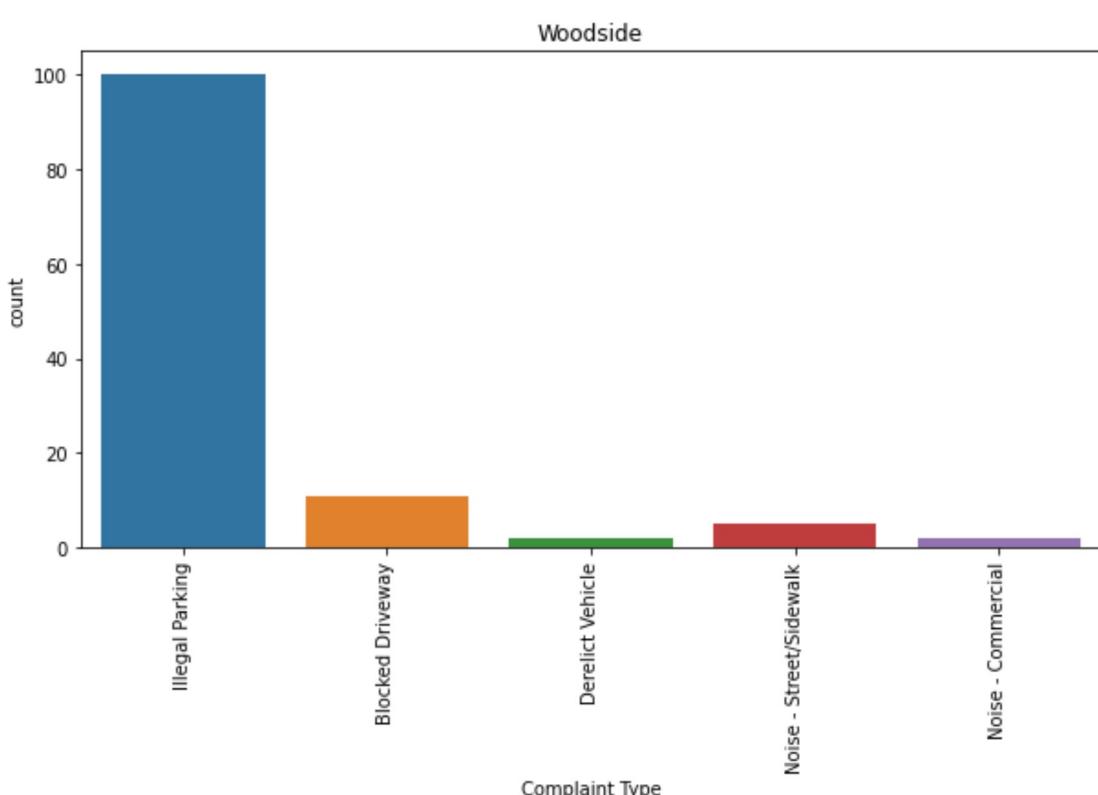
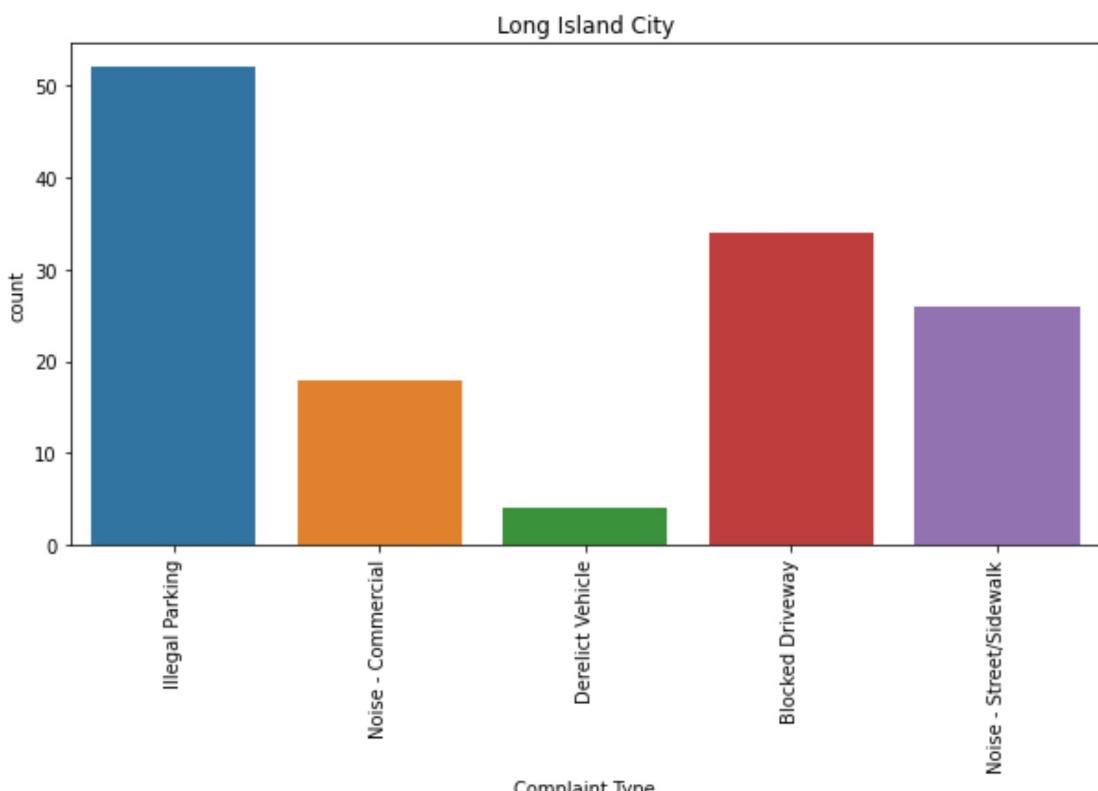


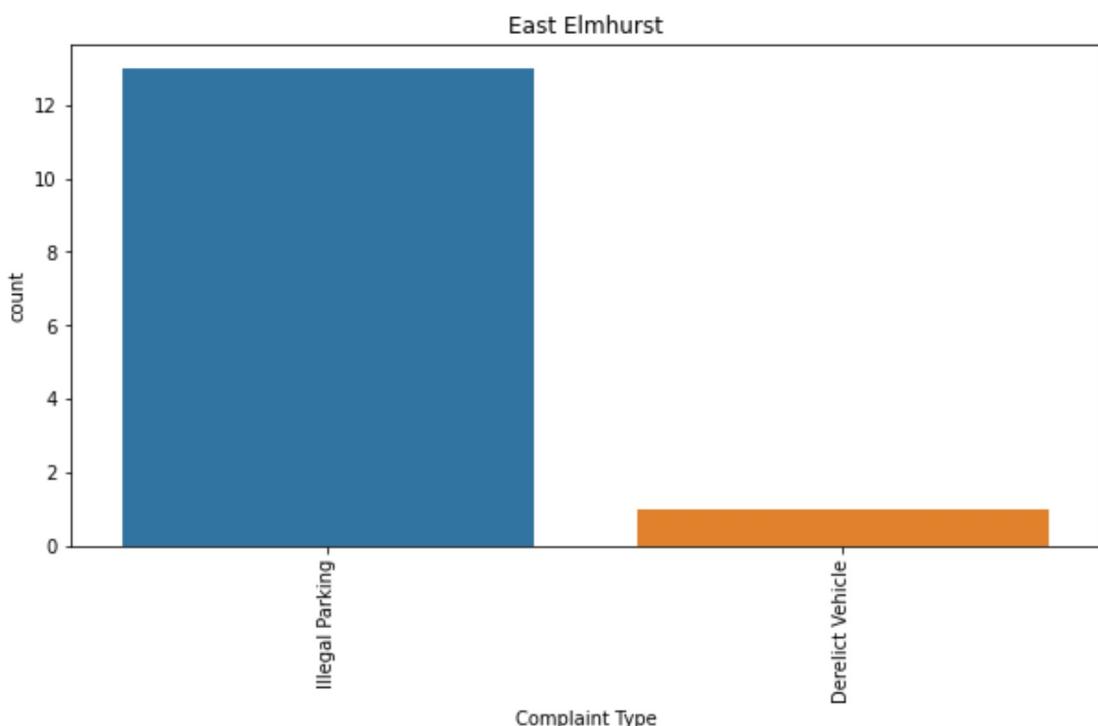








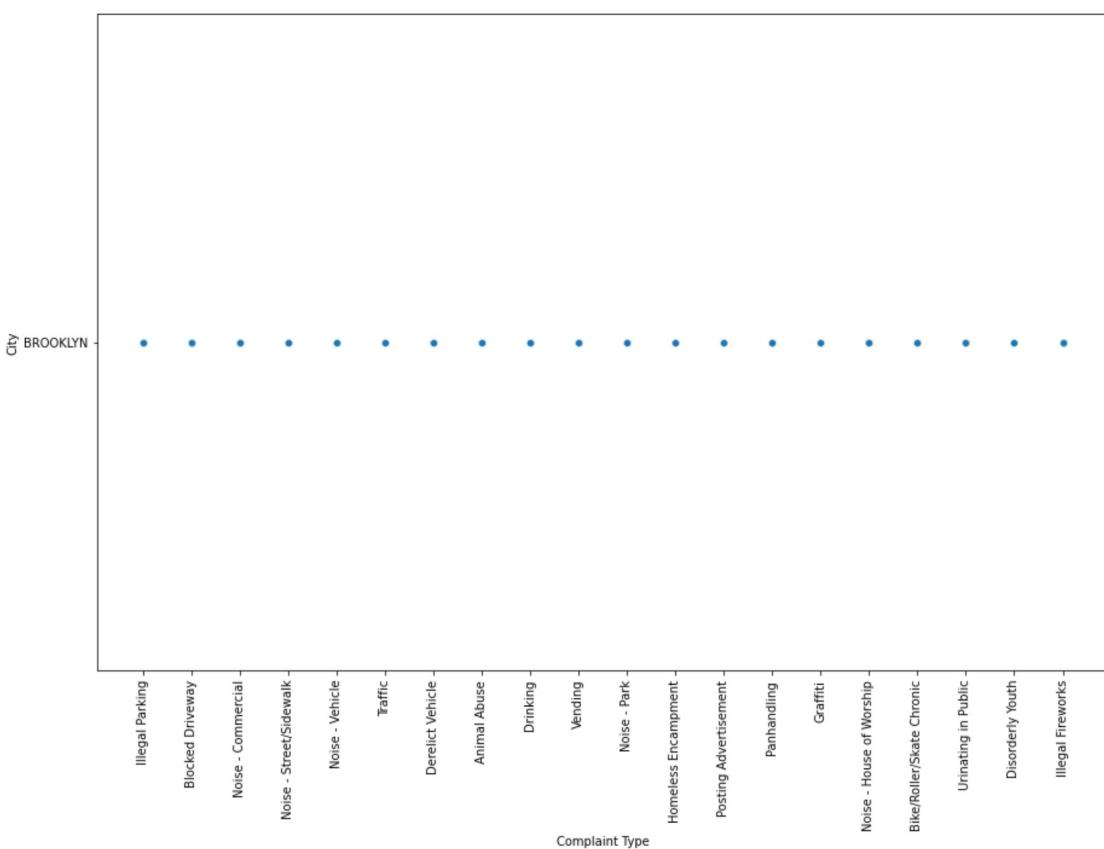




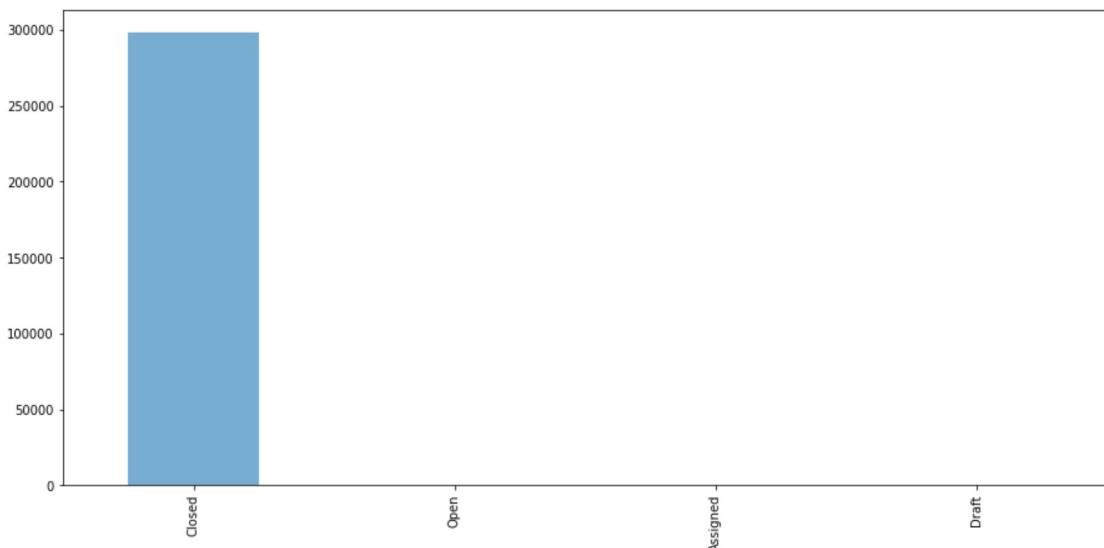
Draw scatter plots for complaint concentration across Brooklyn

```
In [ ]: plt.figure(figsize=(15,10))
sns.scatterplot(data=Brooklyn, x='Complaint Type', y='City')
plt.xticks(x=Brooklyn['Complaint Type'], rotation='vertical')
```

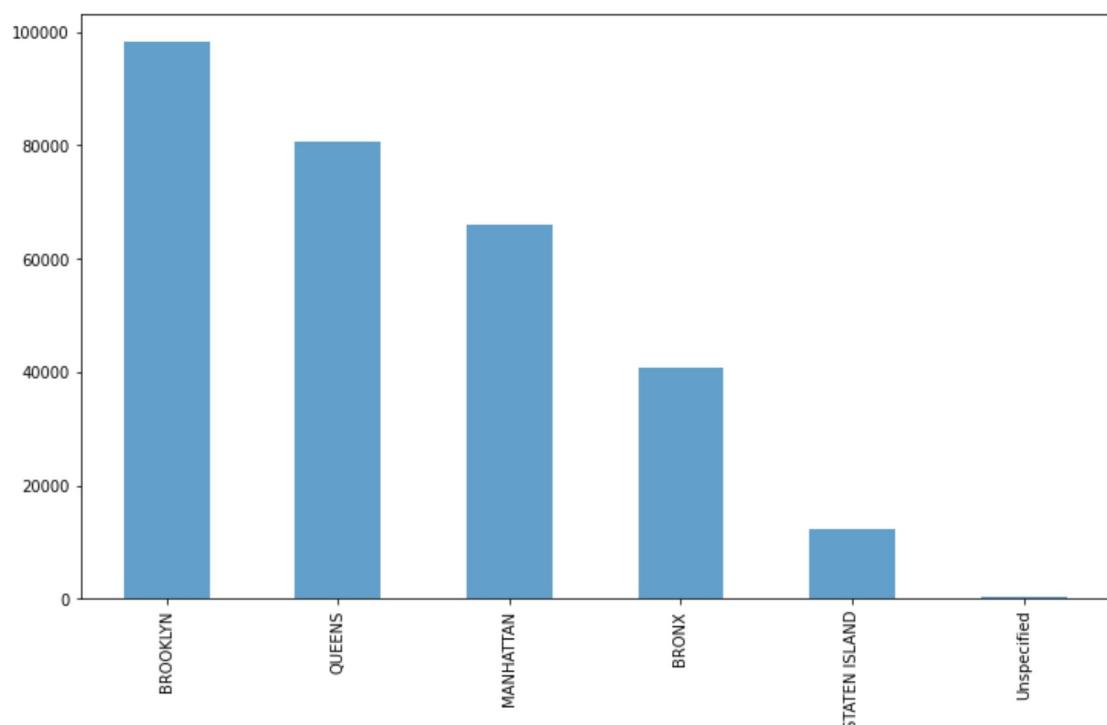
```
Out[ ]: ([0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19],  
<a list of 20 Text major ticklabel objects>)
```



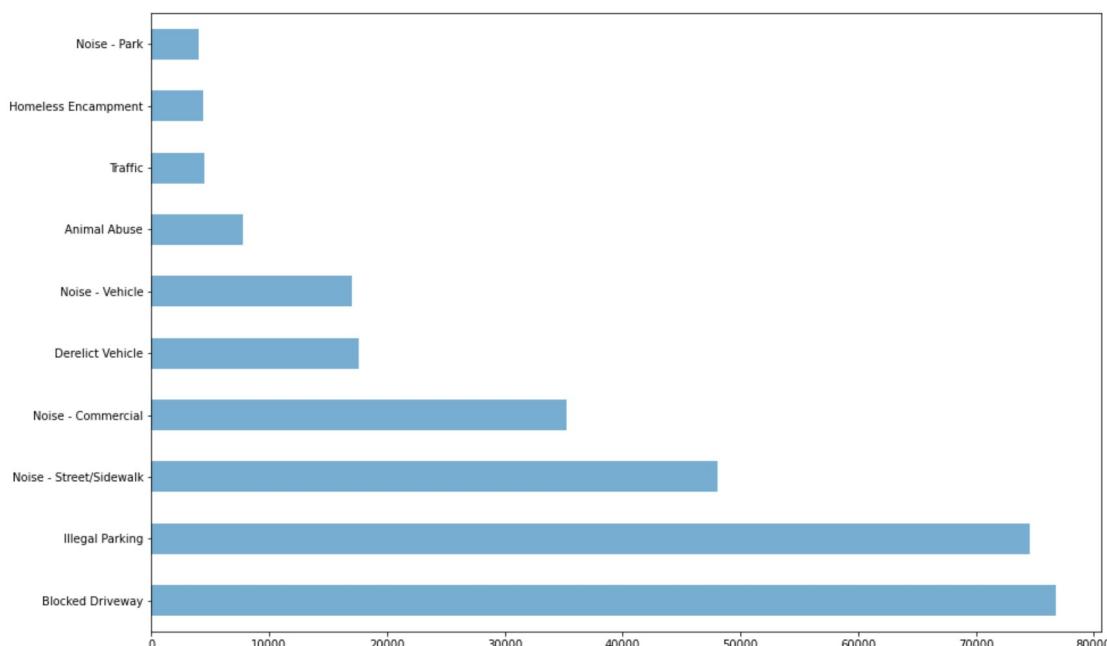
```
In [ ]: # Count plot to know the status of the requests
data['Status'].value_counts().plot(kind='bar',alpha=0.6,figsize=(15,7))
plt.show()
```



```
In [ ]: #Count Plot for Column Borough
plt.figure(figsize=(12,7))
data[ 'Borough'].value_counts().plot(kind='bar',alpha=0.7)
plt.show()
```



```
In [ ]: # Count plot to understand the type of the complaint raised
data[ 'Complaint Type'].value_counts()[:10].plot(kind='barh',alpha=0.6,figsize=(15,10))
plt.show()
```

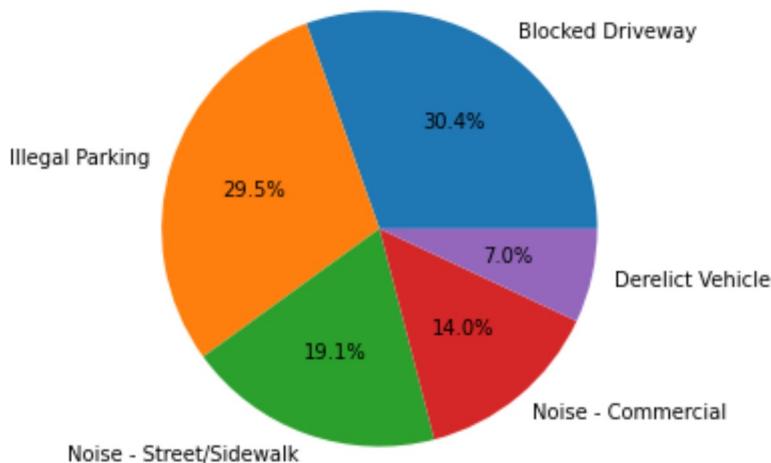


```
In [ ]: majorcomplaints=data.groupby("Complaint Type")
         sortedComplaintType = majorcomplaints.size().sort_values(ascending = False)
         sortedComplaintType = sortedComplaintType.to_frame('count').reset_index()
         sortedComplaintType
         sortedComplaintType.head(10)
```

Out[]:

	Complaint Type	count
0	Blocked Driveway	76810
1	Illegal Parking	74532
2	Noise - Street/Sidewalk	48076
3	Noise - Commercial	35247
4	Derelict Vehicle	17588
5	Noise - Vehicle	17033
6	Animal Abuse	7768
7	Traffic	4496
8	Homeless Encampment	4416
9	Noise - Park	4022

```
In [ ]: sortedComplaintType = sortedComplaintType.head()
         plt.figure(figsize=(5,5))
         plt.pie(sortedComplaintType['count'],labels=sortedComplaintType["Complaint Type"], autopct="%1.1f%%")
         plt.show()
```



```
In [ ]: #Group dataset by complaint type to display plot against city
         groupedby_complainttype = data.groupby('Complaint Type')
```

```
In [ ]: grp_data = groupedby_complainttype.get_group('Blocked Driveway')
         grp_data.shape
```

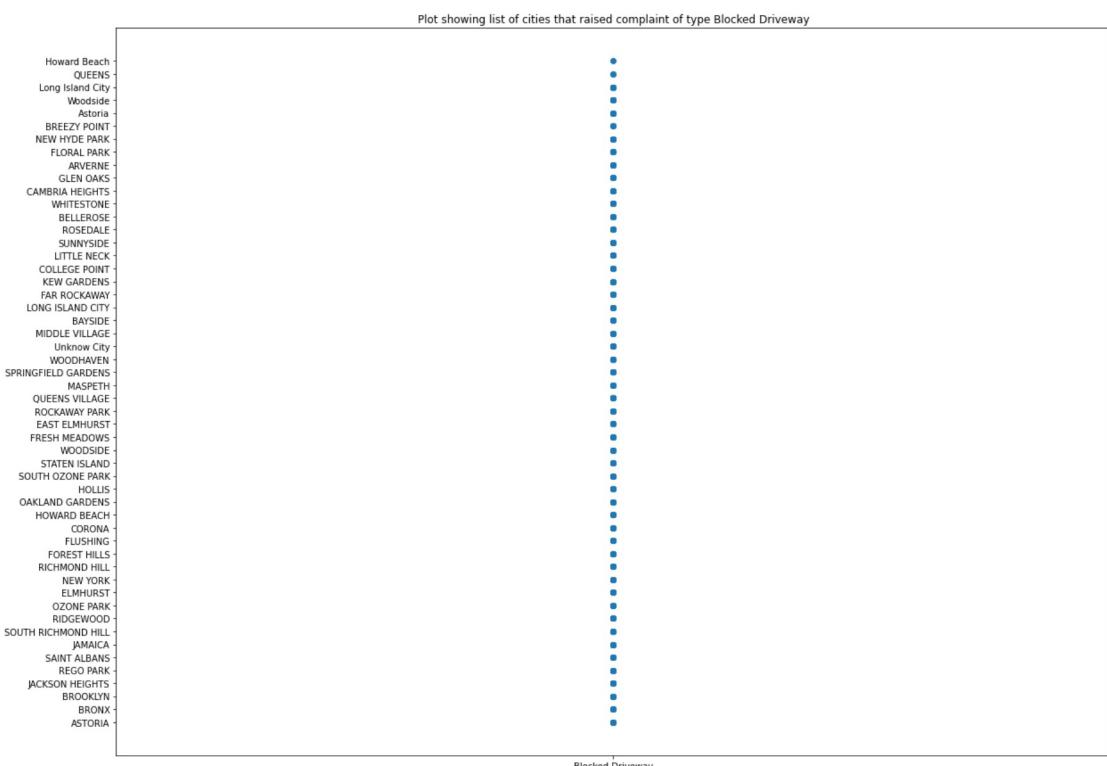
Out[]: (76810, 44)

```
In [ ]: data['City'].dropna(inplace=True)
```

```
In [ ]: data['City'].shape
```

```
Out[ ]: (298534,)
```

```
In [ ]: #Scatter plot displaying all the cities that raised complaint of type 'Blocked Driveway'  
plt.figure(figsize=(20, 15))  
plt.scatter(grp_data['Complaint Type'],grp_data['City'])  
plt.title('Plot showing list of cities that raised complaint of type Blocked Driveway')  
plt.show()
```



```
In [ ]: C_CT_RCT = data[['City', 'Complaint Type', 'Request_Closing_Time']]
C_CT_RCT.dropna(subset = ['City', 'Complaint Type', 'Request_Closing_Time'],
                 inplace = True)
C_CT_RCT['DTime'] = np.around( (C_CT_RCT['Request_Closing_Time'].astype(np.int64)/
                                    (pow(10,9)*3600) ), decimals=2)
C_CT_RCT.head(6)
```

/usr/local/lib/python3.7/dist-packages/pandas/util/_decorators.py:311: SettingWithCopyWarning:

A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy

```
    return func(*args, **kwargs)
```

/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:3: FutureWarning: casting timedelta64[ns] values to int64 with .astype(...) is deprecated and will raise in a future version. Use .view(...) instead.

This is separate from the ipykernel package so we can avoid doing imports until

/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:4: SettingWithCopyWarning:

A value is trying to be set on a copy of a slice from a DataFrame.

Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy

after removing the cwd from sys.path.

Out[]:

	City	Complaint Type	Request_Closing_Time	DTime
0	NEW YORK	Noise - Street/Sidewalk	-1 days +23:04:45	-0.92
1	ASTORIA	Blocked Driveway	-1 days +22:33:44	-1.44
2	BRONX	Blocked Driveway	-1 days +19:08:29	-4.86
3	BRONX	Illegal Parking	-1 days +16:14:46	-7.75
4	ELMHURST	Illegal Parking	-1 days +20:32:58	-3.45
5	BROOKLYN	Illegal Parking	-1 days +22:06:30	-1.89

```
In [ ]: Avarage_time = np.around((C_CT_RCT['DTime'].mean()),decimals=2)
print('Avarage or mean time gap between logging the complaint and problem
      solved = ',Avarage_time, 'hour')
Central_val = np.around((C_CT_RCT['DTime'].median()),decimals=2)
print('Central or median value of the distribution = ',Central_val, 'hour
      ')
Most_occoor = np.around((C_CT_RCT['DTime'].mode()),decimals=2)
print('Frequently occered value = ',Most_occoor, 'hour')
stand_dev = np.around((C_CT_RCT['DTime'].std()),decimals=2)
print('Standard Deviation is = ',stand_dev)
```

```
Avarage or mean time gap between logging the complaint and problem solve
d = -4.31 hour
Central or median value of the distribution = -2.72 hour
Frequently occered value = 0 -0.88
dtype: float64 hour
Standard Deviation is = 6.09
```

```
In [ ]: # Creating a data frame Contain Days and Months of Complaint date
-----
import calendar
Year_Month_Day = pd.to_datetime(data['Created Date'].dt.date)
Month_Day = pd.DataFrame()
Month_Day[ 'Date' ] = pd.to_datetime(Year_Month_Day.dt.date)
Month_Day[ 'Month' ] = Year_Month_Day.dt.month
Month_Day[ 'Day' ] = Year_Month_Day.dt.day
Month_Day[ 'Month Name' ] = Month_Day[ 'Month' ].apply(lambda x: calendar.month_abbr[x])
Month_Day[ 'Day No' ] = Month_Day[ 'Date' ].dt.weekday
Month_Day[ 'Day Name' ] = Month_Day[ 'Day No' ].map({0:'Monday',1:'Tuesday',
2:'Wednesday',3:'Thursday',4:'Friday',
5:'Saturday',6:'Sunday'})
Month_Day.sample(20)
```

Out[]:

	Date	Month	Day	Month Name	Day No	Day Name
29299	2015-12-02	12	2	Dec	2	Wednesday
298855	2015-03-31	3	31	Mar	1	Tuesday
295319	2015-04-04	4	4	Apr	5	Saturday
239964	2015-05-27	5	27	May	2	Wednesday
177252	2015-07-20	7	20	Jul	0	Monday
21797	2015-12-09	12	9	Dec	2	Wednesday
187887	2015-07-11	7	11	Jul	5	Saturday
53323	2015-11-08	11	8	Nov	6	Sunday
241963	2015-05-25	5	25	May	0	Monday
17088	2015-12-13	12	13	Dec	6	Sunday
101166	2015-09-24	9	24	Sep	3	Thursday
131498	2015-08-30	8	30	Aug	6	Sunday
244496	2015-05-23	5	23	May	5	Saturday
74330	2015-10-19	10	19	Oct	0	Monday
277723	2015-04-23	4	23	Apr	3	Thursday
215632	2015-06-17	6	17	Jun	2	Wednesday
207580	2015-06-24	6	24	Jun	2	Wednesday
81595	2015-10-12	10	12	Oct	0	Monday
248503	2015-05-20	5	20	May	2	Wednesday
207869	2015-06-23	6	23	Jun	1	Tuesday

```
In [ ]: Month_plot = Month_Day['Month Name'].value_counts()
Month_plot = Month_plot.to_frame()
Month_plot = Month_plot.rename(columns={'Month Name': 'Counts'})
Month_plot
```

Out[]:

Counts	
May	36069
Sep	35176
Jun	35142
Aug	34773
Jul	34416
Oct	32398
Nov	30594
Dec	30340
Apr	27169
Mar	2457

```
In [ ]: Day_plot = Month_Day['Day Name'].value_counts()
Day_plot = Day_plot.to_frame()
Day_plot = Day_plot.rename(columns={'Day Name': 'Counts'})
Day_plot
```

Out[]:

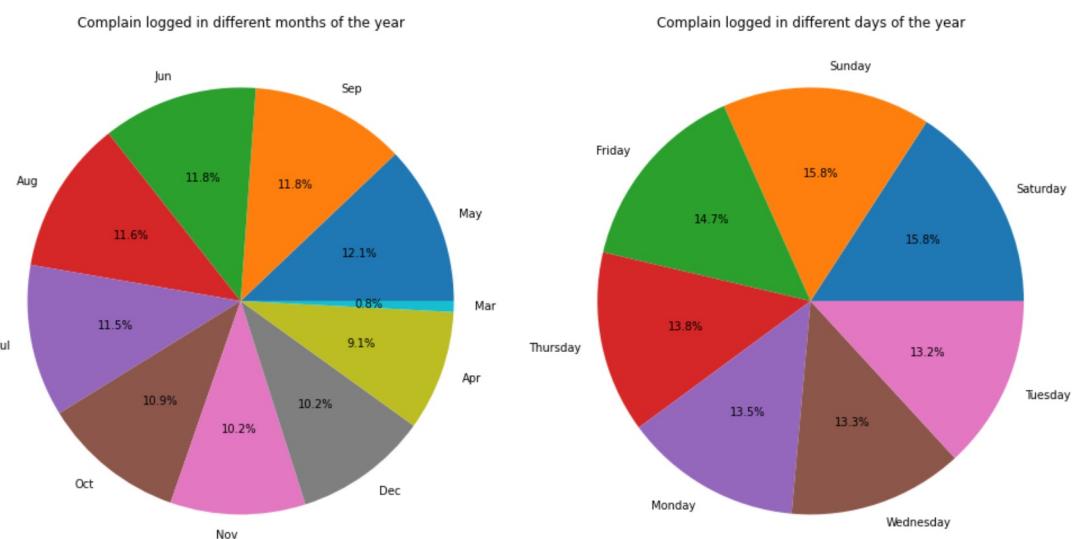
Counts	
Saturday	47294
Sunday	47232
Friday	43771
Thursday	41108
Monday	40258
Wednesday	39574
Tuesday	39297

```
In [ ]: fig, axes = plt.subplots(1,2, figsize=(14,8))

axes[0].pie(Month_plot['Counts'], labels = Month_plot.index, autopct='%.1f%%')
axes[0].set_title('Complain logged in different months of the year')

axes[1].pie(Day_plot['Counts'], labels = Day_plot.index, autopct='%.1f%%')
axes[1].set_title('Complain logged in different days of the year')

plt.tight_layout()
```



```
In [ ]: Month_Day_grouped = Month_Day.groupby(['Month Name', 'Day Name'], as_index=False)[['Day No']].count()
Month_Day_grouped_final = Month_Day_grouped.rename(columns={'Day No': 'Counts'})
Month_Day_grouped_final.head(10)
```

Out[]:

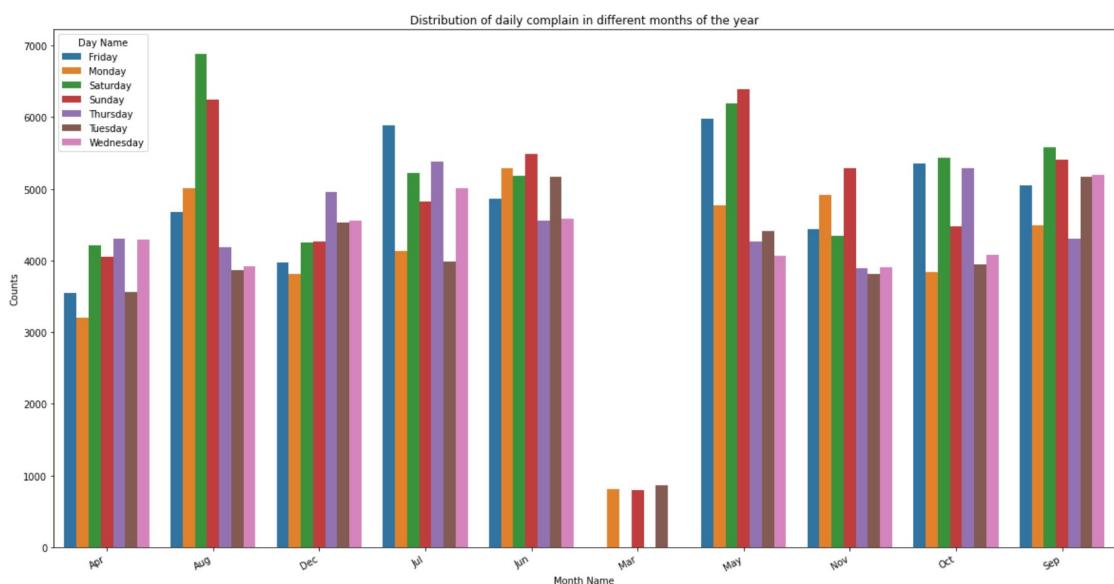
	Month Name	Day Name	Counts
0	Apr	Friday	3553
1	Apr	Monday	3202
2	Apr	Saturday	4211
3	Apr	Sunday	4045
4	Apr	Thursday	4306
5	Apr	Tuesday	3563
6	Apr	Wednesday	4289
7	Aug	Friday	4674
8	Aug	Monday	5011
9	Aug	Saturday	6881

```
In [ ]: Month_Day[(Month_Day['Month Name'] == 'Mar') & (Month_Day['Day Name'] == 'Monday')].count()
```

```
Out[ ]: Date      805
Month     805
Day       805
Month Name 805
Day No    805
Day Name   805
dtype: int64
```

```
In [ ]: plt.figure(figsize=(20,10))
```

```
month_day_plot = sns.barplot(x=Month_Day_grouped_final['Month Name'], y=Month_Day_grouped_final['Counts'],
                             hue=Month_Day_grouped_final['Day Name'], data=Month_Day_grouped_final)
month_day_plot.set_xticklabels(month_day_plot.get_xticklabels(), rotation=30, ha="right")
plt.title('Distribution of daily complain in different months of the year')
plt.show()
plt.tight_layout()
```



<Figure size 432x288 with 0 Axes>

```
In [ ]: Month_Day_grouped[Month_Day_grouped['Month Name'] == 'Mar']
```

```
Out[ ]:
```

	Month Name	Day Name	Day No
35	Mar	Monday	805
36	Mar	Sunday	796
37	Mar	Tuesday	856

```
In [ ]: Complaint_City_AvgTime_grouped = C_CT_RCT.groupby(['City','Complaint Type'])  
        .agg({'DTime':'mean'})  
Complaint_City_AvgTime_grouped = Complaint_City_AvgTime_grouped.rename(columns={'DTime':'Avg. Time(Given City, Complaint Type)'}))  
Complaint_City_AvgTime_grouped = Complaint_City_AvgTime_grouped.sort_values(['City','Avg. Time(Given City, Complaint Type)'])  
pd.set_option('display.max_rows', None)  
pd.set_option('display.max_columns', None)  
Complaint_City_AvgTime_grouped
```

Out[]:

Avg. Time(Given City, Complaint Type)

City	Complaint Type	Avg. Time
ARVERNE	Disorderly Youth	-3.595000
	Derelict Vehicle	-2.968519
	Blocked Driveway	-2.526286
	Illegal Parking	-2.316207
	Noise - Commercial	-2.285000
	Animal Abuse	-2.153158
	Noise - Street/Sidewalk	-1.992759
	Noise - Vehicle	-1.860000
	Homeless Encampment	-1.812500
	Noise - House of Worship	-1.562727
	Graffiti	-1.530000
	Noise - Park	-1.285000
	Panhandling	-1.030000
	Urinating in Public	-0.690000
	Vending	-0.480000
	Drinking	-0.240000
	Graffiti	-14.097500
ASTORIA	Derelict Vehicle	-9.689145
	Posting Advertisement	-5.870000
	Traffic	-5.410851
	Animal Abuse	-5.000640
	Vending	-4.935556
	Homeless Encampment	-4.918750
	Illegal Parking	-4.833371
	Blocked Driveway	-4.816108
	Drinking	-4.722571
	Urinating in Public	-4.626667
	Noise - Vehicle	-3.509020
	Noise - Street/Sidewalk	-3.450881
	Noise - Commercial	-3.133039
	Noise - Park	-2.994754
	Disorderly Youth	-2.903333
	Illegal Fireworks	-2.772500
	Noise - House of Worship	-2.022632
	Bike/Roller/Skate Chronic	-1.740667
	Panhandling	-1.150000

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
Astoria	Derelict Vehicle	-6.234167
	Blocked Driveway	-4.915172
	Illegal Parking	-4.711362
	Noise - Street/Sidewalk	-3.713333
	Noise - Commercial	-3.542069
BAYSIDE	Graffiti	-4.553333
	Noise - House of Worship	-3.535000
	Derelict Vehicle	-3.360000
	Noise - Park	-3.275000
	Animal Abuse	-3.274865
BELLEROSE	Disorderly Youth	-2.970000
	Homeless Encampment	-2.875000
	Blocked Driveway	-2.562997
	Illegal Parking	-2.562763
	Noise - Commercial	-2.234500
BELLMONT	Drinking	-1.900000
	Vending	-1.880000
	Noise - Vehicle	-1.709375
	Noise - Street/Sidewalk	-1.530667
	Traffic	-1.526667
BELMONT	Homeless Encampment	-39.130000
	Derelict Vehicle	-17.167978
	Animal Abuse	-12.725714
	Blocked Driveway	-10.099474
	Noise - Street/Sidewalk	-9.069231
BELMONT	Illegal Parking	-8.203019
	Urinating in Public	-7.540000
	Panhandling	-7.480000
	Noise - Commercial	-6.740811
	Illegal Fireworks	-6.670000
BELMONT	Traffic	-5.760000
	Bike/Roller/Skate Chronic	-4.900000
	Drinking	-3.920000
	Noise - Vehicle	-2.584000
	Posting Advertisement	-2.260000
BELMONT	Noise - House of Worship	-2.200000
	Disorderly Youth	-1.850000

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Noise - Park	-1.410000
BREEZY POINT	Derelict Vehicle	-7.143333
	Illegal Parking	-3.942667
	Drinking	-2.630000
	Animal Abuse	-2.615000
	Noise - Commercial	-2.540000
	Blocked Driveway	-1.326667
	Noise - Vehicle	-1.320000
	Noise - Street/Sidewalk	-1.000000
BRONX	Panhandling	-14.214211
	Derelict Vehicle	-9.227623
	Graffiti	-8.898889
	Homeless Encampment	-7.442186
	Animal Abuse	-7.335534
	Vending	-6.825673
	Illegal Parking	-6.580888
	Blocked Driveway	-6.261773
	Drinking	-5.793404
	Illegal Fireworks	-5.607083
	Noise - Vehicle	-5.560851
	Urinating in Public	-5.389804
	Noise - Street/Sidewalk	-5.226292
	Traffic	-4.923606
	Noise - Park	-4.698556
	Noise - Commercial	-4.697402
	Noise - House of Worship	-4.559494
	Disorderly Youth	-4.238571
	Posting Advertisement	-3.461176
	Bike/Roller/Skate Chronic	-3.459500
BROOKLYN	Graffiti	-8.242791
	Derelict Vehicle	-5.947511
	Bike/Roller/Skate Chronic	-5.004865
	Animal Abuse	-4.832427
	Homeless Encampment	-4.694912
	Vending	-4.528097
	Blocked Driveway	-4.410757
	Panhandling	-4.316735

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Illegal Parking	-4.272241
	Disorderly Youth	-4.150833
	Urinating in Public	-3.899191
	Drinking	-3.540467
	Posting Advertisement	-3.361778
	Noise - Street/Sidewalk	-3.296003
	Noise - Vehicle	-3.283404
	Noise - Park	-3.150495
	Traffic	-3.112959
	Noise - House of Worship	-3.069765
	Noise - Commercial	-2.986138
	Illegal Fireworks	-2.340000
CAMBRIA HEIGHTS	Homeless Encampment	-22.788000
	Derelict Vehicle	-16.110870
	Animal Abuse	-11.355455
	Illegal Parking	-11.243947
	Traffic	-8.546667
	Blocked Driveway	-7.696054
	Noise - Vehicle	-6.917273
	Noise - Street/Sidewalk	-4.607600
	Noise - Commercial	-3.809167
	Noise - House of Worship	-2.640000
	Illegal Fireworks	-1.530000
CENTRAL PARK	Illegal Parking	-4.595000
	Noise - Street/Sidewalk	-3.266526
COLLEGE POINT	Graffiti	-11.860000
	Vending	-4.660000
	Animal Abuse	-4.643929
	Noise - Commercial	-3.972571
	Derelict Vehicle	-3.518913
	Blocked Driveway	-3.380667
	Noise - Park	-3.180000
	Illegal Parking	-3.125227
	Noise - Street/Sidewalk	-3.016667
	Noise - Vehicle	-2.650687
	Traffic	-2.293571
	Homeless Encampment	-1.443333

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
CORONA	Disorderly Youth	-0.600000
	Derelict Vehicle	-4.585088
	Noise - House of Worship	-3.753333
	Homeless Encampment	-3.669474
	Animal Abuse	-3.668033
	Drinking	-3.648485
	Illegal Parking	-3.361045
	Blocked Driveway	-3.320837
	Vending	-3.101613
	Disorderly Youth	-2.876667
EAST ELMHURST	Noise - Vehicle	-2.660500
	Noise - Commercial	-2.622177
	Noise - Street/Sidewalk	-2.364160
	Noise - Park	-2.320417
	Traffic	-2.285833
	Urinating in Public	-1.951429
	Posting Advertisement	-1.540000
	Panhandling	-1.170000
	Graffiti	-0.730000
	Graffiti	-7.650000
	Disorderly Youth	-6.900000
	Homeless Encampment	-6.300000
	Derelict Vehicle	-5.687080
	Animal Abuse	-4.055254
	Vending	-4.021111
	Blocked Driveway	-3.733274
	Illegal Parking	-3.378139
QUEENS	Traffic	-2.687500
	Noise - Park	-2.654000
	Noise - Street/Sidewalk	-2.474673
	Noise - Commercial	-2.354000
	Noise - Vehicle	-2.168033
	Urinating in Public	-2.100000
	Drinking	-1.861111
	Posting Advertisement	-1.860000
	Noise - House of Worship	-1.439444
	Bike/Roller/Skate Chronic	-0.250000

Avg. Time(Given City, Complaint Type)		
City	Complaint Type	
ELMHURST	Derelict Vehicle	-4.818333
	Bike/Roller/Skate Chronic	-4.625000
	Vending	-3.994762
	Animal Abuse	-3.872105
	Homeless Encampment	-3.674688
	Blocked Driveway	-3.433396
	Panhandling	-3.300000
	Illegal Parking	-3.278196
	Drinking	-3.062308
	Noise - Commercial	-2.790123
	Traffic	-2.627857
	Noise - Vehicle	-2.626170
	Urinating in Public	-2.539000
	Noise - Street/Sidewalk	-2.509554
	Noise - Park	-2.314412
	Noise - House of Worship	-1.886000
	Illegal Fireworks	-0.980000
East Elmhurst	Disorderly Youth	-0.860000
	Posting Advertisement	-0.730000
FAR ROCKAWAY	Derelict Vehicle	-9.490000
	Illegal Parking	-5.784615
FLORAL PARK	Derelict Vehicle	-3.665615
	Disorderly Youth	-3.370000
	Noise - Street/Sidewalk	-3.038382
	Homeless Encampment	-3.019286
	Vending	-2.805556
	Animal Abuse	-2.717865
	Illegal Parking	-2.706441
	Blocked Driveway	-2.634648
	Drinking	-2.417500
	Traffic	-2.385000
	Noise - Vehicle	-2.180909
	Noise - Commercial	-1.927708
	Urinating in Public	-1.510000
	Noise - Park	-1.504348
	Noise - House of Worship	-1.130000
	Animal Abuse	-26.580000

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Derelict Vehicle	-16.654464
	Illegal Parking	-9.254062
	Drinking	-8.230000
	Blocked Driveway	-7.701500
	Noise - Street/Sidewalk	-6.913333
	Noise - Commercial	-4.366667
	Disorderly Youth	-3.260000
	Noise - Vehicle	-1.950000
FLUSHING	Posting Advertisement	-6.130000
	Bike/Roller/Skate Chronic	-5.733333
	Derelict Vehicle	-3.692932
	Noise - House of Worship	-3.640000
	Animal Abuse	-3.557762
	Noise - Vehicle	-3.359690
	Drinking	-3.052250
	Homeless Encampment	-3.006538
	Illegal Parking	-2.982001
	Blocked Driveway	-2.951002
	Noise - Park	-2.889310
	Noise - Commercial	-2.845029
	Noise - Street/Sidewalk	-2.830533
	Vending	-2.450000
	Disorderly Youth	-2.145000
	Traffic	-2.063617
	Graffiti	-1.722500
	Urinating in Public	-1.226667
	Panhandling	-1.150000
	Illegal Fireworks	-0.695000
FOREST HILLS	Posting Advertisement	-5.866667
	Panhandling	-5.816000
	Bike/Roller/Skate Chronic	-4.824000
	Disorderly Youth	-4.150000
	Drinking	-4.100000
	Noise - House of Worship	-3.900000
	Derelict Vehicle	-3.725962
	Blocked Driveway	-3.715339
	Homeless Encampment	-3.510556

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Illegal Parking	-3.324554
	Graffiti	-3.273333
	Animal Abuse	-3.262889
	Vending	-2.745000
	Noise - Vehicle	-2.383333
	Noise - Street/Sidewalk	-2.320842
	Traffic	-2.007000
	Noise - Commercial	-1.880993
	Noise - Park	-1.539000
	Urinating in Public	-1.370000
	Illegal Fireworks	-0.670000
FRESH MEADOWS	Homeless Encampment	-5.900000
	Derelict Vehicle	-4.511512
	Blocked Driveway	-3.973936
	Drinking	-3.735000
	Noise - Park	-3.416250
	Animal Abuse	-3.279778
	Vending	-2.630000
	Illegal Parking	-2.623379
	Noise - Street/Sidewalk	-2.467381
	Noise - Commercial	-2.407857
	Noise - Vehicle	-2.145455
	Traffic	-1.631538
	Urinating in Public	-1.600000
	Panhandling	-1.570000
GLEN OAKS	Derelict Vehicle	-15.245102
	Animal Abuse	-12.990000
	Noise - Street/Sidewalk	-11.915000
	Noise - Vehicle	-11.422500
	Blocked Driveway	-11.299667
	Urinating in Public	-11.010000
	Illegal Parking	-8.967162
	Noise - Commercial	-6.117692
	Traffic	-5.550000
	Vending	-4.843889
	Noise - Park	-4.402432
HOLLIS	Derelict Vehicle	-11.565035

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Drinking	-7.296667
	Illegal Parking	-6.792318
	Noise - Commercial	-6.715200
	Blocked Driveway	-4.795117
	Animal Abuse	-4.370909
	Homeless Encampment	-4.283333
	Noise - House of Worship	-4.052193
	Urinating in Public	-3.950000
	Disorderly Youth	-3.870000
	Traffic	-3.819091
	Noise - Park	-3.512353
	Noise - Vehicle	-3.190851
	Noise - Street/Sidewalk	-2.830732
HOWARD BEACH	Derelict Vehicle	-11.476377
	Noise - House of Worship	-6.800000
	Noise - Commercial	-5.834922
	Illegal Parking	-5.757438
	Animal Abuse	-4.411613
	Blocked Driveway	-4.254970
	Disorderly Youth	-4.190000
	Noise - Street/Sidewalk	-3.943333
	Noise - Park	-3.875000
	Panhandling	-3.300000
	Traffic	-3.096667
	Noise - Vehicle	-3.084000
	Homeless Encampment	-2.646667
	Bike/Roller/Skate Chronic	-2.630000
	Drinking	-2.007500
	Illegal Fireworks	-1.846667
	Vending	-1.810000
Howard Beach	Blocked Driveway	-4.030000
JACKSON HEIGHTS	Drinking	-5.727778
	Bike/Roller/Skate Chronic	-4.115000
	Animal Abuse	-4.059762
	Urinating in Public	-3.820000
	Derelict Vehicle	-3.768966
	Blocked Driveway	-3.739313

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Vending	-3.714615
	Illegal Parking	-3.649781
	Traffic	-3.246923
	Noise - Commercial	-2.956350
	Homeless Encampment	-2.612727
	Noise - Park	-2.418750
	Noise - Street/Sidewalk	-2.321198
	Noise - Vehicle	-2.211207
	Panhandling	-1.680000
	Posting Advertisement	-1.380000
	Noise - House of Worship	-1.105000
	Illegal Fireworks	-0.700000
JAMAICA	Homeless Encampment	-8.077468
	Derelict Vehicle	-7.946527
	Vending	-7.512000
	Posting Advertisement	-5.487143
	Graffiti	-5.410000
	Noise - House of Worship	-5.351538
	Urinating in Public	-5.108182
	Illegal Parking	-5.079275
	Disorderly Youth	-5.077500
	Animal Abuse	-5.059127
	Blocked Driveway	-4.981122
	Traffic	-4.706464
	Drinking	-4.412059
	Noise - Commercial	-3.923823
	Noise - Street/Sidewalk	-3.664749
	Noise - Vehicle	-3.463775
	Noise - Park	-3.181316
	Bike/Roller/Skate Chronic	-2.915000
	Illegal Fireworks	-2.607500
	Panhandling	-1.740000
KEW GARDENS	Urinating in Public	-7.196667
	Derelict Vehicle	-7.191429
	Vending	-6.220000
	Blocked Driveway	-6.129553
	Illegal Parking	-4.753396

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Noise - Commercial	-3.857073
	Traffic	-3.793000
	Noise - Vehicle	-3.625556
	Animal Abuse	-3.164211
	Noise - Street/Sidewalk	-2.584000
	Homeless Encampment	-1.900000
	Noise - House of Worship	-1.160000
	Drinking	-1.020000
LITTLE NECK	Disorderly Youth	-4.355000
	Derelict Vehicle	-3.597049
	Urinating in Public	-3.080000
	Illegal Parking	-2.850763
	Blocked Driveway	-2.417355
	Animal Abuse	-2.303333
	Posting Advertisement	-2.230000
	Traffic	-2.200588
	Noise - Vehicle	-2.152000
	Noise - Street/Sidewalk	-1.982500
	Drinking	-1.580000
	Noise - Commercial	-1.352763
	Noise - Park	-1.070000
LONG ISLAND CITY	Derelict Vehicle	-10.488462
	Vending	-9.279333
	Illegal Parking	-7.467154
	Homeless Encampment	-7.015000
	Bike/Roller/Skate Chronic	-6.763333
	Blocked Driveway	-6.076969
	Animal Abuse	-6.058667
	Disorderly Youth	-5.500000
	Noise - Park	-5.333704
	Noise - Vehicle	-5.062056
	Noise - Commercial	-4.542130
	Noise - Street/Sidewalk	-4.392358
	Urinating in Public	-4.193333
	Panhandling	-3.900000
	Graffiti	-3.505000
	Traffic	-3.384583

Avg. Time(Given City, Complaint Type)		
City	Complaint Type	
Long Island City	Drinking	-3.032857
	Posting Advertisement	-0.820000
	Derelict Vehicle	-8.680000
	Illegal Parking	-4.945577
	Blocked Driveway	-3.527059
	Noise - Commercial	-3.357222
MASPETH	Noise - Street/Sidewalk	-2.970385
	Noise - Park	-11.033333
	Bike/Roller/Skate Chronic	-8.840000
	Noise - House of Worship	-7.900000
	Derelict Vehicle	-7.777995
	Animal Abuse	-7.278333
	Homeless Encampment	-7.183000
	Illegal Parking	-5.495492
	Noise - Commercial	-4.925577
	Blocked Driveway	-4.815724
MIDDLE VILLAGE	Vending	-4.635000
	Noise - Vehicle	-4.601579
	Noise - Street/Sidewalk	-4.208347
	Disorderly Youth	-4.015000
	Traffic	-3.754545
	Urinating in Public	-3.695000
	Drinking	-2.324444
	Illegal Fireworks	-1.620000
	Bike/Roller/Skate Chronic	-15.680000
	Derelict Vehicle	-8.245000
NEW HYDE PARK	Animal Abuse	-6.881364
	Noise - Commercial	-5.113000
	Illegal Parking	-4.998780
	Noise - Street/Sidewalk	-4.895676
	Noise - Vehicle	-4.743095
	Noise - Park	-4.545000
	Blocked Driveway	-4.368993
	Homeless Encampment	-4.352000
	Traffic	-3.531667
	Drinking	-1.235000
	Derelict Vehicle	-7.802143

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Blocked Driveway	-7.738491
	Illegal Parking	-7.589286
	Noise - Vehicle	-3.345000
	Animal Abuse	-1.920000
NEW YORK	Graffiti	-5.063636
	Derelict Vehicle	-4.266071
	Squeegee	-4.047500
	Homeless Encampment	-3.703297
	Animal Abuse	-3.685252
	Blocked Driveway	-3.558807
	Panhandling	-3.474404
	Illegal Parking	-3.390036
	Vending	-3.306084
	Drinking	-3.057831
	Posting Advertisement	-2.955854
	Noise - Park	-2.945041
	Urinating in Public	-2.893984
	Bike/Roller/Skate Chronic	-2.892178
	Noise - Commercial	-2.735005
	Noise - Street/Sidewalk	-2.733194
	Traffic	-2.649457
	Noise - Vehicle	-2.621935
	Disorderly Youth	-2.408261
	Noise - House of Worship	-2.305206
	Illegal Fireworks	-1.720278
OAKLAND GARDENS	Homeless Encampment	-28.650000
	Vending	-3.785000
	Derelict Vehicle	-3.719419
	Animal Abuse	-2.764737
	Noise - Park	-2.749286
	Blocked Driveway	-2.546667
	Drinking	-2.440000
	Traffic	-2.411667
	Noise - Vehicle	-2.314000
	Illegal Parking	-2.292928
	Noise - Street/Sidewalk	-1.643684
	Disorderly Youth	-1.430000

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
OZONE PARK	Bike/Roller/Skate Chronic	-1.115000
	Derelict Vehicle	-10.677619
	Bike/Roller/Skate Chronic	-7.190000
	Illegal Parking	-5.119742
	Posting Advertisement	-4.973333
	Animal Abuse	-4.963125
	Blocked Driveway	-4.956267
	Panhandling	-4.582857
	Urinating in Public	-4.397500
	Traffic	-4.343684
QUEENS	Vending	-4.280000
	Drinking	-3.944211
	Noise - Commercial	-3.907391
	Noise - Street/Sidewalk	-3.822847
	Noise - Vehicle	-3.340704
	Noise - Park	-2.905556
	Disorderly Youth	-2.207500
	Homeless Encampment	-1.963333
	Noise - House of Worship	-0.840000
	Illegal Fireworks	-0.320000
QUEENS VILLAGE	Animal in a Park	-336.830000
	Derelict Vehicle	-8.690000
	Homeless Encampment	-7.200000
	Blocked Driveway	-3.995000
	Noise - Street/Sidewalk	-3.655000
	Illegal Parking	-3.417500
	Noise - House of Worship	-2.600000
	Traffic	-2.115000
	Noise - Vehicle	-1.325000
	Noise - Commercial	-1.325000
Urinating in Public		-0.350000
Graffiti		-53.330000
Derelict Vehicle		-16.077216
Vending		-14.600000
Animal Abuse		-12.821970
Noise - Commercial		-10.036512
Illegal Parking		-9.935484

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Blocked Driveway	-9.538376
	Homeless Encampment	-9.383333
	Panhandling	-9.060000
	Noise - Vehicle	-8.879268
	Traffic	-7.098846
	Urinating in Public	-6.334000
	Noise - Street/Sidewalk	-5.581667
	Drinking	-4.680000
	Noise - Park	-3.525000
	Illegal Fireworks	-3.284000
	Posting Advertisement	-3.060000
	Noise - House of Worship	-2.515000
REGO PARK	Noise - House of Worship	-9.300000
	Urinating in Public	-5.600000
	Vending	-5.113333
	Derelict Vehicle	-4.549753
	Animal Abuse	-4.424615
	Traffic	-3.764286
	Noise - Park	-3.749091
	Blocked Driveway	-3.602733
	Illegal Parking	-3.367356
	Noise - Vehicle	-2.946744
	Noise - Street/Sidewalk	-2.604912
	Drinking	-2.562500
	Noise - Commercial	-2.392785
	Homeless Encampment	-1.528333
	Graffiti	-0.950000
RICHMOND HILL	Derelict Vehicle	-9.591867
	Homeless Encampment	-8.084643
	Urinating in Public	-6.292000
	Vending	-5.806154
	Illegal Parking	-5.778579
	Animal Abuse	-5.539688
	Noise - Street/Sidewalk	-5.149195
	Blocked Driveway	-5.052434
	Noise - Commercial	-4.089444
	Noise - Vehicle	-4.076562

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Illegal Fireworks	-3.477500
	Traffic	-3.261429
	Posting Advertisement	-3.000000
	Drinking	-2.956667
	Graffiti	-2.430000
	Noise - Park	-2.242500
RIDGEWOOD	Derelict Vehicle	-7.576242
	Animal Abuse	-6.428974
	Homeless Encampment	-5.779565
	Illegal Parking	-4.435233
	Noise - Vehicle	-4.349862
	Drinking	-4.347000
	Urinating in Public	-4.150000
	Noise - Street/Sidewalk	-4.128868
	Blocked Driveway	-4.009716
	Disorderly Youth	-3.996667
	Noise - Commercial	-3.683417
	Traffic	-3.633571
	Noise - Park	-3.592857
	Bike/Roller/Skate Chronic	-3.480000
	Noise - House of Worship	-3.075000
	Vending	-3.052500
	Illegal Fireworks	-1.080000
	Graffiti	-0.990000
	Posting Advertisement	-0.250000
ROCKAWAY PARK	Traffic	-3.562857
	Disorderly Youth	-3.427500
	Vending	-2.945000
	Derelict Vehicle	-2.727778
	Illegal Parking	-2.620662
	Blocked Driveway	-2.417429
	Drinking	-2.303500
	Animal Abuse	-2.283000
	Noise - Vehicle	-2.260370
	Noise - Commercial	-2.013492
	Noise - Street/Sidewalk	-1.833704
	Homeless Encampment	-1.717500

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Noise - Park	-1.025000
	Urinating in Public	-0.720000
ROSEDALE	Homeless Encampment	-18.862500
	Animal Abuse	-14.593939
	Derelict Vehicle	-14.507548
	Traffic	-10.535217
	Illegal Parking	-10.225487
	Bike/Roller/Skate Chronic	-8.525000
	Noise - Commercial	-7.758800
	Blocked Driveway	-7.457773
	Vending	-6.798125
	Noise - Street/Sidewalk	-5.873750
	Noise - Vehicle	-5.845200
	Noise - Park	-5.778406
	Drinking	-5.505000
	Noise - House of Worship	-4.505000
	Graffiti	-0.160000
SAINT ALBANS	Homeless Encampment	-7.570000
	Animal Abuse	-7.372000
	Urinating in Public	-6.510000
	Derelict Vehicle	-5.900545
	Blocked Driveway	-4.686844
	Noise - House of Worship	-4.650000
	Illegal Parking	-4.184309
	Traffic	-3.965455
	Noise - Vehicle	-3.458537
	Noise - Street/Sidewalk	-3.366582
	Noise - Commercial	-3.100345
	Vending	-2.390000
	Disorderly Youth	-1.760000
	Drinking	-0.963333
	Noise - Park	-0.820000
SOUTH OZONE PARK	Derelict Vehicle	-10.398687
	Noise - Park	-5.707500
	Drinking	-4.880769
	Illegal Parking	-4.695729
	Blocked Driveway	-4.427643

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Bike/Roller/Skate Chronic	-4.060000
	Noise - Vehicle	-3.793765
	Noise - Street/Sidewalk	-3.660476
	Traffic	-3.556786
	Vending	-3.520000
	Animal Abuse	-3.492000
	Noise - Commercial	-3.339571
	Disorderly Youth	-2.685000
	Noise - House of Worship	-2.160000
	Homeless Encampment	-1.835000
	Urinating in Public	-1.695000
	Posting Advertisement	-1.290000
	Illegal Fireworks	-0.510000
SOUTH RICHMOND HILL	Bike/Roller/Skate Chronic	-30.910000
	Derelict Vehicle	-11.877024
	Traffic	-5.776364
	Drinking	-5.766522
	Illegal Parking	-5.708247
	Homeless Encampment	-5.335455
	Vending	-5.267917
	Blocked Driveway	-4.866428
	Animal Abuse	-4.366923
	Noise - Street/Sidewalk	-4.121868
	Noise - Commercial	-3.873586
	Noise - Vehicle	-3.607407
	Noise - Park	-3.605000
	Disorderly Youth	-3.065000
	Noise - House of Worship	-1.983333
	Illegal Fireworks	-0.475000
SPRINGFIELD GARDENS	Posting Advertisement	-19.505000
	Animal Abuse	-14.861250
	Derelict Vehicle	-11.669619
	Traffic	-10.343636
	Illegal Parking	-9.178067
	Blocked Driveway	-9.035725
	Vending	-6.850000
	Panhandling	-6.350000

Avg. Time(Given City, Complaint Type)

City	Complaint Type	
	Illegal Fireworks	-5.560000
	Noise - Vehicle	-5.045476
	Drinking	-4.846667
	Urinating in Public	-4.790000
	Noise - Street/Sidewalk	-4.217368
	Homeless Encampment	-3.778000
	Noise - Commercial	-3.724722
	Noise - House of Worship	-3.710000
	Noise - Park	-1.670000
STATEN ISLAND	Graffiti	-9.560000
	Derelict Vehicle	-5.039490
	Homeless Encampment	-4.980141
	Animal Abuse	-4.969587
	Panhandling	-4.670833
	Vending	-4.272000
	Bike/Roller/Skate Chronic	-4.078571
	Blocked Driveway	-4.071195
	Disorderly Youth	-3.893913
	Illegal Parking	-3.846005
	Illegal Fireworks	-3.735000
	Traffic	-3.567500
	Drinking	-3.493200
	Noise - Vehicle	-3.237753
	Noise - Commercial	-3.000517
	Noise - Street/Sidewalk	-2.969044
	Noise - Park	-2.933134
	Noise - House of Worship	-2.502941
	Urinating in Public	-2.478571
	Posting Advertisement	-1.542117
SUNNYSIDE	Animal Abuse	-11.553143
	Derelict Vehicle	-9.829000
	Vending	-9.724000
	Posting Advertisement	-7.270000
	Homeless Encampment	-7.190000
	Blocked Driveway	-6.968398
	Illegal Parking	-6.665492
	Noise - Commercial	-6.622174

Avg. Time(Given City, Complaint Type)

City	Complaint Type	Avg. Time
	Noise - Park	-6.464667
	Noise - Street/Sidewalk	-6.232000
	Traffic	-5.951875
	Noise - Vehicle	-4.923125
	Drinking	-4.606000
	Disorderly Youth	-3.740000
	Urinating in Public	-3.405000
	Bike/Roller/Skate Chronic	-1.205000
	Graffiti	-0.590000
Unknow City	Derelict Vehicle	-14.248696
	Illegal Parking	-9.594615
	Noise - Commercial	-8.969516
	Traffic	-8.725000
	Noise - Park	-8.585714
	Blocked Driveway	-8.336034
	Noise - Street/Sidewalk	-6.989778
	Drinking	-6.606667
	Bike/Roller/Skate Chronic	-5.860000
	Agency Issues	-5.258333
	Vending	-5.120000
	Noise - Vehicle	-4.741667
	Animal Abuse	-3.410000
	Homeless Encampment	-2.530000
WHITESTONE	Graffiti	-8.800000
	Noise - Commercial	-4.443125
	Illegal Fireworks	-4.370000
	Drinking	-3.630000
	Noise - Park	-3.625000
	Noise - Street/Sidewalk	-3.454848

In []: `import scipy.stats as stat`

```
In [ ]: Complaint_AvgTime = C_CT_RCT.groupby(['Complaint Type']).agg({'DTime':'mean'})
Complaint_AvgTime = pd.DataFrame(Complaint_AvgTime)
Complaint_AvgTime = Complaint_AvgTime.sort_values(['DTime']).reset_index()
Complaint_AvgTime
```

Out[]:

	Complaint Type	DTime
0	Animal in a Park	-336.830000
1	Derelict Vehicle	-7.364159
2	Graffiti	-7.151062
3	Agency Issues	-5.258333
4	Animal Abuse	-5.213239
5	Blocked Driveway	-4.740904
6	Illegal Parking	-4.501153
7	Panhandling	-4.372852
8	Homeless Encampment	-4.365614
9	Squeegee	-4.047500
10	Vending	-4.013910
11	Drinking	-3.861827
12	Bike/Roller/Skate Chronic	-3.766533
13	Urinating in Public	-3.626486
14	Noise - Vehicle	-3.588976
15	Disorderly Youth	-3.558916
16	Traffic	-3.448639
17	Noise - Street/Sidewalk	-3.445221
18	Noise - Park	-3.410728
19	Noise - House of Worship	-3.193240
20	Noise - Commercial	-3.147167
21	Illegal Fireworks	-2.761190
22	Posting Advertisement	-1.975926

```
In [ ]: Tmean_without = float(Complaint_AvgTime[Complaint_AvgTime['Complaint Type']!='Animal in a Park'].mean())
print("Without complaint type 'Animal in a Park' ----- ",Tmean_without)
Tmean_with = float(Complaint_AvgTime['DTime'].mean())
print("With complaint type 'Animal in a Park' ----- ",Tmean_with)
```

```
Without complaint type 'Animal in a Park' ----- -4.12788985442961
With complaint type 'Animal in a Park' ----- -18.59319899119354
```

```
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:1: FutureWarning: Dropping of nuisance columns in DataFrame reductions (with 'numer
ic_only=None') is deprecated; in a future version this will raise TypeEr
ror. Select only valid columns before calling the reduction.

"""Entry point for launching an IPython kernel.
```

```
In [ ]: ttest_with, pval_with = stat.ttest_1samp(Complaint_AvgTime['DTime'], Tmea
n_with)
print('T-statistic is =',ttest_with)
print('p value is =',np.around(pval_with))
```

```
T-statistic is = 0.0
p value is = 1.0
```

```
In [ ]: if (pval_with<0.05):
    print('Null hypothesis is rejected since p value ({} ) is less than 0.
05'.format(np.around(pval_with,decimals=2)))
else:
    print('Null hypothesis is accepted since p value ({} ) is greater than
0.05'.format(np.around(pval_with,decimals=2)))
```

```
Null hypothesis is accepted since p value (1.0) is greater than 0.05
```

```
In [ ]: Complaint_AvgTime_without = Complaint_AvgTime.drop([len(Complaint_AvgTim
e)-1],axis=0)
Complaint_AvgTime_without
```

Out[]:

	Complaint Type	DTime
0	Animal in a Park	-336.830000
1	Derelict Vehicle	-7.364159
2	Graffiti	-7.151062
3	Agency Issues	-5.258333
4	Animal Abuse	-5.213239
5	Blocked Driveway	-4.740904
6	Illegal Parking	-4.501153
7	Panhandling	-4.372852
8	Homeless Encampment	-4.365614
9	Squeegee	-4.047500
10	Vending	-4.013910
11	Drinking	-3.861827
12	Bike/Roller/Skate Chronic	-3.766533
13	Urinating in Public	-3.626486
14	Noise - Vehicle	-3.588976
15	Disorderly Youth	-3.558916
16	Traffic	-3.448639
17	Noise - Street/Sidewalk	-3.445221
18	Noise - Park	-3.410728
19	Noise - House of Worship	-3.193240
20	Noise - Commercial	-3.147167
21	Illegal Fireworks	-2.761190

```
In [ ]: ttest_without, pval_without = stat.ttest_1samp(Complaint_AvgTime_without
['DTime'], Tmean_without)
print('T-statistic is ',ttest_without)
print('p value is ',np.around(pval_without,decimals=8))
```

T-statistic is = -1.0066413896496211
p value is = 0.32556609

```
In [ ]: if (pval_without<0.05):
    print('Null hypothesis is rejected since p value ({} ) is less than 0.
05'.format(np.around(pval_without,decimals=2)))
else:
    print('Null hypothesis is accepted since p value ({} ) is greater than
0.05'.format(np.around(pval_without,decimals=2)))
```

Null hypothesis is accepted since p value (0.33) is greater than 0.05

```
In [ ]: sample1 = Complaint_AvgTime.sample(frac=.5)
sample1
```

Out[]:

	Complaint Type	DTime
0	Animal in a Park	-336.830000
3	Agency Issues	-5.258333
18	Noise - Park	-3.410728
12	Bike/Roller/Skate Chronic	-3.766533
9	Squeegee	-4.047500
16	Traffic	-3.448639
15	Disorderly Youth	-3.558916
20	Noise - Commercial	-3.147167
2	Graffiti	-7.151062
6	Illegal Parking	-4.501153
8	Homeless Encampment	-4.365614
19	Noise - House of Worship	-3.193240

```
In [ ]: sample2 = Complaint_AvgTime.drop(sample1.index)
sample2
```

Out[]:

	Complaint Type	DTime
1	Derelict Vehicle	-7.364159
4	Animal Abuse	-5.213239
5	Blocked Driveway	-4.740904
7	Panhandling	-4.372852
10	Vending	-4.013910
11	Drinking	-3.861827
13	Urinating in Public	-3.626486
14	Noise - Vehicle	-3.588976
17	Noise - Street/Sidewalk	-3.445221
21	Illegal Fireworks	-2.761190
22	Posting Advertisement	-1.975926

```
In [ ]: print('Mean of 1st sample =',np.around(float(sample1['DTime'].mean()),decimals=2))
print('Standard dev. of 1st sample =',np.around(float(sample1['DTime'].std()),decimals=2))
print('Mean of 2nd sample =',np.around(float(sample2['DTime'].mean()),decimals=2))
print('Standard dev. of 2nd sample =',np.around(float(sample2['DTime'].std()),decimals=2))
```

```
Mean of 1st sample = -31.89
Standard dev. of 1st sample = 96.04
Mean of 2nd sample = -4.09
Standard dev. of 2nd sample = 1.4
```

```
In [ ]: ttest_2sp, p_val = stat.ttest_ind(sample1['DTime'],sample2['DTime'])
print('T-statistic is =',ttest_2sp)
print('p value is =',np.around(p_val,decimals=2))
```

```
T-statistic is = -0.958145390174112
p value is = 0.35
```

```
In [ ]: if (p_val<0.05):
    print('Null hypothesis is rejected since p value ({} ) is less than 0.05'.format(np.around(p_val,decimals=2)))
else:
    print('Null hypothesis is accepted since p value ({} ) is greater than 0.05'.format(np.around(p_val,decimals=2)))
```

```
Null hypothesis is accepted since p value (0.35) is greater than 0.05
```

```
In [ ]: sample1_anova = Complaint_AvgTime.sample(frac=1/3)
sample1_anova
```

Out[]:

	Complaint Type	DTime
13	Urinating in Public	-3.626486
3	Agency Issues	-5.258333
2	Graffiti	-7.151062
1	Derelict Vehicle	-7.364159
16	Traffic	-3.448639
8	Homeless Encampment	-4.365614
22	Posting Advertisement	-1.975926
0	Animal in a Park	-336.830000

```
In [ ]: rest_data = Complaint_AvgTime.drop(sample1_anova.index)
rest_data
```

Out[]:

	Complaint Type	DTime
4	Animal Abuse	-5.213239
5	Blocked Driveway	-4.740904
6	Illegal Parking	-4.501153
7	Panhandling	-4.372852
9	Squeegee	-4.047500
10	Vending	-4.013910
11	Drinking	-3.861827
12	Bike/Roller/Skate Chronic	-3.766533
14	Noise - Vehicle	-3.588976
15	Disorderly Youth	-3.558916
17	Noise - Street/Sidewalk	-3.445221
18	Noise - Park	-3.410728
19	Noise - House of Worship	-3.193240
20	Noise - Commercial	-3.147167
21	Illegal Fireworks	-2.761190

```
In [ ]: sample2_anova = rest_data.sample(frac=1/2)
sample2_anova
```

Out[]:

	Complaint Type	DTime
11	Drinking	-3.861827
15	Disorderly Youth	-3.558916
20	Noise - Commercial	-3.147167
4	Animal Abuse	-5.213239
9	Squeegee	-4.047500
5	Blocked Driveway	-4.740904
18	Noise - Park	-3.410728
6	Illegal Parking	-4.501153

```
In [ ]: sample3_anova = rest_data.drop(sample2_anova.index)
sample3_anova
```

Out[]:

	Complaint Type	DTime
7	Panhandling	-4.372852
10	Vending	-4.013910
12	Bike/Roller/Skate Chronic	-3.766533
14	Noise - Vehicle	-3.588976
17	Noise - Street/Sidewalk	-3.445221
19	Noise - House of Worship	-3.193240
21	Illegal Fireworks	-2.761190

```
In [ ]: print('Mean of 1st sample =',np.around(float(sample1_anova['DTime'].mean()),decimals=2))
print('Standard dev. of 1st sample =',np.around(float(sample1_anova['DTime'].std()),decimals=2))
print('Mean of 2nd sample =',np.around(float(sample2_anova['DTime'].mean()),decimals=2))
print('Standard dev. of 2nd sample =',np.around(float(sample2_anova['DTime'].std()),decimals=2))
print('Mean of 3rd sample =',np.around(float(sample3_anova['DTime'].mean()),decimals=2))
print('Standard dev. of 3rd sample =',np.around(float(sample3_anova['DTime'].std()),decimals=2))
```

Mean of 1st sample = -46.25
 Standard dev. of 1st sample = 117.43
 Mean of 2nd sample = -4.06
 Standard dev. of 2nd sample = 0.71
 Mean of 3rd sample = -3.59
 Standard dev. of 3rd sample = 0.53

```
In [ ]: f_val,p_val = stat.shapiro(sample1_anova['DTime'])
print('F-statistic is =',f_val)
print('p value is =',np.around(p_val,decimals=2))
```

F-statistic is = 0.4333314895629883
 p value is = 0.0

```
In [ ]: f_val,p_val = stat.shapiro(sample2_anova['DTime'])
print('F-statistic is =',f_val)
print('p value is =',np.around(p_val,decimals=2))
```

F-statistic is = 0.9647266268730164
 p value is = 0.85

```
In [ ]: f_val,p_val = stat.shapiro(sample3_anova['DTime'])
print('F-statistic is =',f_val)
print('p value is =',np.around(p_val,decimals=2))
```

F-statistic is = 0.9979153275489807
 p value is = 1.0

```
In [ ]: f_val,p_val = stat.shapiro(sample3_anova['DTime'])
print('F-statistic is =',f_val)
print('p value is =',np.around(p_val,decimals=2))
```

```
F-statistic is = 0.9979153275489807
p value is = 1.0
```

```
In [ ]: f_val,p_val = stat.f_oneway(sample1_anova['DTime'],sample2_anova['DTime'],
sample3_anova['DTime'])
print('F-statistic is =',f_val)
print('p value is =',np.around(p_val,decimals=2))
```

```
F-statistic is = 0.9723037452138078
p value is = 0.4
```

```
In [ ]: if (p_val<0.05):
    print('Null hypothesis is rejected since p value ({} ) is less than 0.05'.format(np.around(p_val,decimals=2)))
else:
    print('Null hypothesis is accepted since p value ({} ) is greater than 0.05'.format(np.around(p_val,decimals=2)))
```

```
Null hypothesis is accepted since p value (0.4) is greater than 0.05
```

```
In [ ]: t_val,p_val = stat.ttest_ind(sample1_anova['DTime'],sample2_anova['DTime'])
print('T-statistic for sample 1 and 2 is =',t_val)
print('p value is =',np.around(p_val,decimals=2))
t_val,p_val = stat.ttest_ind(sample1_anova['DTime'],sample3_anova['DTime'])
print('T-statistic for sample 1 and 3 is =',t_val)
print('p value is =',np.around(p_val,decimals=2))
t_val,p_val = stat.ttest_ind(sample2_anova['DTime'],sample3_anova['DTime'])
print('T-statistic for sample 2 and 3 is =',t_val)
print('p value is =',np.around(p_val,decimals=2))
```

```
T-statistic for sample 1 and 2 is = -1.016268857244261
p value is = 0.33
T-statistic for sample 1 and 3 is = -0.9566087696558108
p value is = 0.36
T-statistic for sample 2 and 3 is = -1.428125062449962
p value is = 0.18
```

```
In [ ]: print('Null data in Complaint Type =',data['Complaint Type'].isnull().sum())
print('Null data in City =',data['City'].isnull().sum())
```

```
Null data in Complaint Type = 0
Null data in City = 0
```

```
In [ ]: df_cc = data[['Complaint Type','City']]
df_cc = df_cc.dropna()
```

```
In [ ]: City_Complaint = pd.crosstab(data[ 'Complaint Type' ],data[ 'City' ],margins=True, margins_name='Total')
City_Complaint.head(6)
```

Out[]:

Complaint Type	City	ARVERNE	ASTORIA	Astoria	BAYSIDE	BELLEROSE	BREEZY POINT	BRONX	BRO
Agency Issues		0	0	0	0	0	0	0	0
Animal Abuse		38	125	0	37	7	2	1415	
Animal in a Park		0	0	0	0	0	0	0	0
Bike/Roller /Skate Chronic		0	15	0	0	1	0	20	
Blocked Driveway		35	2618	116	377	95	3	12754	
Derelict Vehicle		27	351	12	198	89	3	1952	

```
In [ ]: print("For 'ARVERNE' and 'ASTORIA' pair -----")
f_val,p_val = stat.f_oneway(City_Complaint['ARVERNE'],City_Complaint['ASTORIA'])
print('F-statistic is ',f_val)
print('p value is ',np.around(p_val,decimals=2))
print("For 'ARVERNE' and 'BROOKLYN' pair -----")
f_val,p_val = stat.f_oneway(City_Complaint['ARVERNE'],City_Complaint['BROOKLYN'])
print('F-statistic is ',f_val)
print('p value is ',np.around(p_val,decimals=2))
print("For 'HOLLIS' and 'JAMAICA' pair -----")
f_val,p_val = stat.f_oneway(City_Complaint['HOLLIS'],City_Complaint['JAMAICA'])
print('F-statistic is ',f_val)
print('p value is ',np.around(p_val,decimals=2))
print("For 'MASPETH' and 'QUEENS' pair -----")
f_val,p_val = stat.f_oneway(City_Complaint['MASPETH'],City_Complaint['QUEENS'])
print('F-statistic is ',f_val)
print('p value is ',np.around(p_val,decimals=2))
```

```
For 'ARVERNE' and 'ASTORIA' pair -----
F-statistic is = 3.293850752389981
p value is = 0.08
For 'ARVERNE' and 'BROOKLYN' pair -----
F-statistic is = 3.6976053686420127
p value is = 0.06
For 'HOLLIS' and 'JAMAICA' pair -----
F-statistic is = 2.6530532256121977
p value is = 0.11
For 'MASPETH' and 'QUEENS' pair -----
F-statistic is = 3.3520642433839614
p value is = 0.07
```

```
In [ ]: chai2, p_val, df, exp_frq = stat.chi2_contingency(City_Complaint)
print('Chai square value =',chai2)
print('p-value is =',p_val)
```

```
Chai square value = 123514.69104525715
p-value is = 0.0
```

```
In [ ]: if (p_val<0.05):
    print('Null hypothesis is rejected since p value ({} ) is less than 0.05'.format(np.around(p_val,decimals=2)))
else:
    print('Null hypothesis is accepted since p value ({} ) is greater than 0.05'.format(np.around(p_val,decimals=2)))
```

```
Null hypothesis is rejected since p value (0.0) is less than 0.05
```