# ONLINE DELIVERY

## IMPORT LIBRARIES

In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
```

## DATA COLLECTION

In [2]:
```
df=pd.read_csv('Dataset .csv',encoding='unicode_escape')
```

In [3]:
```
df.head()
```

Out[3]:

| | ï»¿Restaurant ID | Restaurant Name | Country Code | City | Address | Locality | Locality Verbose | Longitude | Latitude | Cuisines | ... | C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 6317637 | Le Petit Souffle | 162 | Makati City | Third Floor, Century City Mall, Kalayaan Avenu... | Century City Mall, Poblacion, Makati City | Century City Mall, Poblacion, Makati City, Mak... | 121.027535 | 14.565443 | French, Japanese, Desserts | ... | B |
| **1** | 6304287 | Izakaya Kikufuji | 162 | Makati City | Little Tokyo, 2277 Chino Roces Avenue, Legaspi... | Little Tokyo, Legaspi Village, Makati City | Little Tokyo, Legaspi Village, Makati City, Ma... | 121.014101 | 14.553708 | Japanese | ... | B |
| **2** | 6300002 | Heat - Edsa Shangri-La | 162 | Mandaluyong City | Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal... | Edsa Shangri-La, Ortigas, Mandaluyong City | Edsa Shangri-La, Ortigas, Mandaluyong City, Ma... | 121.056831 | 14.581404 | Seafood, Asian, Filipino, Indian | ... | B |
| **3** | 6318506 | Ooma | 162 | Mandaluyong City | Third Floor, Mega Fashion Hall, SM Megamall, O... | SM Megamall, Ortigas, Mandaluyong City | SM Megamall, Ortigas, Mandaluyong City, Mandal... | 121.056475 | 14.585318 | Japanese, Sushi | ... | B |
| **4** | 6314302 | Sambo Kojin | 162 | Mandaluyong City | Third Floor, Mega Atrium, SM Megamall, Ortigas... | SM Megamall, Ortigas, Mandaluyong City | SM Megamall, Ortigas, Mandaluyong City, Mandal... | 121.057508 | 14.584450 | Japanese, Korean | ... | B |

5 rows × 21 columns

In [4]:
```
df.shape
```

Out[4]:
```
(9551, 21)
```

## TO CHECK AND REMOVE NULL VALUES

In [5]:
```
pd.isnull(df).sum()
```

Out[5]:
```
ï»¿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
```

In [6]:
```
df.dropna(inplace=True)
```

In [7]:
```
df.shape
```

Out[7]:
```
(9542, 21)
```

## DETERMINE THE PERCENTAGE OF RESTAURANTS THAT OFFER ONLINE DELIVERY.

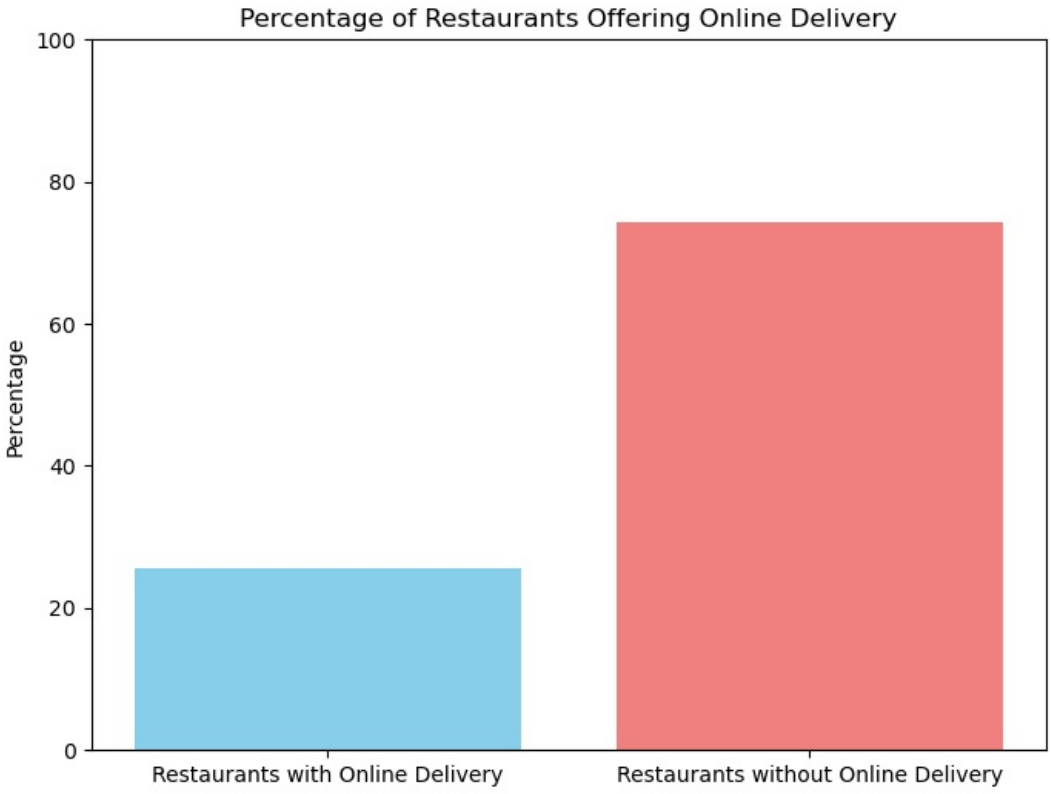
In [8]:
```
df.columns
```

Out[8]:
```
Index(['ï»¿Restaurant ID', 'Restaurant Name', 'Country Code', 'City',
       'Address', 'Locality', 'Locality Verbose', 'Longitude', 'Latitude',
       'Cuisines', 'Average Cost for two', 'Currency', 'Has Table booking',
       'Has Online delivery', 'Is delivering now', 'Switch to order menu',
       'Price range', 'Aggregate rating', 'Rating color', 'Rating text',
       'Votes'],
      dtype='object')
```

In [9]:
```
# Calculate the total number of restaurants
total_restaurants = len(df)

# Count the number of restaurants that offer online delivery
restaurants_with_delivery = df['Has Online delivery'].str.lower().eq('yes').sum()

# Calculate the percentage of restaurants that offer online delivery
percentage_with_delivery = (restaurants_with_delivery / total_restaurants) * 100

print(f"Percentage of restaurants that offer online delivery: {percentage_with_delivery:.2f}%")
```

```
Percentage of restaurants that offer online delivery: 25.69%
```

In [10]:
```
plt.figure(figsize=(8, 6))
plt.bar(['Restaurants with Online Delivery', 'Restaurants without Online Delivery'], [percentage_with_delivery,
plt.title('Percentage of Restaurants Offering Online Delivery')
plt.ylabel('Percentage')
plt.ylim(0, 100)
plt.show()
```

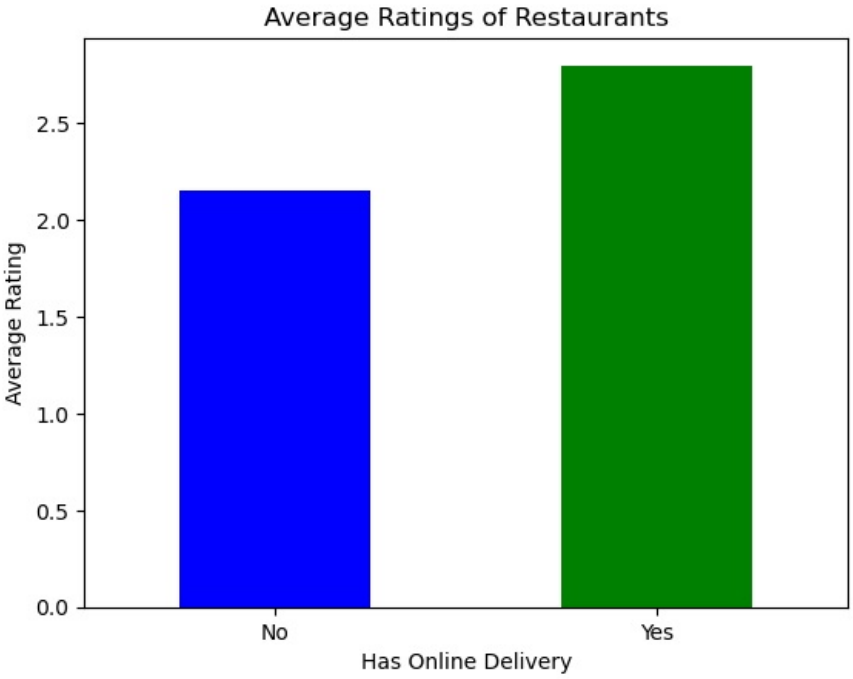



COMPARE THE AVERAGE RATINGS OF RESTAURANTS WITH AND WITHOUT ONLINE DELIVERY.

In [65]:
```
restaurant_avg_rating=df.groupby('Has Online delivery')['Aggregate rating'].mean()

print('Average ratings for restaurants: ')
print(restaurant_avg_rating)
```

```
Average ratings for restaurants:
Has Online delivery
No     2.153152
Yes    2.797226
Name: Aggregate rating, dtype: float64
```

In [69]:
```
# Plotting the bar graph
restaurant_avg_rating.plot(kind='bar', color=['blue', 'green'])
plt.title('Average Ratings of Restaurants')
plt.xlabel('Has Online Delivery')
plt.ylabel('Average Rating')
plt.xticks([0, 1], ['No', 'Yes'], rotation=0)
plt.show()
```




# THANKYOU!

## CONNECT WITH ME:

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YouTube: https://youtube.com/@Datapredicts?si=eDKAqVciVxg23zab