TASK4

Task: Online Delivery

Determine the percentage of restaurants that offer online delivery.

```
In [1]:   # import library
          import pandas as pd
          import matplotlib.pyplot as plt
          import seaborn as sb
```

```
In [2]:   df=pd.read_csv("C:\\Users\\abhis\\Downloads\\Dataset .csv")
          df
```

Out[2]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose
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..
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..
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..
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..
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..
...	...	...	...	...	...	...	..
9546	5915730	Namlı Gurme	208	��stanbul	Kemanke�� Karamustafa Pa��a Mahallesi, Rıhtım ...	Karak�_y	Karak�_y ��stanbu
9547	5908749	Ceviz A��acı	208	��stanbul	Ko��uyolu Mahallesi, Muhittin ��st�_nda�� Cadd...	Ko��uyolu	Ko��uyolu ��stanbu
9548	5915807	Huqqa	208	��stanbul	Kuru�_e��me Mahallesi, Muallim Naci Caddesi, N...	Kuru�_e��me	Kuru�_e��me ��stanbu
9549	5916112	A���k Kahve	208	��stanbul	Kuru�_e��me Mahallesi, Muallim Naci Caddesi, N...	Kuru�_e��me	Kuru�_e��me ��stanbu
9550	5927402	Walter's Coffee Roastery	208	��stanbul	Cafea��a Mahallesi, Bademaltı Sokak, No 21/B, ...	Moda	Moda ��stanbu

9551 rows × 21 columns

In [4]: `df.isnull().sum()`

Out[4]:
```
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.describe()`

Out[6]:

	Restaurant ID	Country Code	Longitude	Latitude	Average Cost for two	Price range	Aggregate rating
count	9.551000e+03	9551.000000	9551.000000	9551.000000	9551.000000	9551.000000	9551.000000
mean	9.051128e+06	18.365616	64.126574	25.854381	1199.210763	1.804837	2.666370
std	8.791521e+06	56.750546	41.467058	11.007935	16121.183073	0.905609	1.516378
min	5.300000e+01	1.000000	-157.948486	-41.330428	0.000000	1.000000	0.000000
25%	3.019625e+05	1.000000	77.081343	28.478713	250.000000	1.000000	2.500000
50%	6.004089e+06	1.000000	77.191964	28.570469	400.000000	2.000000	3.200000
75%	1.835229e+07	1.000000	77.282006	28.642758	700.000000	2.000000	3.700000
max	1.850065e+07	216.000000	174.832089	55.976980	800000.000000	4.000000	4.900000

In [7]:
```python
del_rest=df.groupby(by='Has Online delivery')['Restaurant Name'].value_counts()
del_rest
```

```
Out[7]:  Has Online delivery    Restaurant Name
         No                     Domino's Pizza                79
                                Cafe Coffee Day               78
                                Green Chick Chop              47
                                Keventers                     33
                                Barbeque Nation               26
                                                              ..
         Yes                    Zolocrust - Hotel Clarks Amer  1
                                Zucca Pizzeria                 1
                                hug!                           1
                                iGNiTE                         1
                                iKitchen                       1
         Name: Restaurant Name, Length: 7659, dtype: int64
```

In [18]:
```python
del_rest.sum()
```

Out[18]: 9551

In [13]:
```python
del_rest_per=(df['Has Online delivery']=='Yes').sum()
```

In [14]:
```python
del_rest_per
```

Out[14]: 2451

In [19]:
```python
percentage=del_rest_per/del_rest.sum()*100
percentage
```

Out[19]: 25.662234321013504

Compare the average ratings of restaurants with and without online delivery.

In [25]:
```python
del_rating_with=df[df['Has Online delivery']=='Yes']['Aggregate rating'].mean()
```

In [26]:
```python
del_rating_with
```

Out[26]: 3.2488372093023257

In [27]:
```python
del_rating_without=df[df['Has Online delivery']=='No']['Aggregate rating'].mean()
del_rating_without
```

Out[27]: 2.465295774647887

In [ ]: