

Importing Libraries

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

Loading the dataset

```
In [20]: data = pd.read_csv(r"C:\Users\ykuma\Downloads\Zomato data .csv")
data
```

```
Out[20]:
```

	name	online_order	book_table	rate	votes	approx_cost(for two people)	listed_in(type)
0	Jalsa	Yes	Yes	4.1/5	775	800	Buffet
1	Spice Elephant	Yes	No	4.1/5	787	800	Buffet
2	San Churro Cafe	Yes	No	3.8/5	918	800	Buffet
3	Addhuri Udupi Bhojana	No	No	3.7/5	88	300	Buffet
4	Grand Village	No	No	3.8/5	166	600	Buffet
...
143	Melting Melodies	No	No	3.3/5	0	100	Dining
144	New Indraprasta	No	No	3.3/5	0	150	Dining
145	Anna Kuteera	Yes	No	4.0/5	771	450	Dining
146	Darbar	No	No	3.0/5	98	800	Dining
147	Vijayalakshmi	Yes	No	3.9/5	47	200	Dining

148 rows × 7 columns

Data Cleaning

In [24]: *# Converting the data type of the column 'Rate'*

```
def rating(value):
    value = str(value).split('/')
    value = value[0];
    return float(value)

data['rate'] = data['rate'].apply(rating)
data.head()
```

Out[24]:

	name	online_order	book_table	rate	votes	approx_cost(for two people)	listed_in(type)
0	Jalsa	Yes	Yes	4.1	775	800	Buffet
1	Spice Elephant	Yes	No	4.1	787	800	Buffet
2	San Churro Cafe	Yes	No	3.8	918	800	Buffet
3	Addhuri Udupi Bhojana	No	No	3.7	88	300	Buffet
4	Grand Village	No	No	3.8	166	600	Buffet

In [25]: data.info()

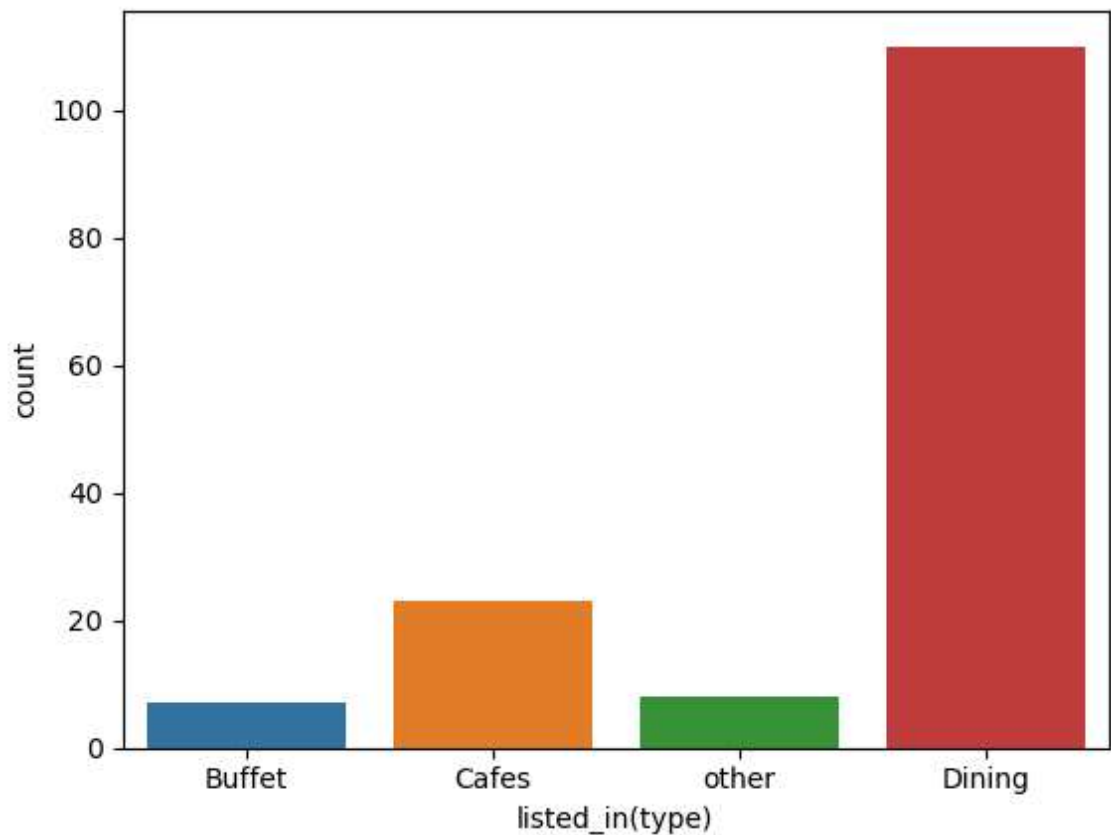
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 148 entries, 0 to 147
Data columns (total 7 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   name                                  148 non-null    object
1   online_order                         148 non-null    object
2   book_table                           148 non-null    object
3   rate                                 148 non-null    float64
4   votes                                148 non-null    int64
5   approx_cost(for two people)          148 non-null    int64
6   listed_in(type)                      148 non-null    object
dtypes: float64(1), int64(2), object(4)
memory usage: 8.2+ KB
```

Business Problem

In [27]: *# 1. What type of restaurant do the majority of customers order from ?*

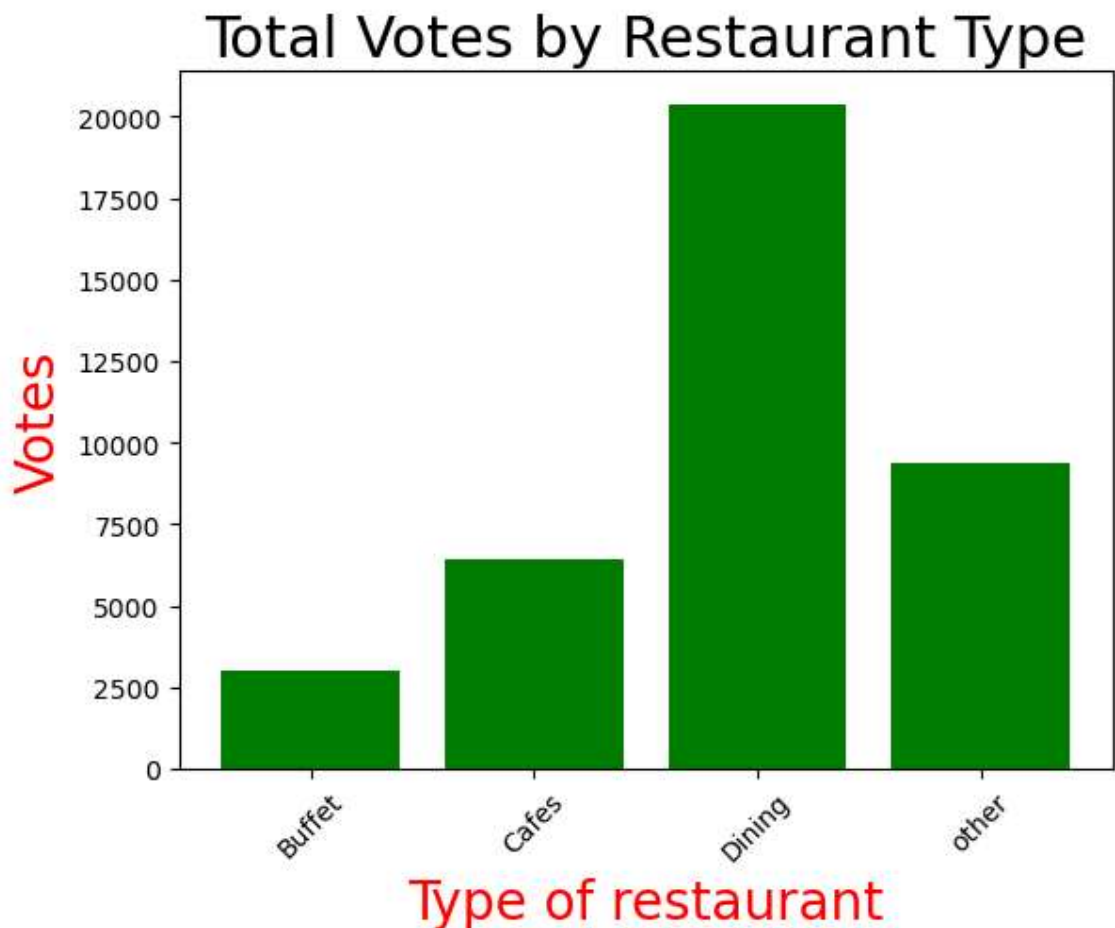
```
sns.countplot(data= data, x='listed_in(type)')  
plt.xlabel('Type of Restaurant')
```

Out[27]: <Axes: xlabel='listed_in(type)', ylabel='count'>



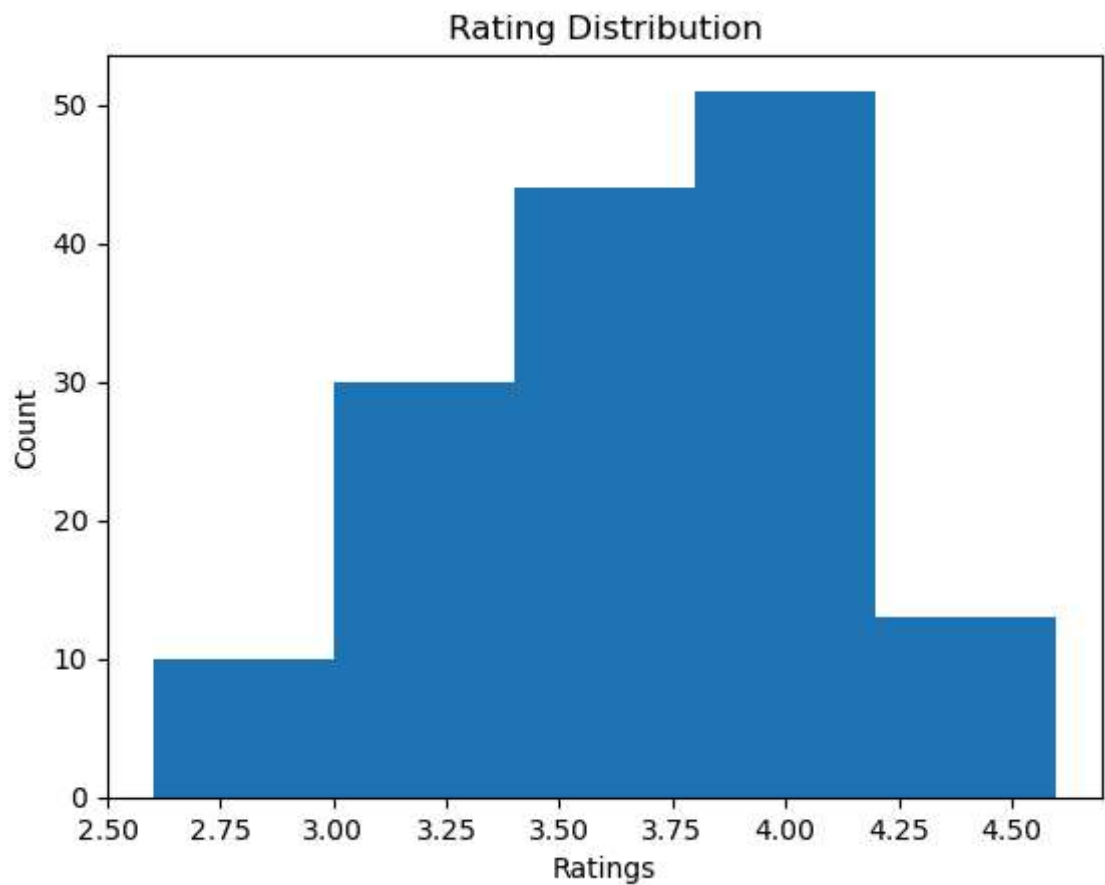
Conclusion:- Dining Restaurants are preferred by a larger number of individuals.

```
In [84]: # 2. How many votes has each type of restaurant received from customers ?  
grouped_data = data.groupby('listed_in(type)')['votes'].sum().reset_index()  
#plotting graph  
plt.bar(grouped_data['listed_in(type)'], grouped_data['votes'], color='green')  
plt.xlabel('Type of restaurant', color='red', size=20)  
plt.ylabel('Votes', color='red', size=20)  
plt.title('Total Votes by Restaurant Type', size=22)  
plt.xticks(rotation=45)  
plt.show()
```



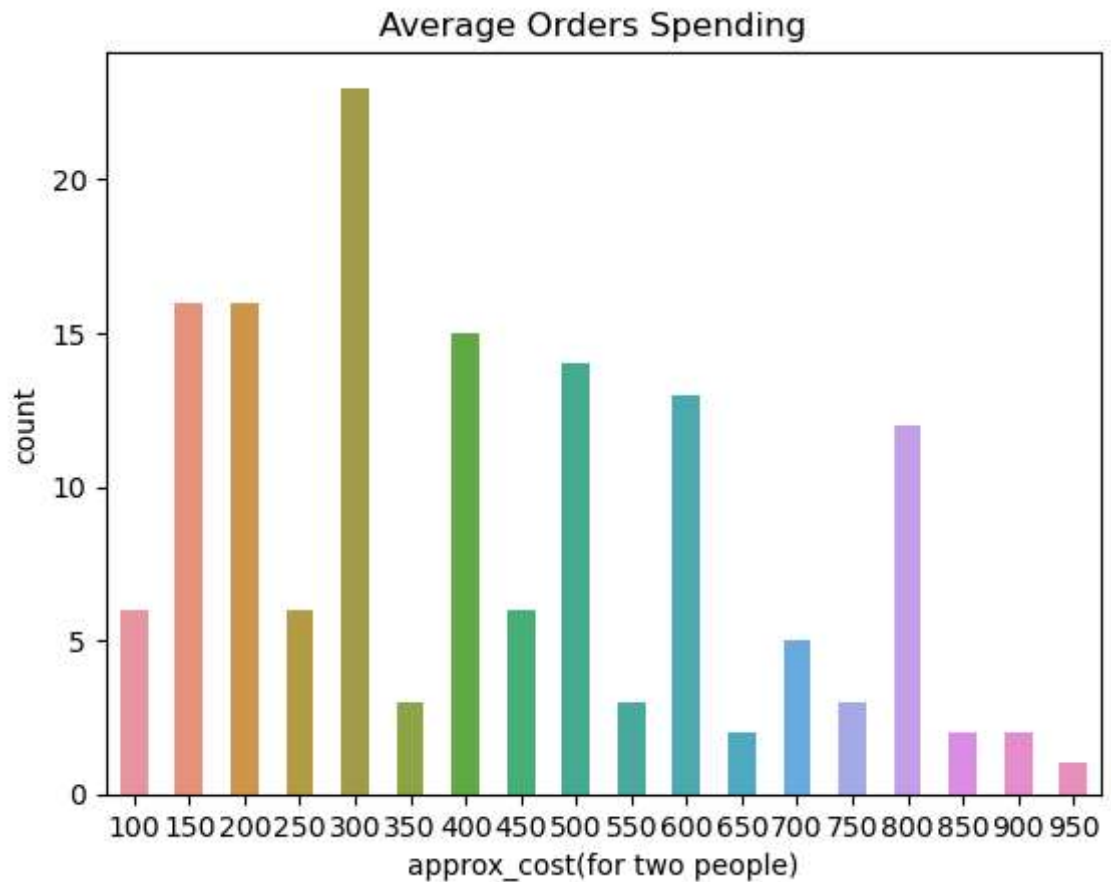
Conclusion:- Dining Restaurants has received maximum votes.

```
In [49]: # 3. what are the ratings that the majority of restaurants have received ?  
plt.hist(data['rate'],bins=5)  
plt.title('Rating Distribution')  
plt.xlabel('Ratings')  
plt.ylabel('Count')  
plt.show()
```



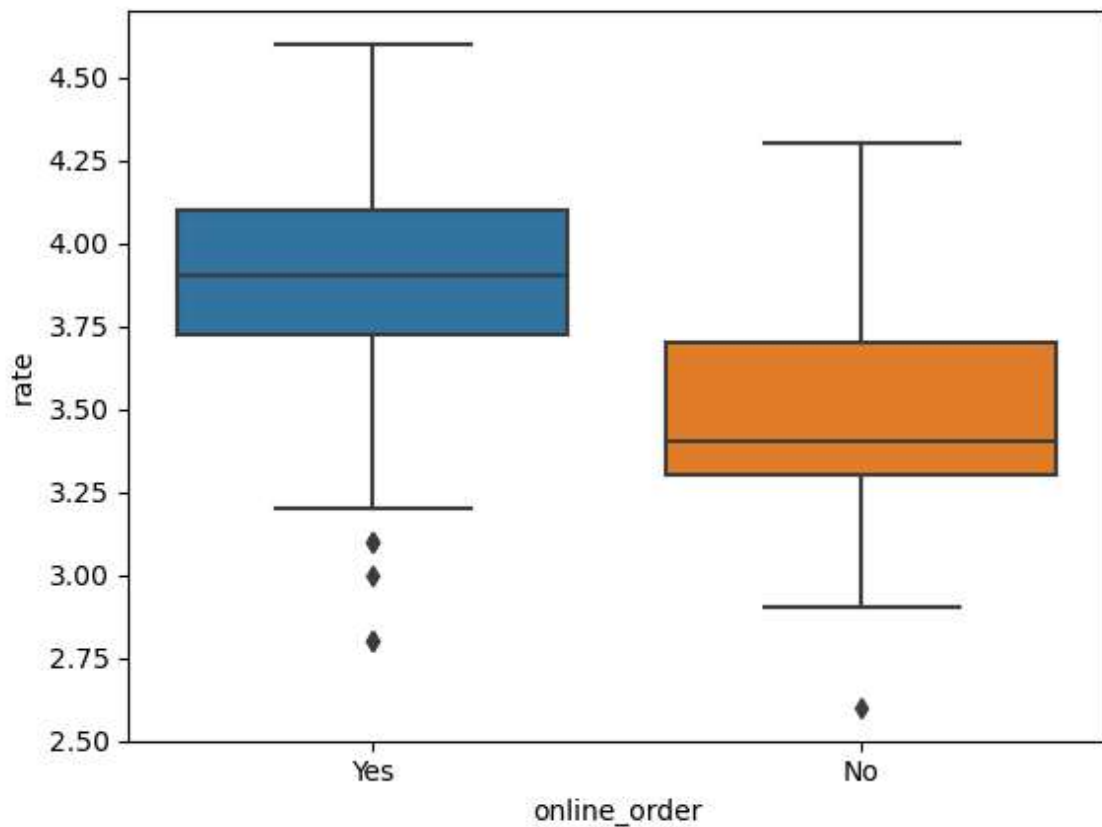
Conclusion:- The majority restaurants received ratings from 3.5 to 4.0

```
In [69]: # 4. Zomato has observed that most of couples order most of their food only  
couple_data= data['approx_cost(for two people)']  
plt.title('Average Orders Spending ' )  
plt.xlabel('Cost')  
sns.countplot(x=couple_data, width=0.5)  
plt.show()
```



Conclusion:- The majority of couples prefer restaurants with an approximate cost of 300 rupees.

```
In [70]: # 5. Which mode has received the maximum rating ?  
sns.boxplot(data=data, x='online_order', y='rate')  
plt.show()
```



Conclusion = Offline orders receive lower rating as compare to online orders.

```
In [66]: # 6. Which type of restaurant received more offline orders, so that Zomato
pivot_table= data.pivot_table(index= 'listed_in(type)', columns= 'online_order',
sns.heatmap(pivot_table, annot=True, cmap='YlGnBu', fmt='d')
plt.title('Heatmap')
plt.xlabel('Online Order')
plt.ylabel('Listed In(type)')
plt.show()
```



Conclusion:- Dining Restaurants primarily accept offline orders, whereas cafes primarily receive online orders. This suggests that clients prefer to place orders in person at restaurants, but prefer online ordering at cafes.

In [1]:

In []: