In [1]:
```
# Problem statement : You've been asked to perform data analysis of service request (3
#You've also been asked to utilize data wrangling techniques
# to understand the pattern in the data and visualize the major types of complaints.

import pandas as pd
dataset1 = pd.read_csv('311_Service_Requests_from_2010_to_Present.csv')
```

```
C:\Users\sesingh\AppData\Local\Temp\ipykernel_3780\2520819190.py:6: DtypeWarning: Col
umns (48,49) have mixed types. Specify dtype option on import or set low_memory=Fals
e.
  dataset1 = pd.read_csv('311_Service_Requests_from_2010_to_Present.csv')
```

In [2]:
```
dataset1.head()
#lookin at the 5 first rows information we can see there are several NAN values in
#bridge highway name/Direction/segment , road map, Garage lot name, ferry direction/te
```

Out[2]:

	Unique Key	Created Date	Closed Date	Agency	Agency Name	Complaint Type	Descriptor	Location Type
0	32310363	12/31/2015 11:59:45 PM	01/01/2016 12:55:15 AM	NYPD	New York City Police Department	Noise - Street/Sidewalk	Loud Music/Party	Street/Sidewalk
1	32309934	12/31/2015 11:59:44 PM	01/01/2016 01:26:57 AM	NYPD	New York City Police Department	Blocked Driveway	No Access	Street/Sidewalk
2	32309159	12/31/2015 11:59:29 PM	01/01/2016 04:51:03 AM	NYPD	New York City Police Department	Blocked Driveway	No Access	Street/Sidewalk
3	32305098	12/31/2015 11:57:46 PM	01/01/2016 07:43:13 AM	NYPD	New York City Police Department	Illegal Parking	Commercial Overnight Parking	Street/Sidewalk
4	32306529	12/31/2015 11:56:58 PM	01/01/2016 03:24:42 AM	NYPD	New York City Police Department	Illegal Parking	Blocked Sidewalk	Street/Sidewalk

5 rows × 53 columns

In [3]:
```
dataset1.shape
#we have got 364558 rows and 53 columns in Dataset
```

Out[3]:
```
(364558, 53)
```

In [4]:
```
dataset1.isnull
```

Out[4]:

```
<bound method DataFrame.isnull of         Unique Key            Created Date
Closed Date Agency  \
0         32310363  12/31/2015 11:59:45 PM  01/01/2016 12:55:15 AM   NYPD
1         32309934  12/31/2015 11:59:44 PM  01/01/2016 01:26:57 AM   NYPD
2         32309159  12/31/2015 11:59:29 PM  01/01/2016 04:51:03 AM   NYPD
3         32305098  12/31/2015 11:57:46 PM  01/01/2016 07:43:13 AM   NYPD
4         32306529  12/31/2015 11:56:58 PM  01/01/2016 03:24:42 AM   NYPD
...            ...                     ...                     ...    ...
364553    29609918  01/01/2015 12:04:44 AM  01/01/2015 10:22:31 AM   NYPD
364554    29608392  01/01/2015 12:04:28 AM  01/01/2015 02:25:02 AM   NYPD
364555    29607589  01/01/2015 12:01:30 AM  01/01/2015 12:20:33 AM   NYPD
364556    29610889  01/01/2015 12:01:29 AM  01/01/2015 02:42:22 AM   NYPD
364557    29611816  01/01/2015 12:00:50 AM  01/01/2015 02:47:50 AM   NYPD

                           Agency Name           Complaint Type  \
0       New York City Police Department  Noise - Street/Sidewalk
1       New York City Police Department         Blocked Driveway
2       New York City Police Department         Blocked Driveway
3       New York City Police Department          Illegal Parking
4       New York City Police Department          Illegal Parking
...                                 ...                      ...
364553  New York City Police Department          Illegal Parking
364554  New York City Police Department          Noise - Vehicle
364555  New York City Police Department  Noise - Street/Sidewalk
364556  New York City Police Department         Blocked Driveway
364557  New York City Police Department         Blocked Driveway

                         Descriptor    Location Type  Incident Zip  \
0                  Loud Music/Party  Street/Sidewalk       10034.0
1                         No Access  Street/Sidewalk       11105.0
2                         No Access  Street/Sidewalk       10458.0
3       Commercial Overnight Parking  Street/Sidewalk       10461.0
4                  Blocked Sidewalk  Street/Sidewalk       11373.0
...                             ...              ...           ...
364553              Blocked Hydrant  Street/Sidewalk       11421.0
364554                Car/Truck Horn  Street/Sidewalk       10468.0
364555             Loud Music/Party  Street/Sidewalk       10031.0
364556                    No Access  Street/Sidewalk       10466.0
364557                    No Access  Street/Sidewalk       11420.0

            Incident Address  ... Bridge Highway Name  \
0         71 VERMILYEA AVENUE  ...                 NaN
1             27-07 23 AVENUE  ...                 NaN
2       2897 VALENTINE AVENUE  ...                 NaN
3         2940 BAISLEY AVENUE  ...                 NaN
4               87-14 57 ROAD  ...                 NaN
...                       ...  ...                 ...
364553          84-25 85 ROAD  ...                 NaN
364554   2555 SEDGWICK AVENUE  ...                 NaN
364555    508 WEST 139 STREET  ...                 NaN
364556    931 EAST 226 STREET  ...                 NaN
364557      123-19 135 STREET  ...                 NaN

       Bridge Highway Direction Road Ramp Bridge Highway Segment  \
0                           NaN       NaN                    NaN
1                           NaN       NaN                    NaN
2                           NaN       NaN                    NaN
3                           NaN       NaN                    NaN
4                           NaN       NaN                    NaN
...                         ...       ...                    ...
```

```
364553                    NaN       NaN                    NaN
364554                    NaN       NaN                    NaN
364555                    NaN       NaN                    NaN
364556                    NaN       NaN                    NaN
364557                    NaN       NaN                    NaN

       Garage Lot Name Ferry Direction Ferry Terminal Name   Latitude  \
0                  NaN             NaN                  NaN  40.865682
1                  NaN             NaN                  NaN  40.775945
2                  NaN             NaN                  NaN  40.870325
3                  NaN             NaN                  NaN  40.835994
4                  NaN             NaN                  NaN  40.733060
...                ...             ...                  ...       ...
364553             NaN             NaN                  NaN  40.695145
364554             NaN             NaN                  NaN  40.867830
364555             NaN             NaN                  NaN  40.821647
364556             NaN             NaN                  NaN  40.886361
364557             NaN             NaN                  NaN  40.674212

        Longitude                                  Location
0      -73.923501   (40.86568153633767, -73.92350095571744)
1      -73.915094  (40.775945312321085, -73.91509393898605)
2      -73.888525  (40.870324522111424, -73.88852464418646)
3      -73.828379   (40.83599404683083, -73.82837939584206)
4      -73.874170  (40.733059618956815, -73.87416975810375)
...           ...                                       ...
364553 -73.860949   (40.69514470265117, -73.86094888534394)
364554 -73.907178   (40.86782963689454, -73.90717786644662)
364555 -73.950873  (40.821646626438095, -73.95087342885292)
364556 -73.853290   (40.88636077906953, -73.85329048666742)
364557 -73.803585  (40.674211762243935, -73.80358548685278)

[364558 rows x 53 columns]>
```

In [5]:
```
dataset1.isnull().sum(axis=0)
```

Out[5]:
```
Unique Key                          0
Created Date                        0
Closed Date                      2381
Agency                              0
Agency Name                         0
Complaint Type                      0
Descriptor                       6501
Location Type                     133
Incident Zip                     2998
Incident Address                51699
Street Name                     51699
Cross Street 1                  57188
Cross Street 2                  57805
Intersection Street 1          313438
Intersection Street 2          314046
Address Type                     3252
City                             2997
Landmark                       364183
Facility Type                    2389
Status                              0
Due Date                            3
Resolution Description              0
Resolution Action Updated Date   2402
Community Board                     0
Borough                             0
X Coordinate (State Plane)       4030
Y Coordinate (State Plane)       4030
Park Facility Name                  0
Park Borough                        0
School Name                         0
School Number                       0
School Region                       1
School Code                         1
School Phone Number                 0
School Address                      0
School City                         0
School State                        0
School Zip                          1
School Not Found                    0
School or Citywide Complaint   364558
Vehicle Type                   364558
Taxi Company Borough           364558
Taxi Pick Up Location          364558
Bridge Highway Name            364261
Bridge Highway Direction       364261
Road Ramp                      364296
Bridge Highway Segment         364296
Garage Lot Name                364558
Ferry Direction                364557
Ferry Terminal Name            364556
Latitude                         4030
Longitude                        4030
Location                         4030
dtype: int64
```

In [6]:
```
data_null = dataset1.isna()
#for checking all NA values we created new dataset data_null, lets print it and see wh
```

In [7]:
```
data_null
#Looking at the result we can confirm that isna becomes true only for
#bridge highway name/Direction/segment , road map, Garage lot name, ferry direction/te
```

Out[7]:

	Unique Key	Created Date	Closed Date	Agency	Agency Name	Complaint Type	Descriptor	Location Type	Incident Zip	Incide Addre
0	False	False	False	False	False	False	False	False	False	Fal
1	False	False	False	False	False	False	False	False	False	Fal
2	False	False	False	False	False	False	False	False	False	Fal
3	False	False	False	False	False	False	False	False	False	Fal
4	False	False	False	False	False	False	False	False	False	Fal
...	...	...	...	...	...	...	...	...	...	
364553	False	False	False	False	False	False	False	False	False	Fal
364554	False	False	False	False	False	False	False	False	False	Fal
364555	False	False	False	False	False	False	False	False	False	Fal
364556	False	False	False	False	False	False	False	False	False	Fal
364557	False	False	False	False	False	False	False	False	False	Fal

364558 rows × 53 columns

In [8]:
```
#now we see where NA exist but for dropping all NA items we need to know no of NA in e
#we need to confirm if NA also exists in other columns, if yes how many elements are N
no_of_na_in_Dataset1 = dataset1.isna().sum(axis=0)
```

In [9]:
```
no_of_na_in_Dataset1
```

Out[9]:

```
Unique Key                          0
Created Date                        0
Closed Date                      2381
Agency                              0
Agency Name                         0
Complaint Type                      0
Descriptor                       6501
Location Type                     133
Incident Zip                     2998
Incident Address                51699
Street Name                     51699
Cross Street 1                  57188
Cross Street 2                  57805
Intersection Street 1          313438
Intersection Street 2          314046
Address Type                     3252
City                             2997
Landmark                       364183
Facility Type                    2389
Status                              0
Due Date                            3
Resolution Description              0
Resolution Action Updated Date   2402
Community Board                     0
Borough                             0
X Coordinate (State Plane)       4030
Y Coordinate (State Plane)       4030
Park Facility Name                  0
Park Borough                        0
School Name                         0
School Number                       0
School Region                       1
School Code                         1
School Phone Number                 0
School Address                      0
School City                         0
School State                        0
School Zip                          1
School Not Found                    0
School or Citywide Complaint   364558
Vehicle Type                   364558
Taxi Company Borough           364558
Taxi Pick Up Location          364558
Bridge Highway Name            364261
Bridge Highway Direction       364261
Road Ramp                      364296
Bridge Highway Segment         364296
Garage Lot Name                364558
Ferry Direction                364557
Ferry Terminal Name            364556
Latitude                         4030
Longitude                        4030
Location                         4030
dtype: int64
```

In [10]:

```
#Now that we have all the missing values identified, we see that few columns have huge
#those columns are not useful for our analysis, lets drop them along axis 1 i.e. colum
dataset1.drop('Intersection Street 1',axis=1,inplace=True)
dataset1.drop('Intersection Street 2',axis=1,inplace=True)
dataset1.drop('Landmark',axis=1,inplace=True)
```

```
dataset1.drop('School or Citywide Complaint',axis=1,inplace=True)
dataset1.drop('Vehicle Type',axis=1,inplace=True)
dataset1.drop('Taxi Company Borough',axis=1,inplace=True)
dataset1.drop('Taxi Pick Up Location',axis=1,inplace=True)
dataset1.drop('Bridge Highway Name',axis=1,inplace=True)
dataset1.drop('Bridge Highway Direction',axis=1,inplace=True)
dataset1.drop('Road Ramp',axis=1,inplace=True)
dataset1.drop('Bridge Highway Segment',axis=1,inplace=True)
dataset1.drop('Garage Lot Name',axis=1,inplace=True)
dataset1.drop('Ferry Direction',axis=1,inplace=True)
dataset1.drop('Ferry Terminal Name',axis=1,inplace=True)
dataset1.info()
#now as a result we see that all the columns which contains mostly NA values are remov
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 364558 entries, 0 to 364557
Data columns (total 39 columns):
 #   Column                          Non-Null Count   Dtype  
---  ------                          --------------   -----  
 0   Unique Key                      364558 non-null  int64  
 1   Created Date                    364558 non-null  object 
 2   Closed Date                     362177 non-null  object 
 3   Agency                          364558 non-null  object 
 4   Agency Name                     364558 non-null  object 
 5   Complaint Type                  364558 non-null  object 
 6   Descriptor                      358057 non-null  object 
 7   Location Type                   364425 non-null  object 
 8   Incident Zip                    361560 non-null  float64
 9   Incident Address                312859 non-null  object 
 10  Street Name                     312859 non-null  object 
 11  Cross Street 1                  307370 non-null  object 
 12  Cross Street 2                  306753 non-null  object 
 13  Address Type                    361306 non-null  object 
 14  City                            361561 non-null  object 
 15  Facility Type                   362169 non-null  object 
 16  Status                          364558 non-null  object 
 17  Due Date                        364555 non-null  object 
 18  Resolution Description          364558 non-null  object 
 19  Resolution Action Updated Date  362156 non-null  object 
 20  Community Board                 364558 non-null  object 
 21  Borough                         364558 non-null  object 
 22  X Coordinate (State Plane)      360528 non-null  float64
 23  Y Coordinate (State Plane)      360528 non-null  float64
 24  Park Facility Name              364558 non-null  object 
 25  Park Borough                    364558 non-null  object 
 26  School Name                     364558 non-null  object 
 27  School Number                   364558 non-null  object 
 28  School Region                   364557 non-null  object 
 29  School Code                     364557 non-null  object 
 30  School Phone Number             364558 non-null  object 
 31  School Address                  364558 non-null  object 
 32  School City                     364558 non-null  object 
 33  School State                    364558 non-null  object 
 34  School Zip                      364557 non-null  object 
 35  School Not Found                364558 non-null  object 
 36  Latitude                        360528 non-null  float64
 37  Longitude                       360528 non-null  float64
 38  Location                        360528 non-null  object 
dtypes: float64(5), int64(1), object(33)
memory usage: 108.5+ MB
```

In [11]:
```
dataset1['Created Date']
```

Out[11]:
```
0         12/31/2015 11:59:45 PM
1         12/31/2015 11:59:44 PM
2         12/31/2015 11:59:29 PM
3         12/31/2015 11:57:46 PM
4         12/31/2015 11:56:58 PM
                   ...
364553    01/01/2015 12:04:44 AM
364554    01/01/2015 12:04:28 AM
364555    01/01/2015 12:01:30 AM
364556    01/01/2015 12:01:29 AM
364557    01/01/2015 12:00:50 AM
Name: Created Date, Length: 364558, dtype: object
```

In [12]:
```
dataset1['Closed Date']
```

Out[12]:
```
0         01/01/2016 12:55:15 AM
1         01/01/2016 01:26:57 AM
2         01/01/2016 04:51:03 AM
3         01/01/2016 07:43:13 AM
4         01/01/2016 03:24:42 AM
                   ...
364553    01/01/2015 10:22:31 AM
364554    01/01/2015 02:25:02 AM
364555    01/01/2015 12:20:33 AM
364556    01/01/2015 02:42:22 AM
364557    01/01/2015 02:47:50 AM
Name: Closed Date, Length: 364558, dtype: object
```

In [13]:
```
import numpy as np
if(dataset1['Closed Date'].any() < dataset1['Created Date'].any()):
    print("Some closed dates are before created date : let's drop them")
else:
    print('All closed dates are after created date')
```

```
All closed dates are after created date
```

In [14]:
```
dataset1['Closed Date'].dropna()
```

Out[14]:
```
0         01/01/2016 12:55:15 AM
1         01/01/2016 01:26:57 AM
2         01/01/2016 04:51:03 AM
3         01/01/2016 07:43:13 AM
4         01/01/2016 03:24:42 AM
                   ...
364553    01/01/2015 10:22:31 AM
364554    01/01/2015 02:25:02 AM
364555    01/01/2015 12:20:33 AM
364556    01/01/2015 02:42:22 AM
364557    01/01/2015 02:47:50 AM
Name: Closed Date, Length: 362177, dtype: object
```

In [15]:
```
dataset1['Closed Date'].info()
```

```
<class 'pandas.core.series.Series'>
RangeIndex: 364558 entries, 0 to 364557
Series name: Closed Date
Non-Null Count   Dtype
--------------   -----
362177 non-null  object
dtypes: object(1)
memory usage: 2.8+ MB
```

In [16]:
```
from matplotlib import pyplot as plt
city_list = dataset1['City']
city_list
```

Out[16]:
```
0                 NEW YORK
1                  ASTORIA
2                    BRONX
3                    BRONX
4                 ELMHURST
                   ...
364553           WOODHAVEN
364554               BRONX
364555            NEW YORK
364556               BRONX
364557    SOUTH OZONE PARK
Name: City, Length: 364558, dtype: object
```

In [17]:
```
all_cities = city_list.unique()
```

In [18]:
```
all_cities
```

Out[18]:
```
array(['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'], dtype=object)
```

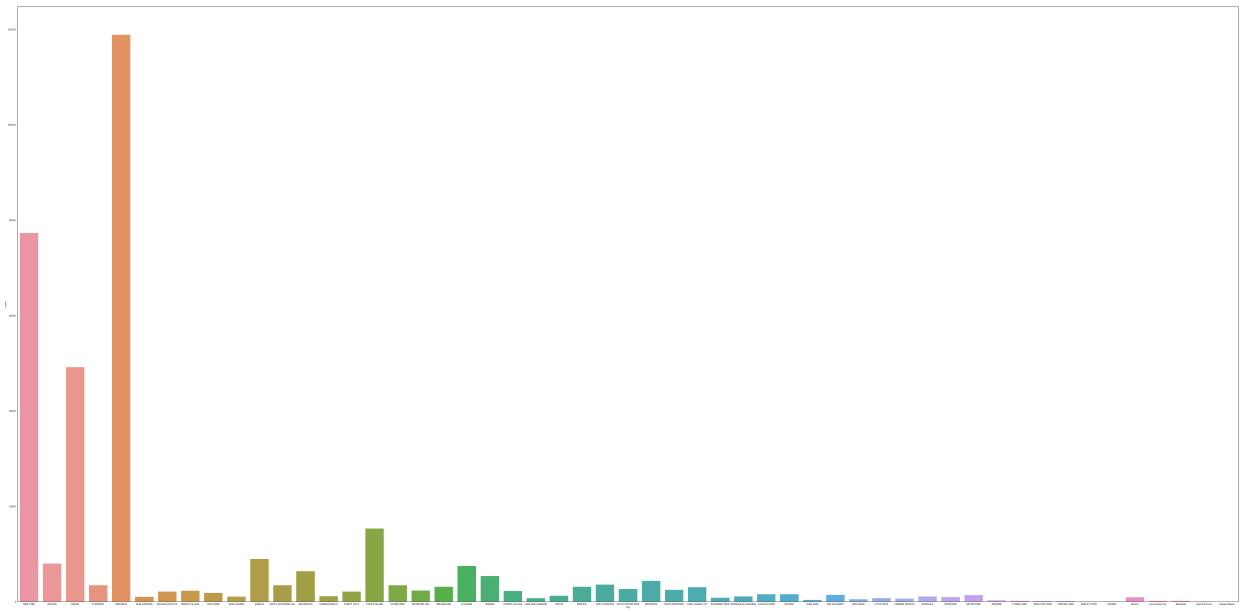
In [19]:
```
all_cities.shape
```

Out[19]:
```
(54,)
```

In [20]:
```
%matplotlib inline
import seaborn as sns
plt.figure(figsize=(100,50))
sns.countplot('City', data=dataset1)
```

```
C:\Users\sesingh\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarnin
g: Pass the following variable as a keyword arg: x. From version 0.12, the only valid
positional argument will be `data`, and passing other arguments without an explicit k
eyword will result in an error or misinterpretation.
  warnings.warn(
```

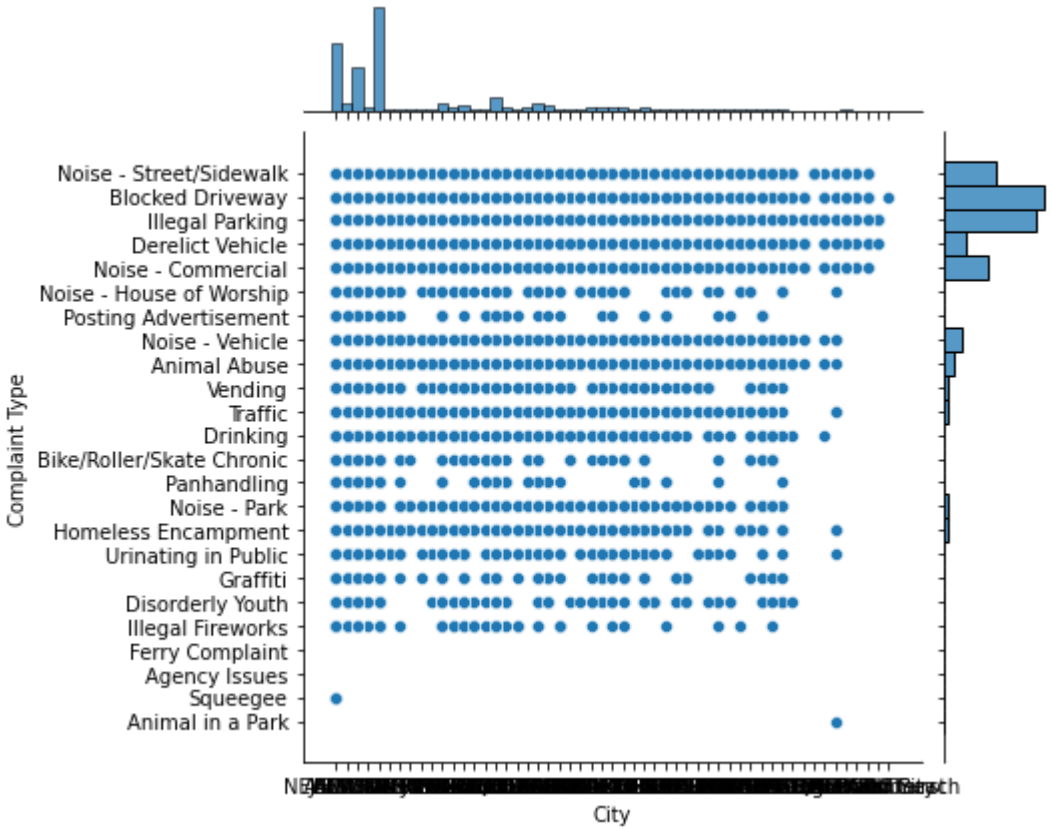
Out[20]:
```
<AxesSubplot:xlabel='City', ylabel='count'>
```



In [21]:
```
plt.figure(figsize=(200,50))
sns.jointplot('City', 'Complaint Type', data=dataset1)
```

```
C:\Users\sesingh\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarnin
g: Pass the following variables as keyword args: x, y. From version 0.12, the only va
lid positional argument will be `data`, and passing other arguments without an explic
it keyword will result in an error or misinterpretation.
  warnings.warn(
```

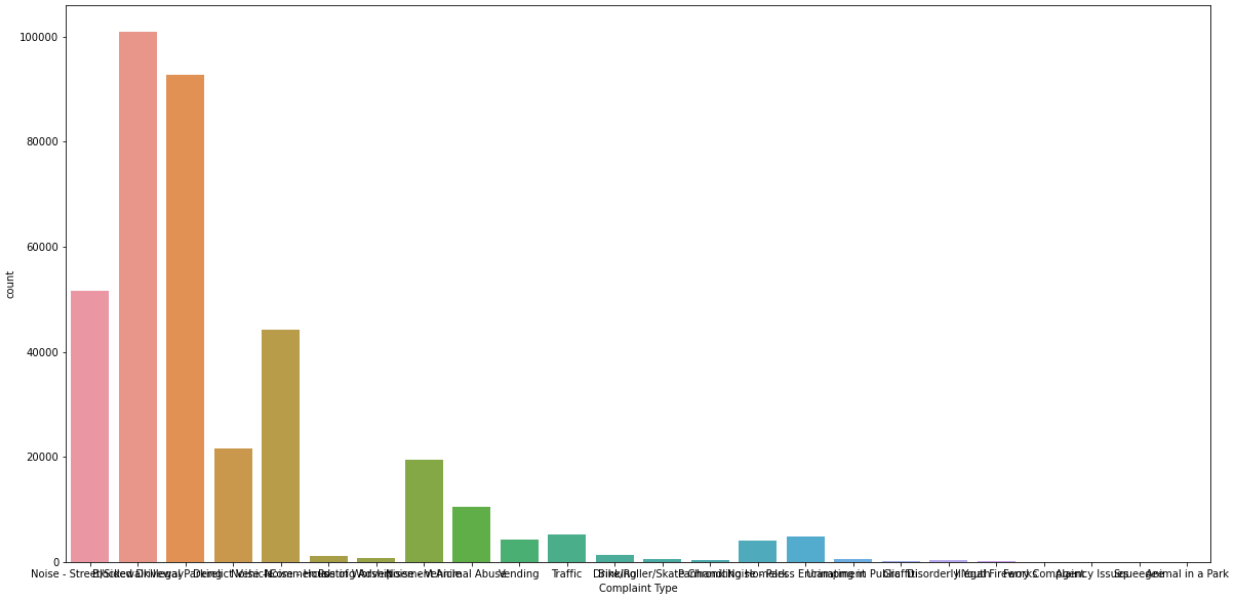
Out[21]:
```
<seaborn.axisgrid.JointGrid at 0x2b3a0654d00>

<Figure size 14400x3600 with 0 Axes>
```



In [22]:
```
%matplotlib inline
import seaborn as sns
plt.figure(figsize=(20,10))
sns.countplot('Complaint Type', data=dataset1)
```

```
C:\Users\sesingh\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarnin
g: Pass the following variable as a keyword arg: x. From version 0.12, the only valid
positional argument will be `data`, and passing other arguments without an explicit k
eyword will result in an error or misinterpretation.
  warnings.warn(
```

Out[22]:
```
<AxesSubplot:xlabel='Complaint Type', ylabel='count'>
```



In [23]:
```
dataset1['Complaint Type'].head(10)
```

Out[23]:
```
0    Noise - Street/Sidewalk
1           Blocked Driveway
2           Blocked Driveway
3            Illegal Parking
4            Illegal Parking
5            Illegal Parking
6            Illegal Parking
7           Blocked Driveway
8            Illegal Parking
9           Blocked Driveway
Name: Complaint Type, dtype: object
```

In [24]:
```
type_of_complaint = dataset1['Complaint Type'].value_counts()
type_of_complaint
```

Out[24]:
```
Blocked Driveway            100881
Illegal Parking              92679
Noise - Street/Sidewalk      51692
Noise - Commercial           44109
Derelict Vehicle             21661
Noise - Vehicle              19352
Animal Abuse                 10541
Traffic                       5198
Homeless Encampment           4879
Vending                       4192
Noise - Park                  4109
Drinking                      1409
Noise - House of Worship      1070
Posting Advertisement          681
Urinating in Public            641
Bike/Roller/Skate Chronic      478
Panhandling                    327
Disorderly Youth               315
Illegal Fireworks              172
Graffiti                       157
Agency Issues                    8
Squeegee                         4
Ferry Complaint                  2
Animal in a Park                 1
Name: Complaint Type, dtype: int64
```

In [25]:
```
type_of_complaint.head(10)
```

Out[25]:
```
Blocked Driveway           100881
Illegal Parking             92679
Noise - Street/Sidewalk     51692
Noise - Commercial          44109
Derelict Vehicle            21661
Noise - Vehicle             19352
Animal Abuse                10541
Traffic                      5198
Homeless Encampment          4879
Vending                      4192
Name: Complaint Type, dtype: int64
```

In [26]:
```
dataframe = dataset1[['City', 'Complaint Type']].copy()
dataframe
```

Out[26]:

	City	Complaint Type
0	NEW YORK	Noise - Street/Sidewalk
1	ASTORIA	Blocked Driveway
2	BRONX	Blocked Driveway
3	BRONX	Illegal Parking
4	ELMHURST	Illegal Parking
...	...	...
364553	WOODHAVEN	Illegal Parking
364554	BRONX	Noise - Vehicle
364555	NEW YORK	Noise - Street/Sidewalk
364556	BRONX	Blocked Driveway
364557	SOUTH OZONE PARK	Blocked Driveway

364558 rows × 2 columns

In [27]:
```
dataframe.shape
```

Out[27]:
```
(364558, 2)
```

In [28]:
```
final_df = dataframe.groupby('City')
final_df.ngroups
```

Out[28]:
```
53
```

In [29]:
```
final_df.first()
```

Out[29]:

City	Complaint Type
ARVERNE	Illegal Parking
ASTORIA	Blocked Driveway
Astoria	Illegal Parking
BAYSIDE	Blocked Driveway
BELLEROSE	Derelict Vehicle
BREEZY POINT	Noise - Street/Sidewalk
BRONX	Blocked Driveway
BROOKLYN	Illegal Parking
CAMBRIA HEIGHTS	Derelict Vehicle
CENTRAL PARK	Noise - Street/Sidewalk
COLLEGE POINT	Illegal Parking
CORONA	Blocked Driveway
EAST ELMHURST	Noise - House of Worship
ELMHURST	Illegal Parking
East Elmhurst	Illegal Parking
FAR ROCKAWAY	Blocked Driveway
FLORAL PARK	Illegal Parking
FLUSHING	Blocked Driveway
FOREST HILLS	Illegal Parking
FRESH MEADOWS	Blocked Driveway
GLEN OAKS	Illegal Parking
HOLLIS	Blocked Driveway
HOWARD BEACH	Illegal Parking
Howard Beach	Blocked Driveway
JACKSON HEIGHTS	Blocked Driveway
JAMAICA	Blocked Driveway
KEW GARDENS	Illegal Parking
LITTLE NECK	Blocked Driveway
LONG ISLAND CITY	Illegal Parking
Long Island City	Illegal Parking
MASPETH	Illegal Parking
MIDDLE VILLAGE	Derelict Vehicle

	Complaint Type
City	
NEW HYDE PARK	Derelict Vehicle
NEW YORK	Noise - Street/Sidewalk
OAKLAND GARDENS	Blocked Driveway
OZONE PARK	Blocked Driveway
QUEENS	Noise - Commercial
QUEENS VILLAGE	Animal Abuse
REGO PARK	Blocked Driveway
RICHMOND HILL	Blocked Driveway
RIDGEWOOD	Blocked Driveway
ROCKAWAY PARK	Blocked Driveway
ROSEDALE	Animal Abuse
SAINT ALBANS	Blocked Driveway
SOUTH OZONE PARK	Blocked Driveway
SOUTH RICHMOND HILL	Blocked Driveway
SPRINGFIELD GARDENS	Illegal Parking
STATEN ISLAND	Posting Advertisement
SUNNYSIDE	Blocked Driveway
WHITESTONE	Illegal Parking
WOODHAVEN	Illegal Parking
WOODSIDE	Blocked Driveway
Woodside	Illegal Parking

In [30]:
```
final_df.last()
```

Out[30]:

City	Complaint Type
ARVERNE	Illegal Parking
ASTORIA	Noise - Commercial
Astoria	Blocked Driveway
BAYSIDE	Illegal Parking
BELLEROSE	Illegal Parking
BREEZY POINT	Illegal Parking
BRONX	Blocked Driveway
BROOKLYN	Blocked Driveway
CAMBRIA HEIGHTS	Homeless Encampment
CENTRAL PARK	Noise - Street/Sidewalk
COLLEGE POINT	Blocked Driveway
CORONA	Blocked Driveway
EAST ELMHURST	Blocked Driveway
ELMHURST	Blocked Driveway
East Elmhurst	Illegal Parking
FAR ROCKAWAY	Illegal Parking
FLORAL PARK	Derelict Vehicle
FLUSHING	Noise - Street/Sidewalk
FOREST HILLS	Derelict Vehicle
FRESH MEADOWS	Noise - Commercial
GLEN OAKS	Illegal Parking
HOLLIS	Noise - Commercial
HOWARD BEACH	Illegal Fireworks
Howard Beach	Blocked Driveway
JACKSON HEIGHTS	Blocked Driveway
JAMAICA	Blocked Driveway
KEW GARDENS	Noise - Street/Sidewalk
LITTLE NECK	Illegal Parking
LONG ISLAND CITY	Blocked Driveway
Long Island City	Illegal Parking
MASPETH	Blocked Driveway
MIDDLE VILLAGE	Illegal Parking

	Complaint Type
City	
NEW HYDE PARK	Blocked Driveway
NEW YORK	Noise - Street/Sidewalk
OAKLAND GARDENS	Derelict Vehicle
OZONE PARK	Blocked Driveway
QUEENS	Derelict Vehicle
QUEENS VILLAGE	Blocked Driveway
REGO PARK	Animal Abuse
RICHMOND HILL	Blocked Driveway
RIDGEWOOD	Noise - Commercial
ROCKAWAY PARK	Noise - Commercial
ROSEDALE	Blocked Driveway
SAINT ALBANS	Animal Abuse
SOUTH OZONE PARK	Blocked Driveway
SOUTH RICHMOND HILL	Illegal Parking
SPRINGFIELD GARDENS	Blocked Driveway
STATEN ISLAND	Blocked Driveway
SUNNYSIDE	Blocked Driveway
WHITESTONE	Animal Abuse
WOODHAVEN	Illegal Parking
WOODSIDE	Noise - Commercial
Woodside	Blocked Driveway

In [31]:
```
df_new_york = final_df.get_group('NEW YORK')
df_new_york
```

Out[31]:

	City	Complaint Type
0	NEW YORK	Noise - Street/Sidewalk
6	NEW YORK	Illegal Parking
19	NEW YORK	Noise - Street/Sidewalk
23	NEW YORK	Illegal Parking
26	NEW YORK	Noise - House of Worship
...	...	...
364542	NEW YORK	Noise - Street/Sidewalk
364543	NEW YORK	Noise - Street/Sidewalk
364547	NEW YORK	Noise - Street/Sidewalk
364552	NEW YORK	Noise - Street/Sidewalk
364555	NEW YORK	Noise - Street/Sidewalk

77312 rows × 2 columns

In [32]:
```
df_BROOKLYN = final_df.get_group('BROOKLYN')
df_BROOKLYN
```

Out[32]:

	City	Complaint Type
5	BROOKLYN	Illegal Parking
9	BROOKLYN	Blocked Driveway
13	BROOKLYN	Illegal Parking
17	BROOKLYN	Noise - Commercial
18	BROOKLYN	Noise - Commercial
...	...	...
364539	BROOKLYN	Blocked Driveway
364541	BROOKLYN	Blocked Driveway
364544	BROOKLYN	Noise - Commercial
364545	BROOKLYN	Blocked Driveway
364546	BROOKLYN	Blocked Driveway

118862 rows × 2 columns

In [33]:
```
df_QUEENS = final_df.get_group('QUEENS')
df_QUEENS
```

Out[33]:

	City	Complaint Type
26409	QUEENS	Noise - Commercial
27634	QUEENS	Illegal Parking
59425	QUEENS	Noise - Street/Sidewalk
59666	QUEENS	Noise - House of Worship
62535	QUEENS	Derelict Vehicle
98539	QUEENS	Noise - Street/Sidewalk
99755	QUEENS	Noise - Commercial
120873	QUEENS	Illegal Parking
120884	QUEENS	Blocked Driveway
125847	QUEENS	Illegal Parking
132012	QUEENS	Noise - Street/Sidewalk
132261	QUEENS	Blocked Driveway
135337	QUEENS	Noise - Commercial
147623	QUEENS	Noise - Street/Sidewalk
177755	QUEENS	Traffic
184777	QUEENS	Homeless Encampment
185726	QUEENS	Noise - Street/Sidewalk
186164	QUEENS	Illegal Parking
191695	QUEENS	Homeless Encampment
195991	QUEENS	Noise - Vehicle
197950	QUEENS	Noise - Commercial
198570	QUEENS	Urinating in Public
213695	QUEENS	Traffic
214984	QUEENS	Noise - Commercial
224916	QUEENS	Illegal Parking
226472	QUEENS	Noise - Vehicle
228376	QUEENS	Noise - Commercial
265802	QUEENS	Illegal Parking
281454	QUEENS	Noise - Street/Sidewalk
283132	QUEENS	Animal in a Park
287169	QUEENS	Illegal Parking
297676	QUEENS	Illegal Parking
301778	QUEENS	Blocked Driveway

	City	Complaint Type
335646	QUEENS	Illegal Parking
343060	QUEENS	Illegal Parking
348390	QUEENS	Animal Abuse
356659	QUEENS	Derelict Vehicle

In [34]:
```
df_LONG_ISLAND_CITY = final_df.get_group('LONG ISLAND CITY')
df_LONG_ISLAND_CITY
```

Out[34]:

	City	Complaint Type
177	LONG ISLAND CITY	Illegal Parking
505	LONG ISLAND CITY	Blocked Driveway
555	LONG ISLAND CITY	Blocked Driveway
626	LONG ISLAND CITY	Illegal Parking
1612	LONG ISLAND CITY	Blocked Driveway
...	...	...
363529	LONG ISLAND CITY	Illegal Parking
363636	LONG ISLAND CITY	Blocked Driveway
363638	LONG ISLAND CITY	Blocked Driveway
364236	LONG ISLAND CITY	Blocked Driveway
364432	LONG ISLAND CITY	Blocked Driveway

3028 rows × 2 columns

In [35]:
```
df_CENTRAL_PARK = final_df.get_group('CENTRAL PARK')
df_CENTRAL_PARK
```

Out[35]:

	City	Complaint Type
17122	CENTRAL PARK	Noise - Street/Sidewalk
18527	CENTRAL PARK	Noise - Street/Sidewalk
20887	CENTRAL PARK	Noise - Street/Sidewalk
23912	CENTRAL PARK	Noise - Street/Sidewalk
24915	CENTRAL PARK	Noise - Street/Sidewalk
...	...	...
334882	CENTRAL PARK	Illegal Parking
335666	CENTRAL PARK	Illegal Parking
338556	CENTRAL PARK	Noise - Street/Sidewalk
342303	CENTRAL PARK	Noise - Street/Sidewalk
362137	CENTRAL PARK	Noise - Street/Sidewalk

110 rows × 2 columns

In [ ]: