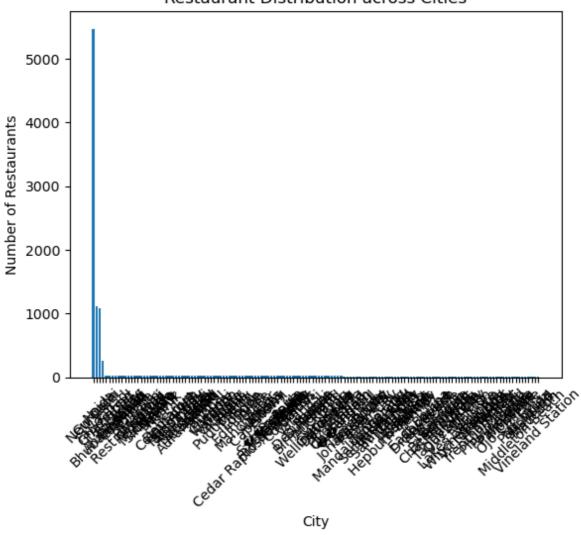
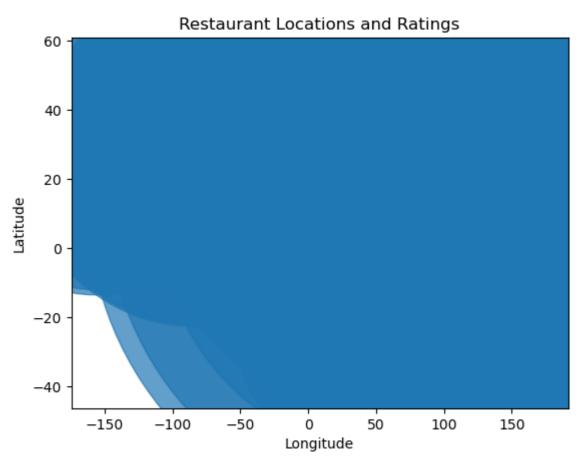
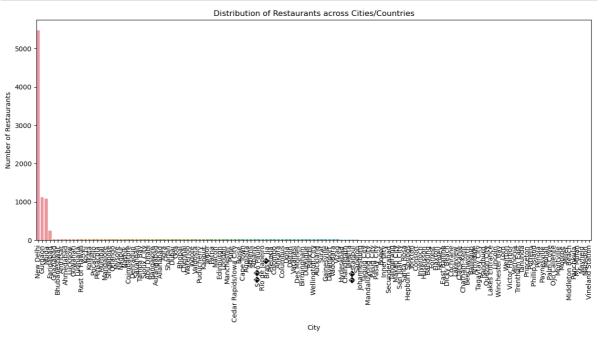
```
In [4]: """LEVEL 01 - TASK 03"""
         '''Task: Geospatial Analysis
        -->Visualize the locations of restaurants on a
        map using latitude and longitude
        information.
        -->Analyze the distribution of restaurants
        across different cities or countries.
        Determine if there is any correlation
        between the restaurant's location and its
        rating.'''
In [ ]: #importing libraries
        import pandas as pd
        import matplotlib.pyplot as plt
        import folium
In [5]: #install folium ---> !pip install folium
In [6]: data = pd.read_csv("Dataset.csv")
In [9]:
        # Visualization the locations of restaurants on a map using latitude and longitude
        res_map = folium.Map(location=[data['Latitude'].mean(), data['Longitude'].mean()],
        for index, row in data.iterrows():
            popup_text = f"{row['Restaurant Name']} - Rating: {row['Votes']}"
            folium.Marker([row['Latitude'], row['Longitude']], popup=popup_text).add_to(res
        res_map.save('res_map.html')
        # Analyze the distribution of restaurants across different cities
        city_distribution = data['City'].value_counts()
        # Plot the distribution using a bar chart
        plt.bar(city_distribution.index, city_distribution.values)
        plt.xlabel('City')
        plt.ylabel('Number of Restaurants')
        plt.title('Restaurant Distribution across Cities')
        plt.xticks(rotation=45)
        plt.show()
        # Plotting scatter plot with size based on rating
        plt.scatter(data['Longitude'], data['Latitude'], s=data['Votes'] * 20, alpha=0.7)
        plt.xlabel('Longitude')
        plt.ylabel('Latitude')
        plt.title('Restaurant Locations and Ratings')
        plt.show()
```

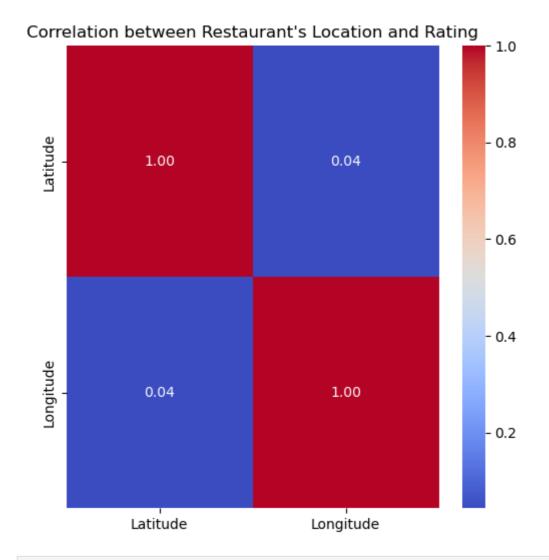
Restaurant Distribution across Cities





```
In [10]:
         import pandas as pd
         import matplotlib.pyplot as plt
         import seaborn as sns
         data = pd.read_csv("Dataset.csv")
         city_country_counts = data["City"].value_counts()
         # Plot the distribution of restaurants across cities or countries
         plt.figure(figsize=(15, 6))
         sns.barplot(x=city_country_counts.index, y=city_country_counts.values)
         plt.xticks(rotation=90)
         plt.xlabel("City")
         plt.ylabel("Number of Restaurants")
         plt.title("Distribution of Restaurants across Cities/Countries")
         plt.show()
         # Checking the correlation between restaurant's location with latitude, longitude of
         correlation = data[["Latitude", "Longitude", "Cuisines"]].corr()
         # Plot the correlation matrix using a heatmap
         plt.figure(figsize=(6, 6))
         sns.heatmap(correlation, annot=True, cmap="coolwarm", fmt=".2f")
         plt.title("Correlation between Restaurant's Location and Rating")
         plt.show()
```





In []: