In [1]:
```
# ==============================
# LEVEL 1 - ALL TASKS
# ==============================
```

In [2]:
```
import pandas as pd
import matplotlib.pyplot as plt
```

In [3]:
```
df=pd.read_csv("C:/Users/jadha/Downloads/Dataset .csv")
```

In [4]:
```
df.head()
```

Out[4]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Localit Verbos
0	6317637	Le Petit Souffle	162	Makati City	Third Floor, Century City Mall, Kalayaan Avenu...	Century City Mall, Poblacion, Makati City	Century Cit Ma Poblacio Makati Cit Mak
1	6304287	Izakaya Kikufuji	162	Makati City	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	Little Tokyo, Legaspi Village, Makati City	Little Toky Legasp Villag Makati Cit Ma
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	Edsa Shangri-La, Ortigas, Mandaluyong City	Edsa Shangr La, Ortiga Mandaluyon City, Ma
3	6318506	Ooma	162	Mandaluyong City	Third Floor, Mega Fashion Hall, SM Megamall, O...	SM Megamall, Ortigas, Mandaluyong City	SM Megama Ortiga Mandaluyon Cit Mandal
4	6314302	Sambo Kojin	162	Mandaluyong City	Third Floor, Mega Atrium, SM Megamall, Ortigas...	SM Megamall, Ortigas, Mandaluyong City	SM Megama Ortiga Mandaluyon Cit Mandal

5 rows × 21 columns

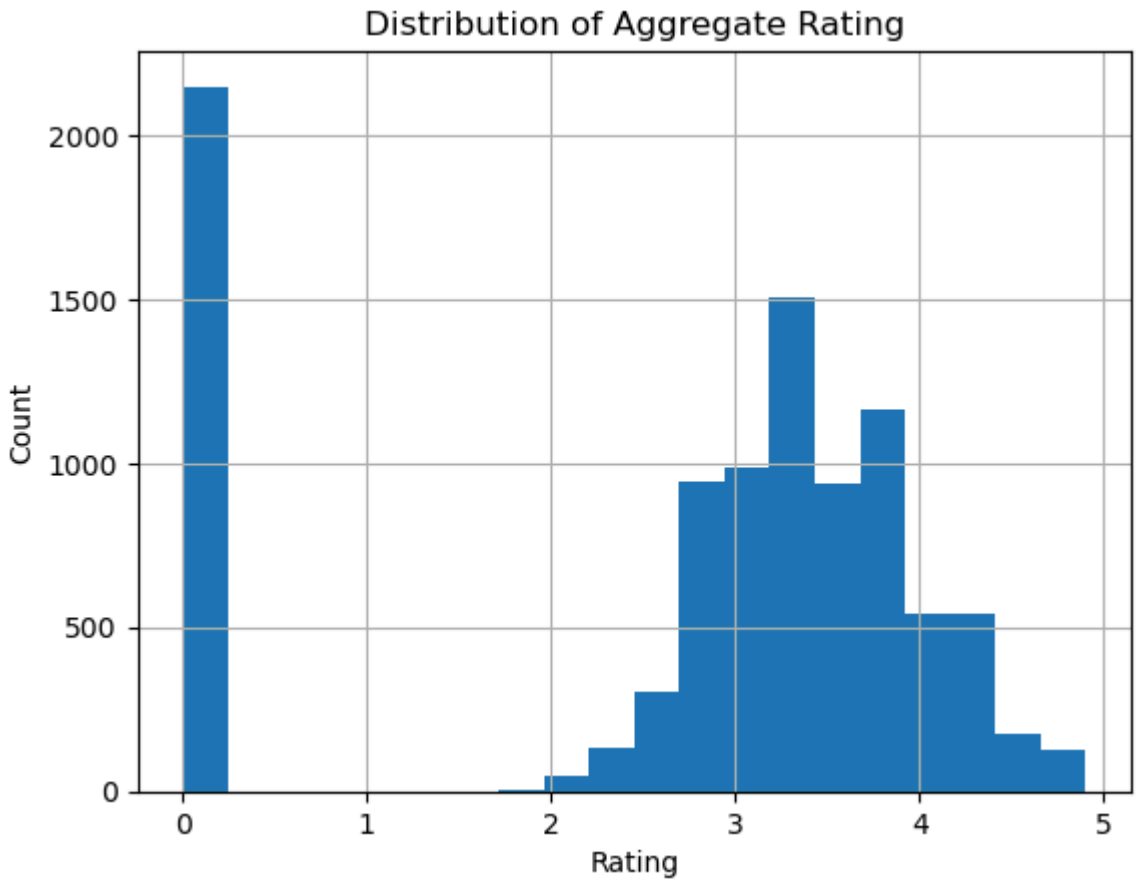
In [5]:
```
# Task 1: Data Exploration
```

In [14]:
```
print("Shape:", df.shape)
print("\nMissing Values:\n", df.isnull().sum())
df['Cuisines'] = df['Cuisines'].fillna("Not Specified")
```

```
Shape: (9551, 21)

Missing Values:
 Restaurant ID           0
Restaurant Name          0
Country Code             0
City                     0
Address                  0
Locality                 0
Locality Verbose         0
Longitude                0
Latitude                 0
Cuisines                 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
```

In [15]:
```
plt.figure()
df['Aggregate rating'].hist(bins=20)
plt.title("Distribution of Aggregate Rating")
plt.xlabel("Rating")
plt.ylabel("Count")
plt.show()
```



In [7]:
```
# Task 2: Descriptive Analysis
```

In [11]:
```
print("\nStatistical Summary:\n", df.describe())
```

```
Statistical Summary:
       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
```

In [12]:
```
print("\nTop Cities:\n", df['City'].value_counts().head(10))
```

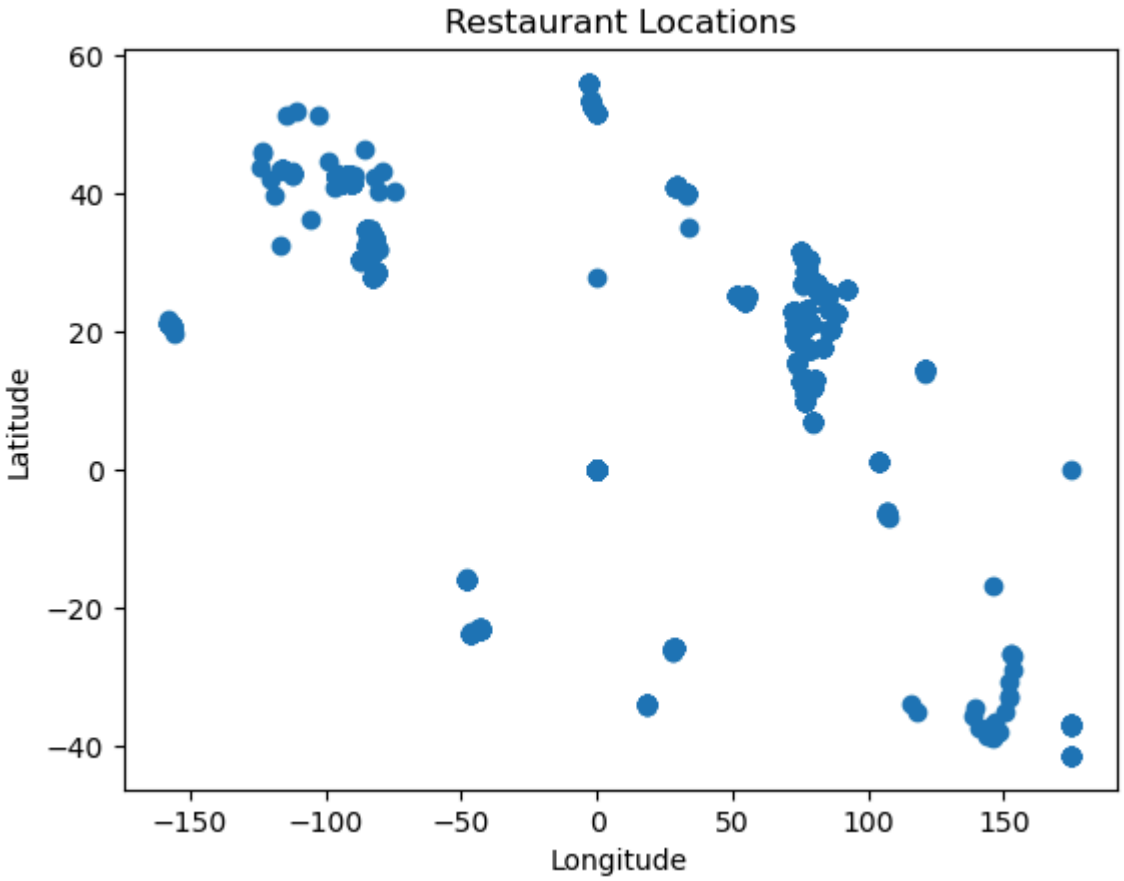
```
Top Cities:
 City
New Delhi       5473
Gurgaon         1118
Noida           1080
Faridabad        251
Ghaziabad         25
Bhubaneshwar      21
Amritsar          21
Ahmedabad         21
Lucknow           21
Guwahati          21
Name: count, dtype: int64
```

In [13]:
```
print("\nTop Cuisines:\n", df['Cuisines'].value_counts().head(10))
```

```
Top Cuisines:
 Cuisines
North Indian                       936
North Indian, Chinese              511
Chinese                            354
Fast Food                          354
North Indian, Mughlai              334
Cafe                               299
Bakery                             218
North Indian, Mughlai, Chinese     197
Bakery, Desserts                   170
Street Food                        149
Name: count, dtype: int64
```

In [9]:
```
# Task 3: Geospatial Analysis
```

In [10]:
```
plt.figure()
plt.scatter(df['Longitude'], df['Latitude'])
plt.title("Restaurant Locations")
plt.xlabel("Longitude")
plt.ylabel("Latitude")
plt.show()
```



In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: