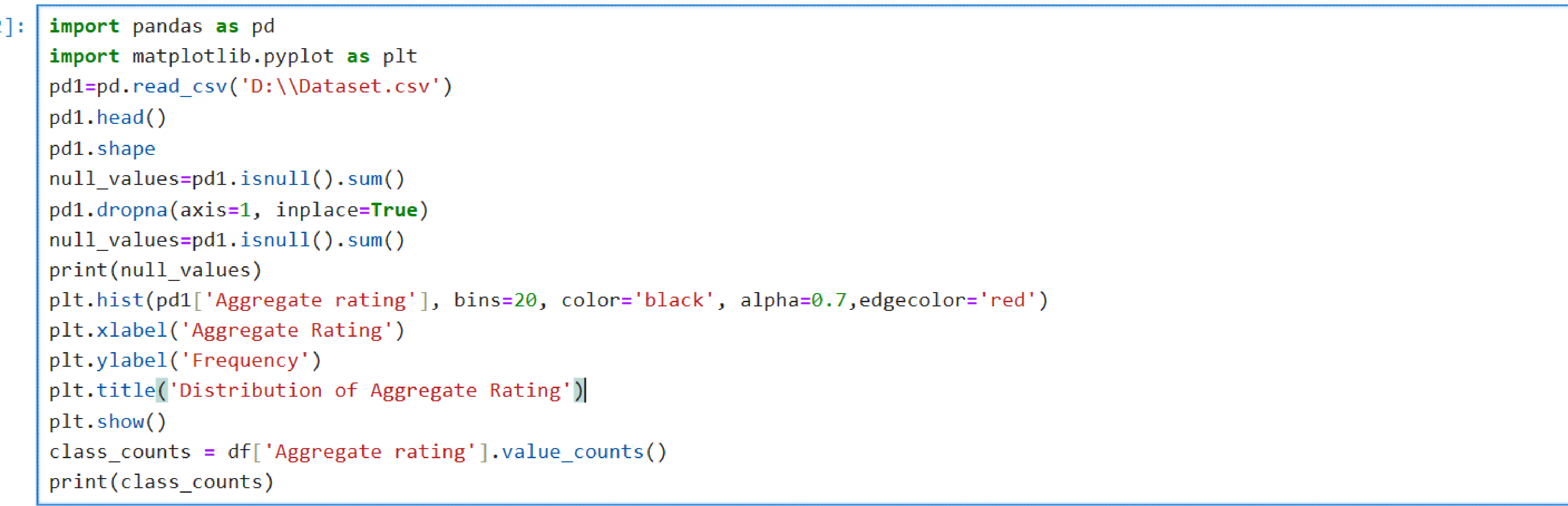
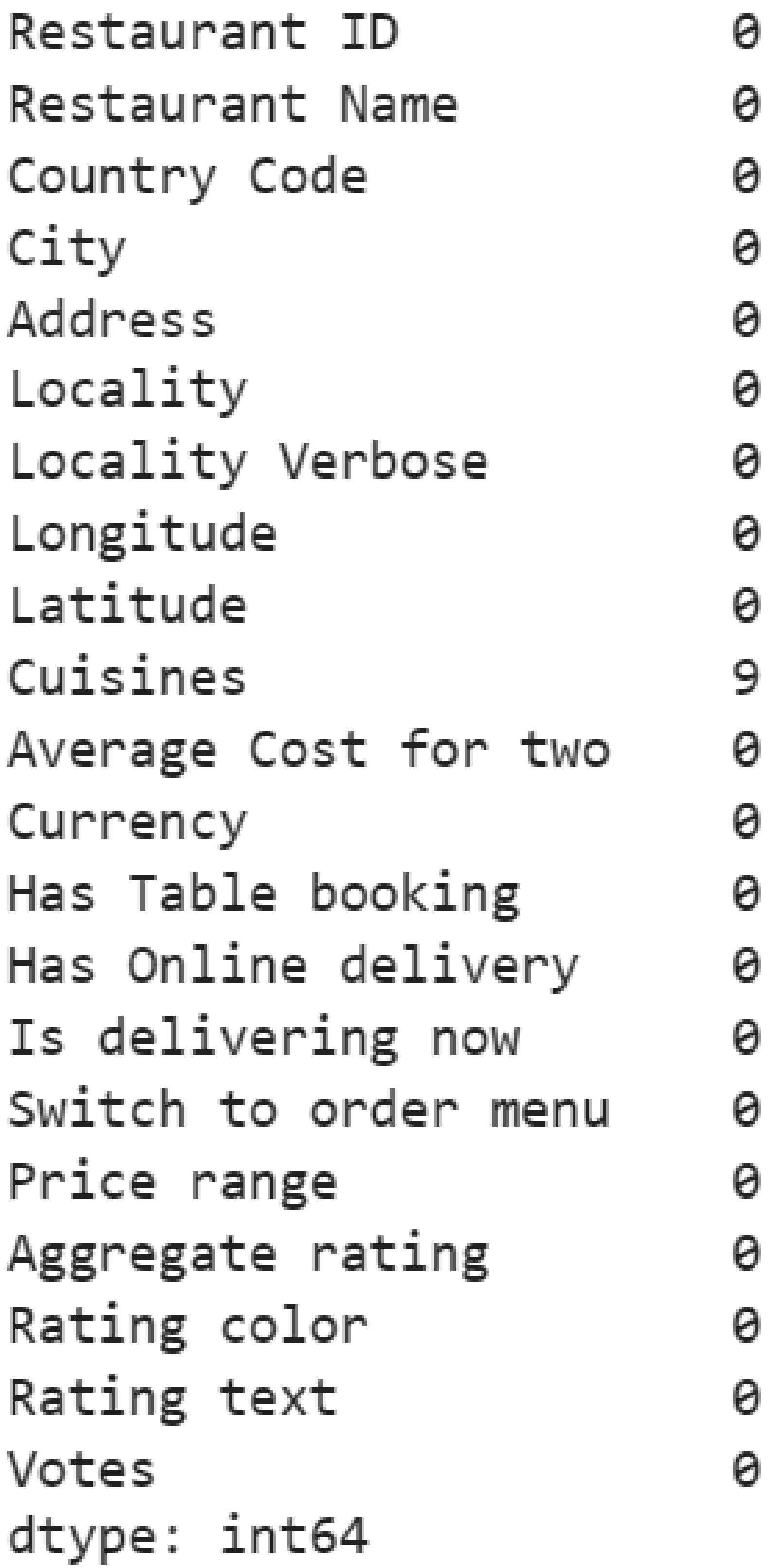
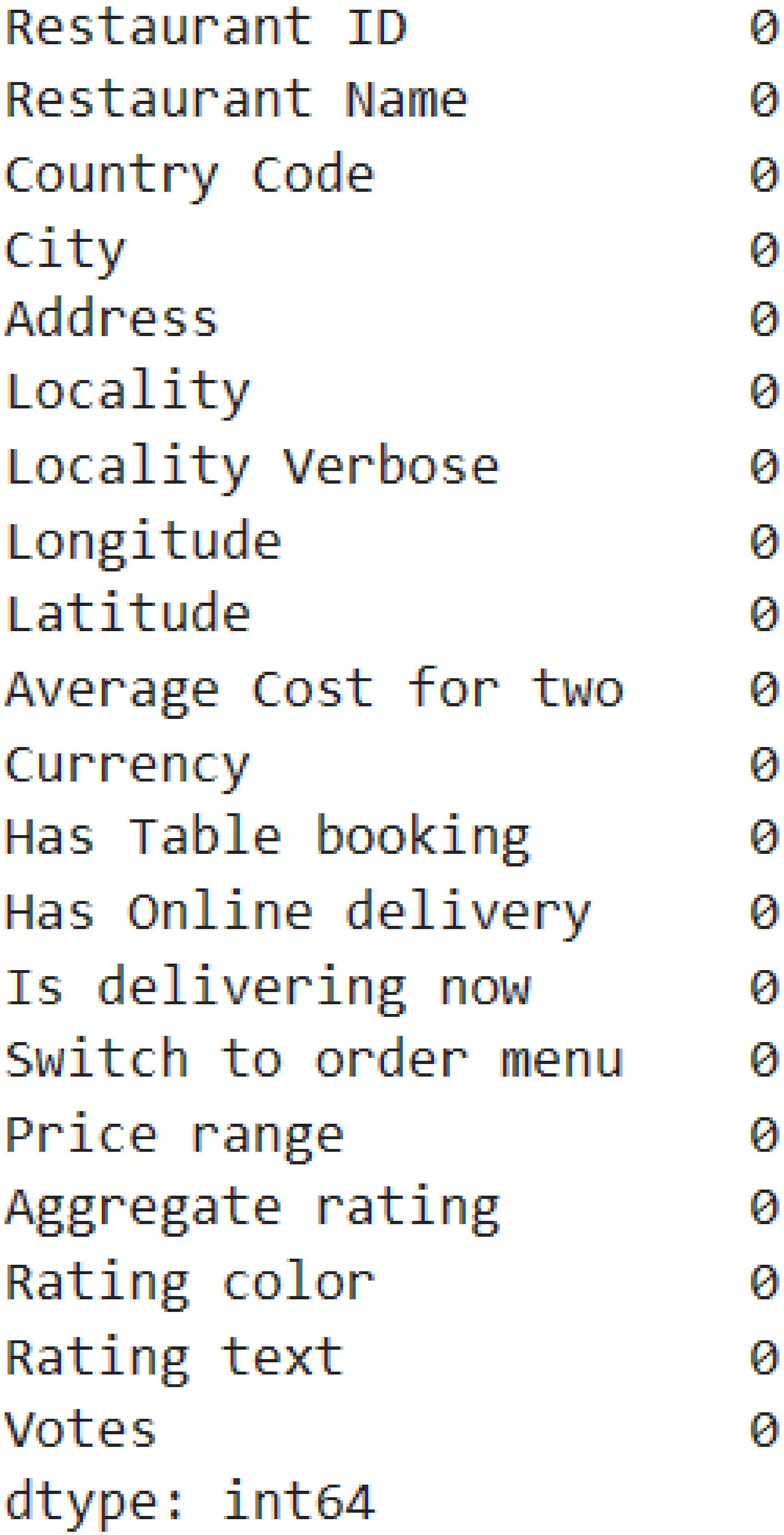


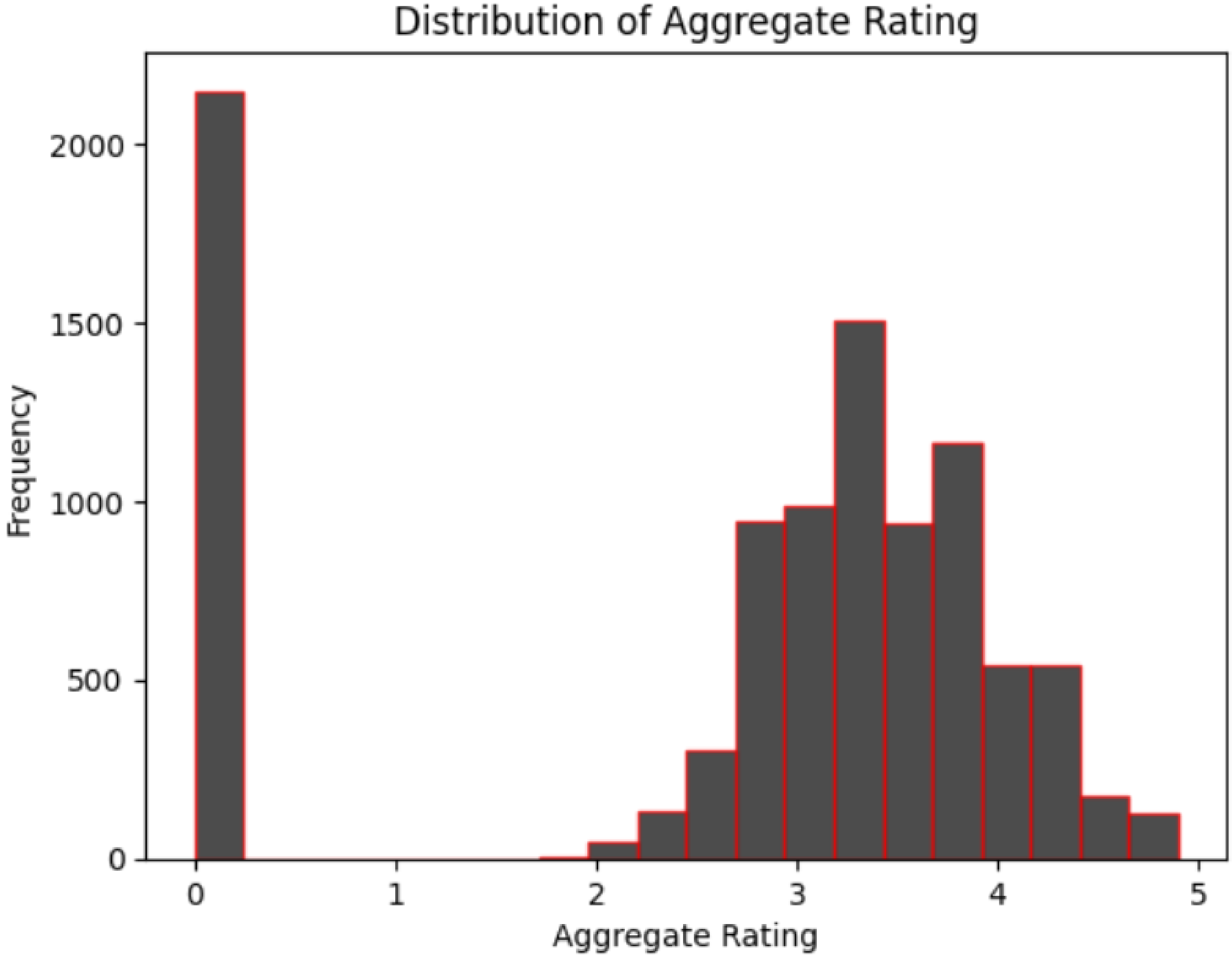
```
import pandas as pd
import matplotlib.pyplot as plt
pd1=pd.read_csv('D:\\Dataset.csv')
pd1.head()
pd1.shape
null_values=pd1.isnull().sum()
pd1.dropna(axis=1, inplace=True)
null_values=pd1.isnull().sum()
print(null_values)
plt.hist(pd1['Aggregate rating'], bins=20, color='black', alpha=0.7,edgecolor='red')
plt.xlabel('Aggregate Rating')
plt.ylabel('Frequency')
plt.title('Distribution of Aggregate Rating')
plt.show()
class_counts = df['Aggregate rating'].value_counts()
print(class_counts)
```

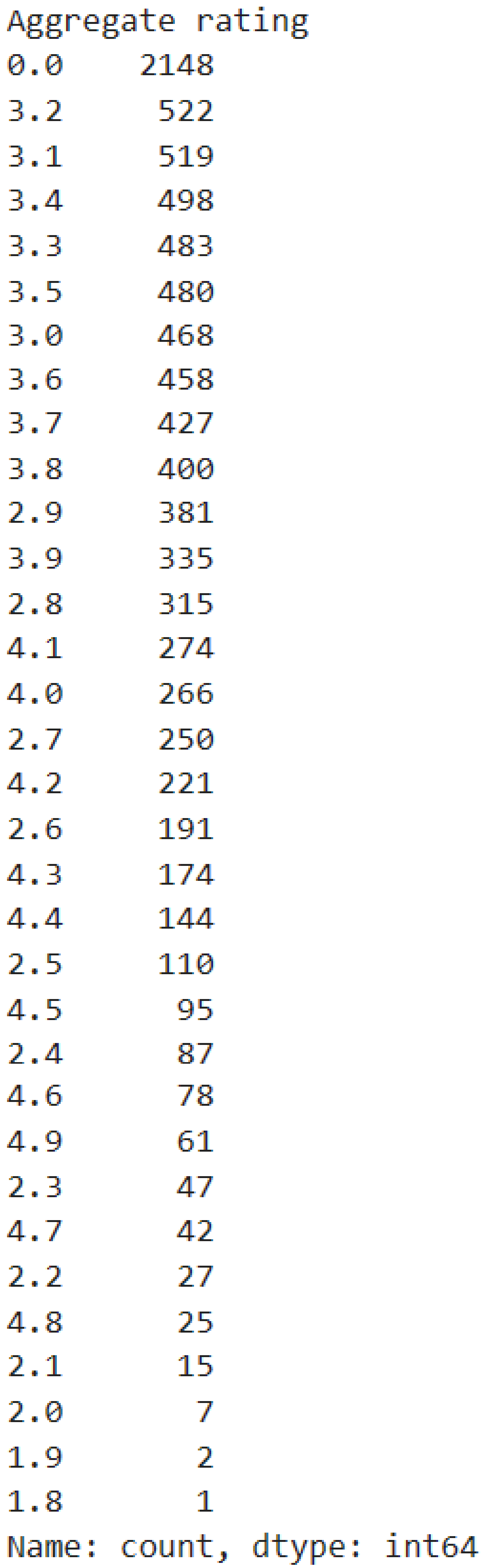


```
Restaurant ID           0
Restaurant Name         0
Country Code            0
City                    0
Address                 0
Locality                0
Locality Verbose        0
Longitude               0
Latitude                0
Cuisines                9
Average Cost for two    0
Currency                0
Has Table booking       0
Has Online delivery     0
Is delivering now       0
Switch to order menu    0
Price range             0
Aggregate rating        0
Rating color            0
Rating text             0
Votes                   0
dtype: int64
```

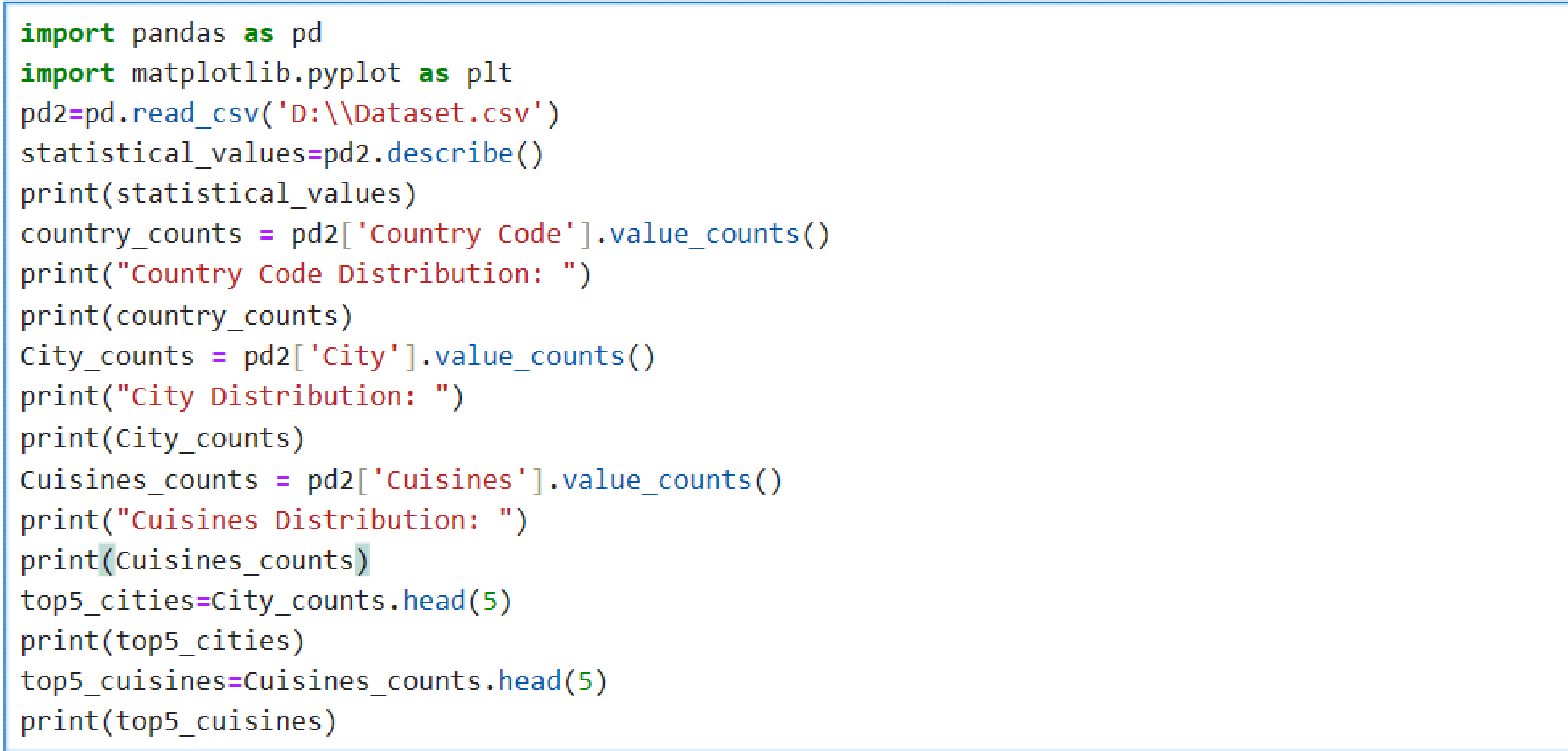


```
Restaurant ID           0
Restaurant Name         0
Country Code            0
City                    0
Address                 0
Locality                0
Locality Verbose        0
Longitude               0
Latitude                0
Average Cost for two    0
Currency                0
Has Table booking       0
Has Online delivery     0
Is delivering now       0
Switch to order menu    0
Price range             0
Aggregate rating        0
Rating color            0
Rating text             0
Votes                   0
dtype: int64
```

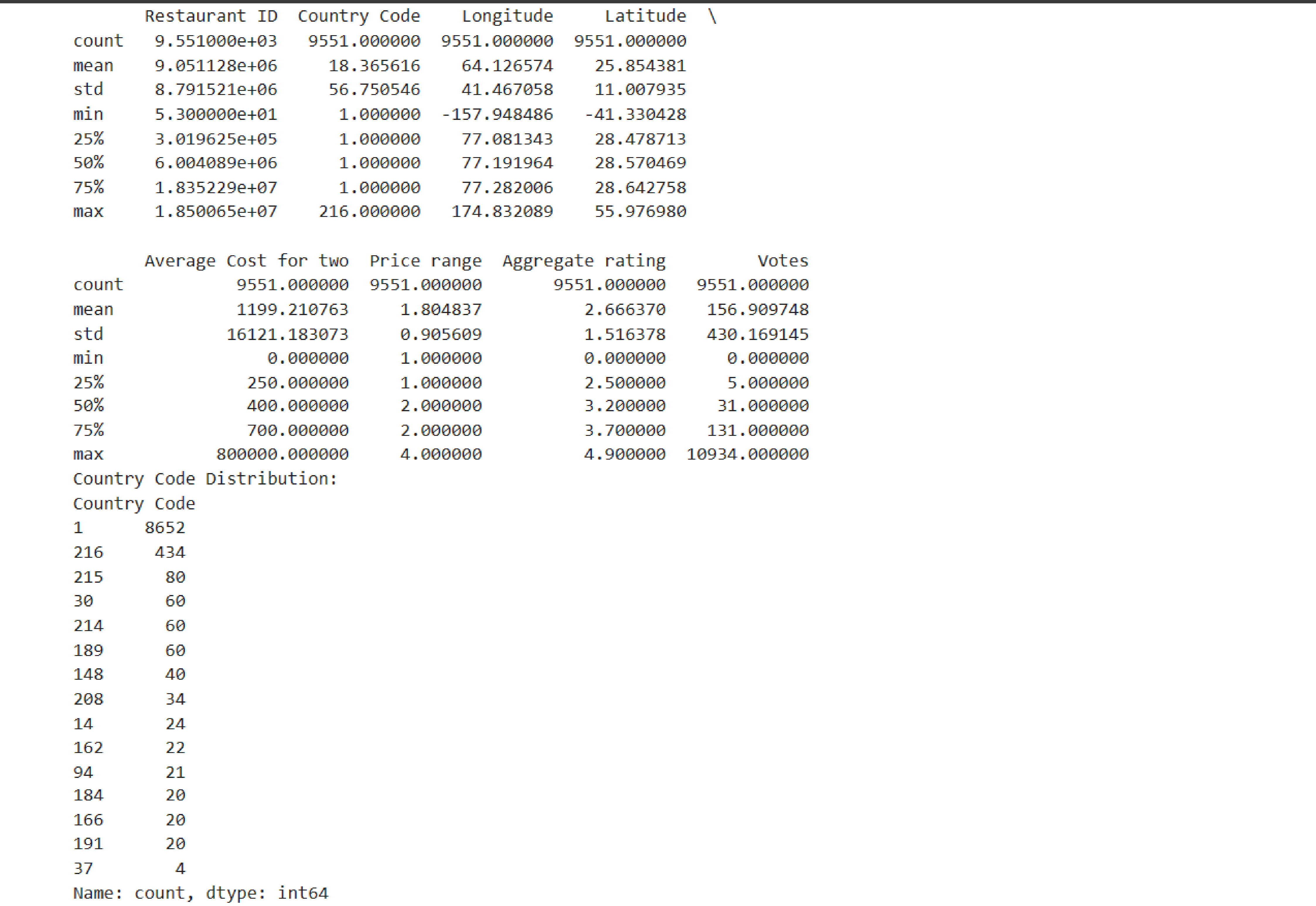

Distribution of Aggregate Rating
Frequency
2000
1500
1000
500
0
0
1
2
3
4
5
Aggregate Rating



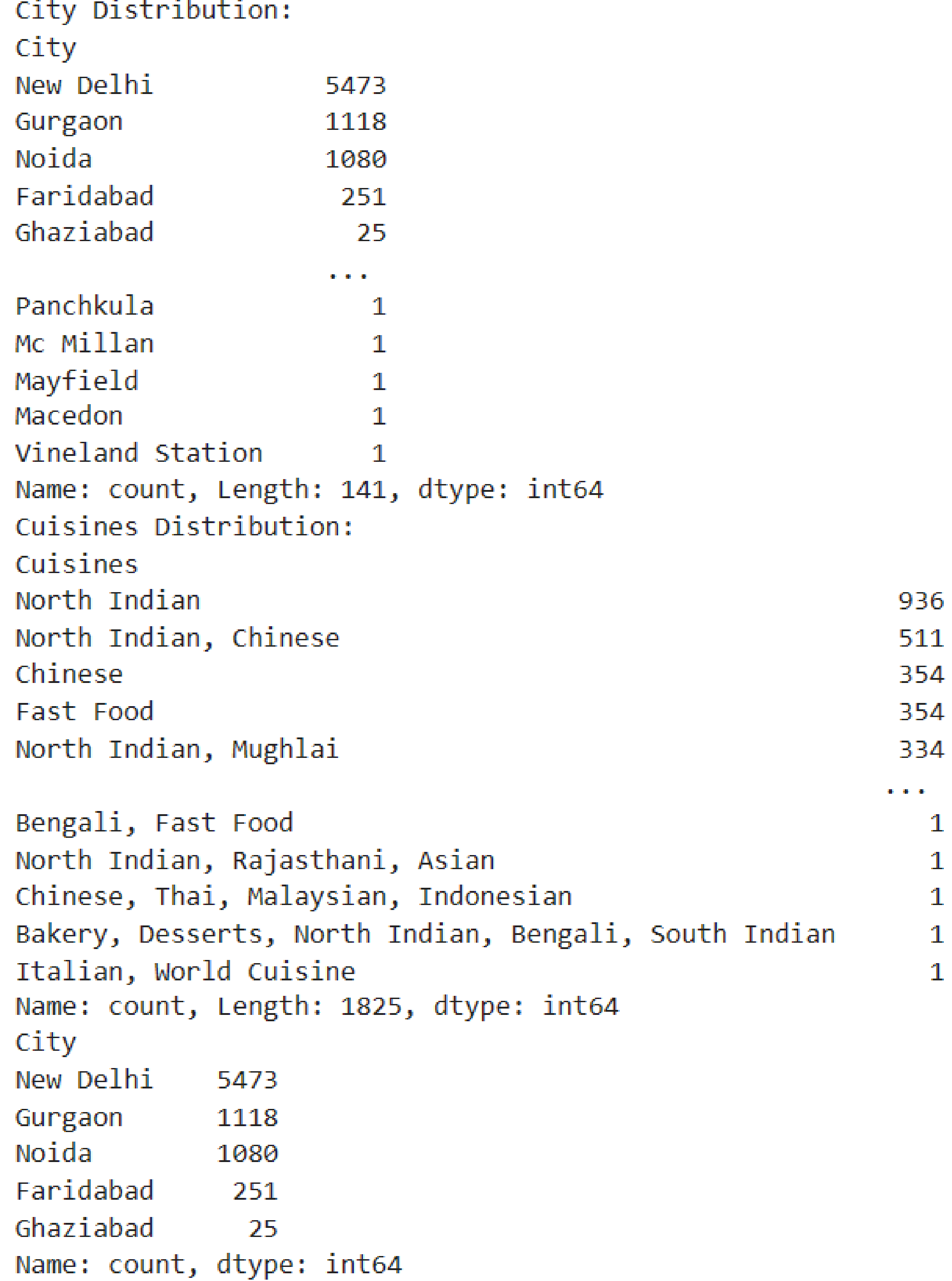
```
Aggregate rating
0.0    2148
3.2     522
3.1     519
3.4     498
3.3     483
3.5     480
3.0     468
3.6     458
3.7     427
3.8     400
2.9     381
3.9     335
2.8     315
4.1     274
4.0     266
2.7     250
4.2     221
2.6     191
4.3     174
4.4     144
2.5     110
4.5      95
2.4      87
4.6      78
4.9      61
2.3      47
4.7      42
2.2      27
4.8      25
2.1      15
2.0       7
1.9       2
1.8       1
Name: count, dtype: int64
```



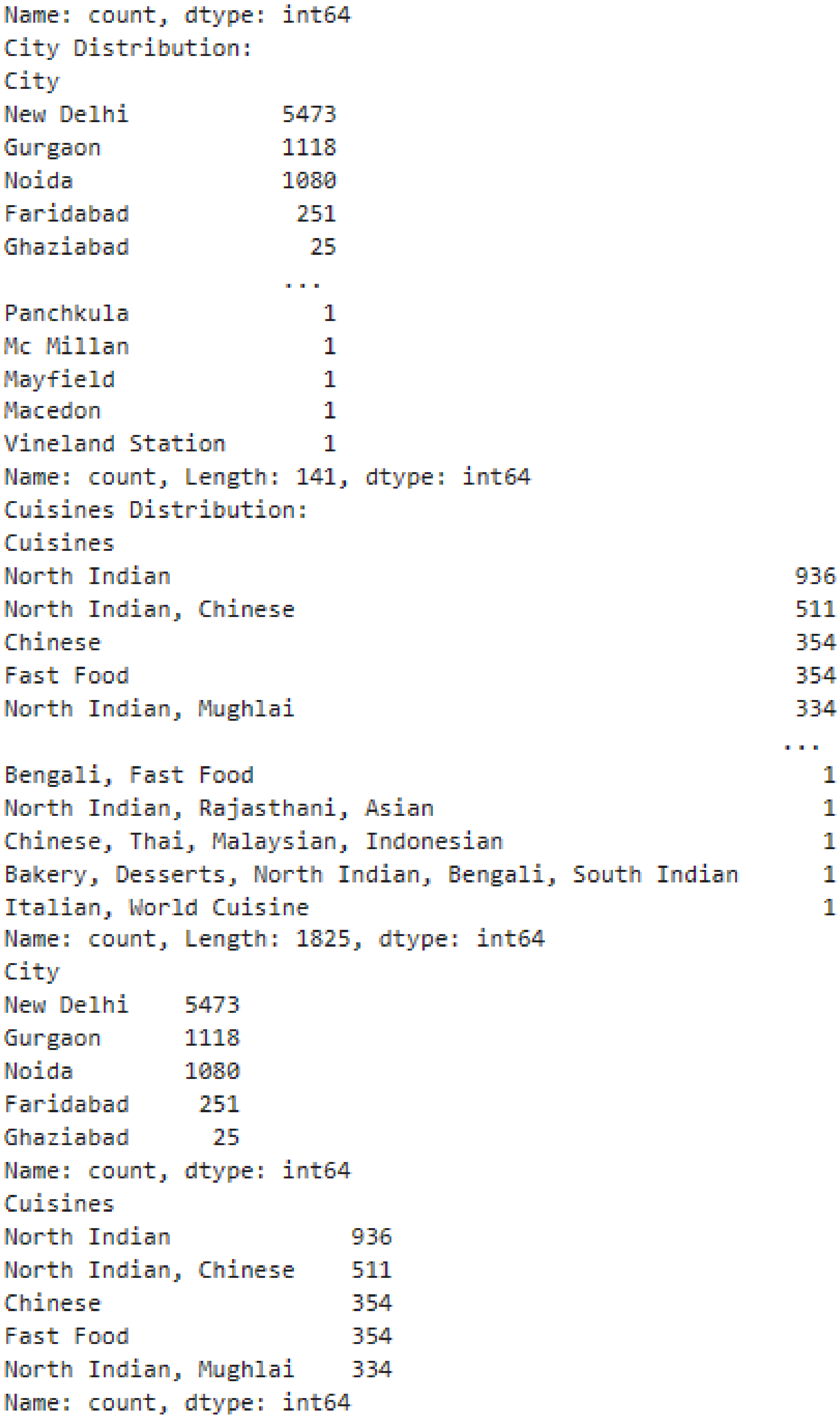
```python
import pandas as pd
import matplotlib.pyplot as plt
pd2=pd.read_csv('D:\\Dataset.csv')
statistical_values=pd2.describe()
print(statistical_values)
country_counts = pd2['Country Code'].value_counts()
print("Country Code Distribution: ")
print(country_counts)
City_counts = pd2['City'].value_counts()
print("City Distribution: ")
print(City_counts)
Cuisines_counts = pd2['Cuisines'].value_counts()
print("Cuisines Distribution: ")
print(Cuisines_counts)
top5_cities=City_counts.head(5)
print(top5_cities)
top5_cuisines=Cuisines_counts.head(5)
print(top5_cuisines)
```



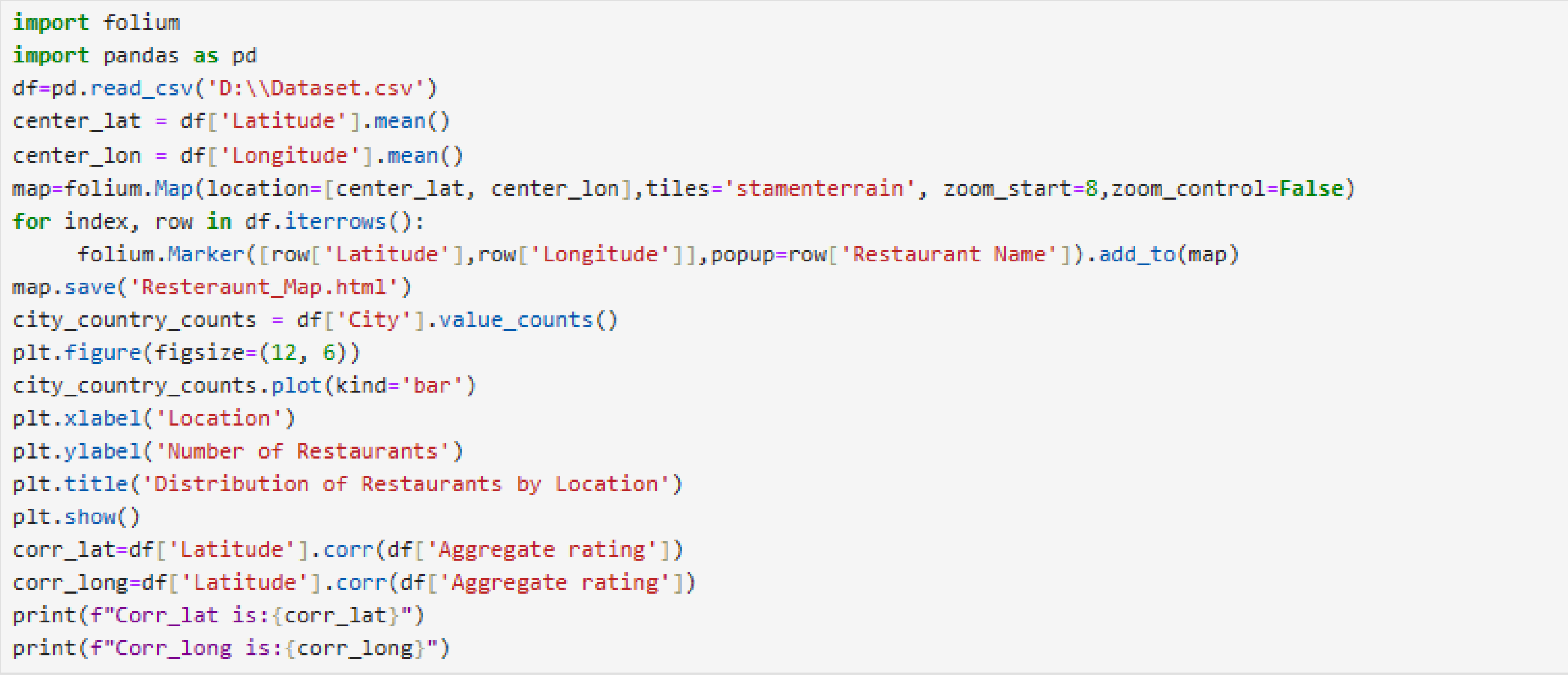
```
       Restaurant ID  Country Code    Longitude     Latitude  \
count   9.551000e+03   9551.000000  9551.000000  9551.000000
mean    9.051128e+06     18.365616    64.126574    25.854381
std     8.791521e+06     56.750546    41.467058    11.007935
min     5.300000e+01      1.000000  -157.948486   -41.330428
25%     3.019625e+05      1.000000    77.081343    28.478713
50%     6.004089e+06      1.000000    77.191964    28.570469
75%     1.835229e+07      1.000000    77.282006    28.642758
max     1.850065e+07    216.000000   174.832089    55.976980

       Average Cost for two  Price range  Aggregate rating         Votes
count           9551.000000  9551.000000       9551.000000   9551.000000
mean            1199.210763     1.804837          2.666370    156.909748
std            16121.183073     0.905609          1.516378    430.169145
min                0.000000     1.000000          0.000000      0.000000
25%              250.000000     1.000000          2.500000      5.000000
50%              400.000000     2.000000          3.200000     31.000000
75%              700.000000     2.000000          3.700000    131.000000
max           800000.000000     4.000000          4.900000  10934.000000
Country Code Distribution:
Country Code
1      8652
216     434
215      80
30       60
214      60
189      60
148      40
208      34
14       24
162      22
94       21
184      20
166      20
191      20
37        4
Name: count, dtype: int64
```



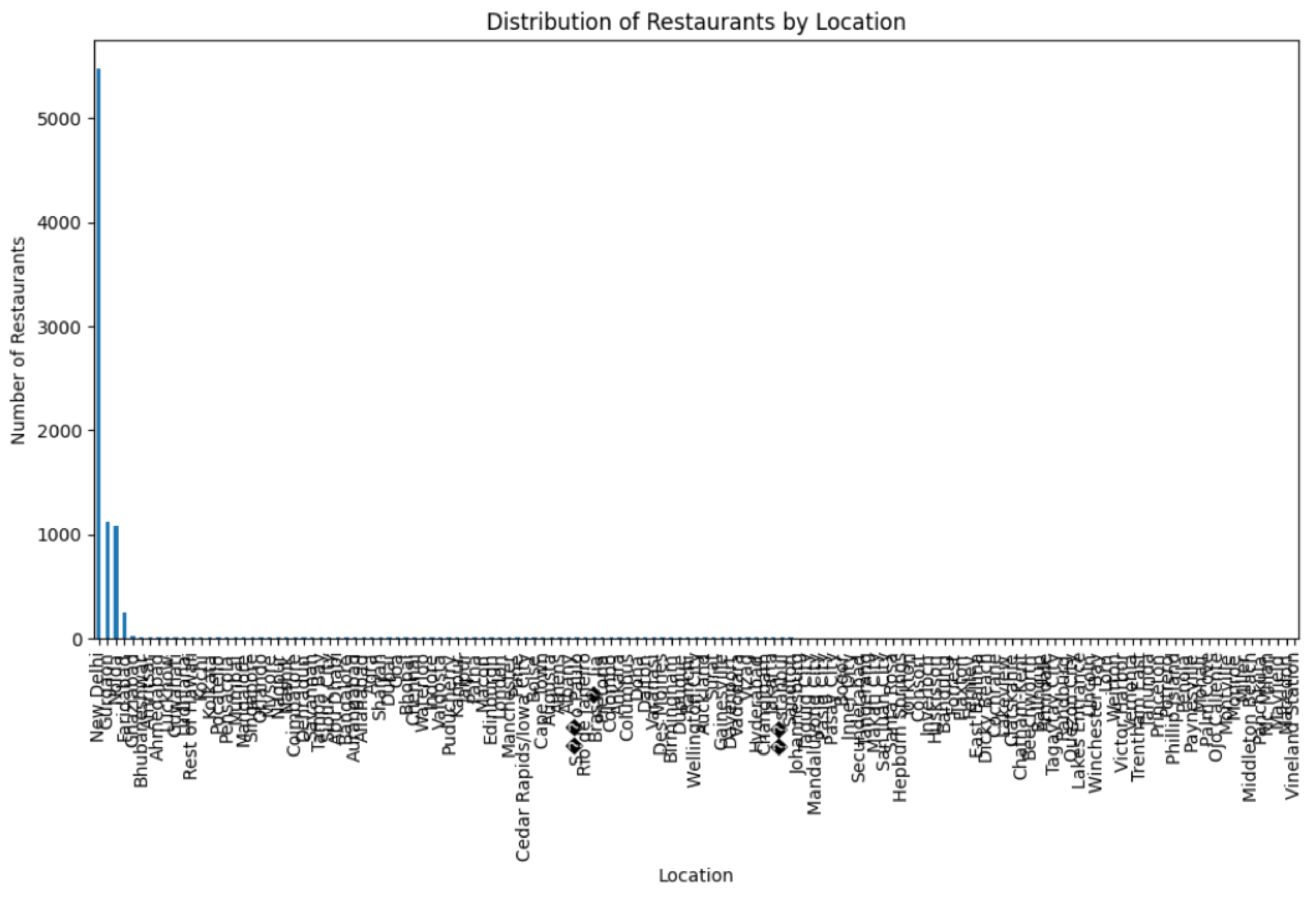
```
City Distribution:
City
New Delhi          5473
Gurgaon            1118
Noida              1080
Faridabad           251
Ghaziabad            25
                   ... 
Panchkula             1
Mc Millan             1
Mayfield              1
Macedon               1
Vineland Station      1
Name: count, Length: 141, dtype: int64
Cuisines Distribution:
Cuisines
North Indian                                         936
North Indian, Chinese                                511
Chinese                                              354
Fast Food                                            354
North Indian, Mughlai                                334
                                                    ... 
Bengali, Fast Food                                     1
North Indian, Rajasthani, Asian                        1
Chinese, Thai, Malaysian, Indonesian                   1
Bakery, Desserts, North Indian, Bengali, South Indian  1
Italian, World Cuisine                                 1
Name: count, Length: 1825, dtype: int64
City
New Delhi    5473
Gurgaon      1118
Noida        1080
Faridabad     251
Ghaziabad      25
Name: count, dtype: int64
```

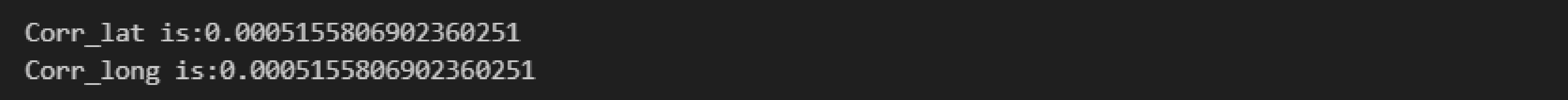


```
Name: count, dtype: int64
City Distribution:
City
New Delhi           5473
Gurgaon             1118
Noida               1080
Faridabad            251
Ghaziabad             25
                    ...
Panchkula              1
Mc Millan              1
Mayfield               1
Macedon                1
Vineland Station       1
Name: count, Length: 141, dtype: int64
Cuisines Distribution:
Cuisines
North Indian                                          936
North Indian, Chinese                                 511
Chinese                                               354
Fast Food                                             354
North Indian, Mughlai                                 334
                                                     ...
Bengali, Fast Food                                      1
North Indian, Rajasthani, Asian                         1
Chinese, Thai, Malaysian, Indonesian                    1
Bakery, Desserts, North Indian, Bengali, South Indian   1
Italian, World Cuisine                                  1
Name: count, Length: 1825, dtype: int64
City
New Delhi    5473
Gurgaon      1118
Noida        1080
Faridabad     251
Ghaziabad      25
Name: count, dtype: int64
Cuisines
North Indian             936
North Indian, Chinese    511
Chinese                  354
Fast Food                354
North Indian, Mughlai    334
Name: count, dtype: int64
```



```
import folium
import pandas as pd
df=pd.read_csv('D:\\Dataset.csv')
center_lat = df['Latitude'].mean()
center_lon = df['Longitude'].mean()
map=folium.Map(location=[center_lat, center_lon],tiles='stamenterrain', zoom_start=8,zoom_control=False)
for index, row in df.iterrows():
    folium.Marker([row['Latitude'],row['Longitude']],popup=row['Restaurant Name']).add_to(map)
map.save('Resteraunt_Map.html')
city_country_counts = df['City'].value_counts()
plt.figure(figsize=(12, 6))
city_country_counts.plot(kind='bar')
plt.xlabel('Location')
plt.ylabel('Number of Restaurants')
plt.title('Distribution of Restaurants by Location')
plt.show()
corr_lat=df['Latitude'].corr(df['Aggregate rating'])
corr_long=df['Latitude'].corr(df['Aggregate rating'])
print(f"Corr_lat is:{corr_lat}")
print(f"Corr_long is:{corr_long}")
```


Distribution of Restaurants by Location
Number of Restaurants
5000
4000
3000
2000
1000
0
Location
New Delhi
Gurgaon
Noida
Faridabad
Ghaziabad
Bhubaneshwar
Ahmedabad
Rest of Hawaii
Coimbatore
Aurangabad
Allahabad
Puducherry
Edinburgh
Manchester
Cedar Rapids/Iowa City
Rio de Janeiro
Columbus
Birmingham
Wellington City
Hyderabad
Johannesburg
Mandaluyong City
Secunderabad
Hepburn Springs
Chatham-Kent
Lakes Entrance
Winchester Bay
Victor Harbor
Trentham East
Phillip Island
Middleton Beach
Vineland Station



```
Corr_lat is:0.0005155806902360251
Corr_long is:0.0005155806902360251
```