Zomato data analysis

[32]:
```
# Importing necessary python libraries

import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

[33]:
```
# Creating dataframe

dataframe=pd.read_csv("Zomato data .csv")
print(dataframe.head())
```

```
                  name online_order book_table   rate  votes  \
0                Jalsa          Yes        Yes  4.1/5    775
1       Spice Elephant          Yes         No  4.1/5    787
2      San Churro Cafe          Yes         No  3.8/5    918
3  Addhuri Udupi Bhojana           No         No  3.7/5     88
4         Grand Village            No         No  3.8/5    166

   approx_cost(for two people) listed_in(type)
0                          800          Buffet
1                          800          Buffet
2                          800          Buffet
3                          300          Buffet
4                          600          Buffet
```

[34]:
```
dataframe=pd.read_csv("Zomato data .csv")
dataframe
```

[34]:

	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

Converting the data type of the "rate" column to float and removing the denominator

•[35]:
```
def handleRate(value):
    value=str(value).split('/')
    value=value[0];
    return float(value)
dataframe['rate']=dataframe['rate'].apply(handleRate)
print(dataframe.head())
```

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

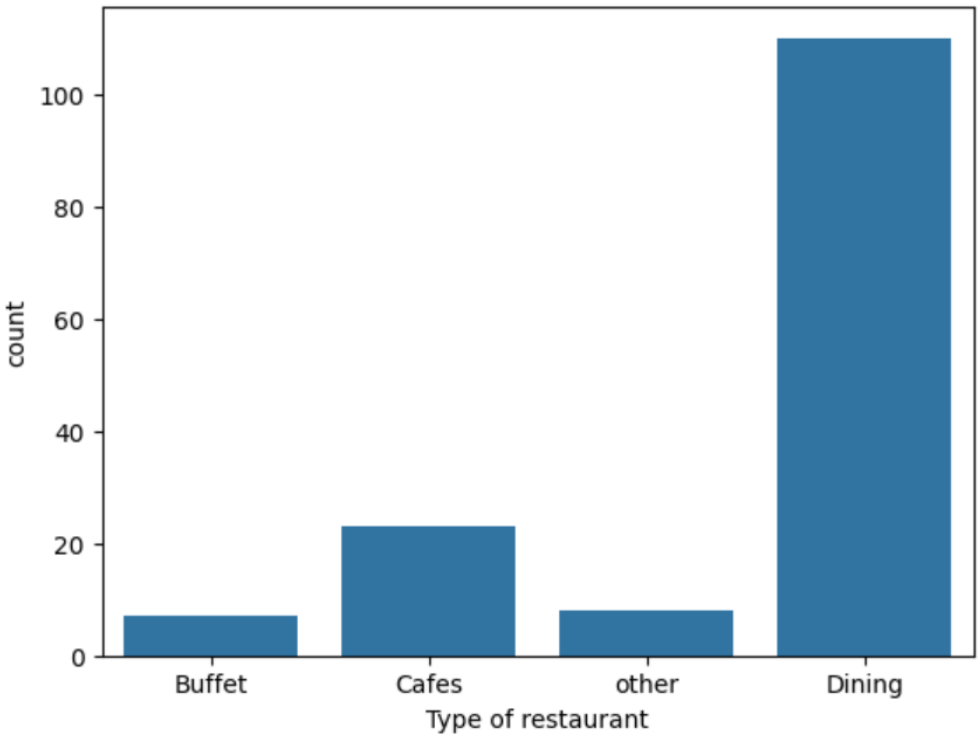
#Dataframe summary

•[36]:
```
dataframe.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
```

Type of restaurant

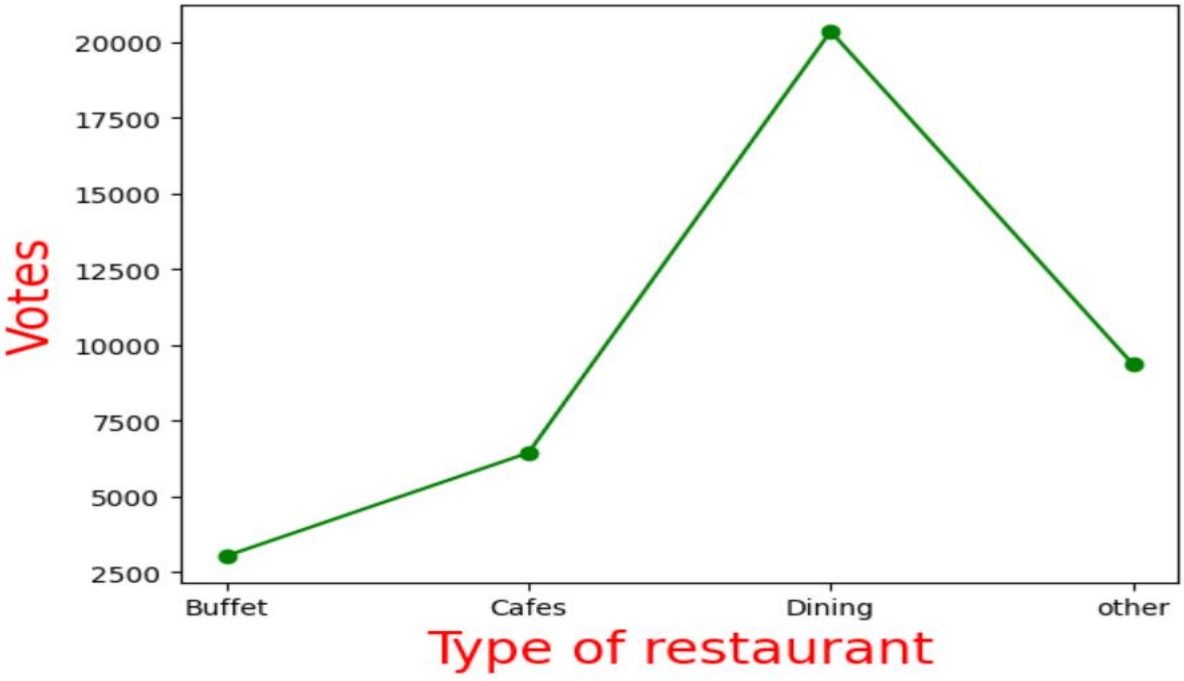
```
[37]: Text(0.5, 0, 'Type of restaurant')
```



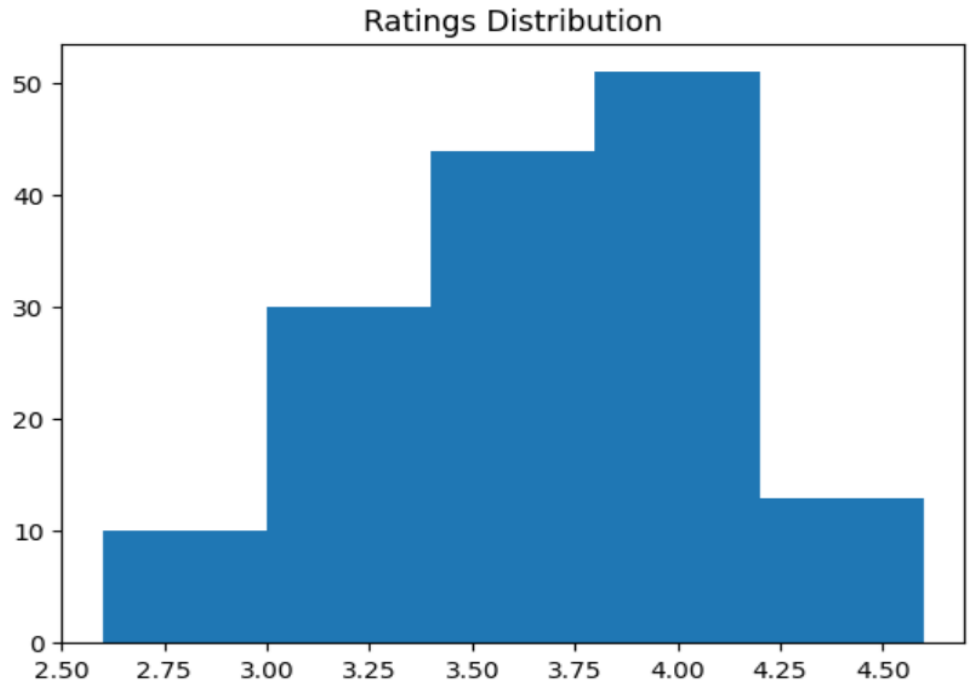
CONCLUSION :- Most of the restaurants fall under Dining category

Ratings of the restaurants

```
[39]: Text(0, 0.5, 'Votes')
```



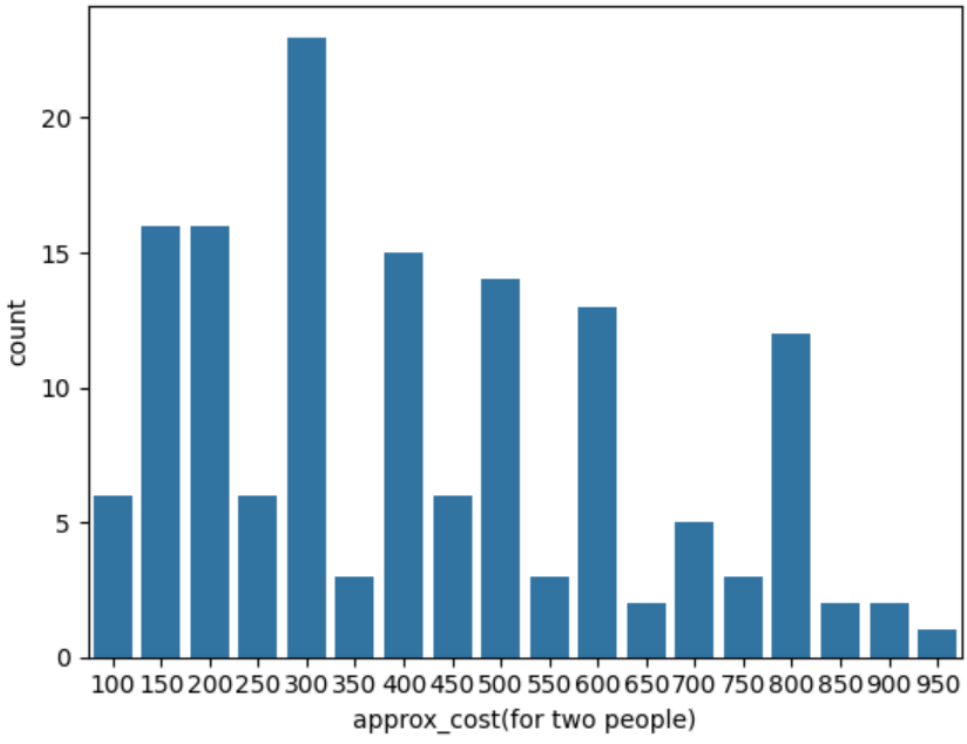
```
[40]: plt.hist(dataframe['rate'],bins=5)
      plt.title("Ratings Distribution")
      plt.show()
```



Majority of the restaurants received ratings ranging 3.5 to 4

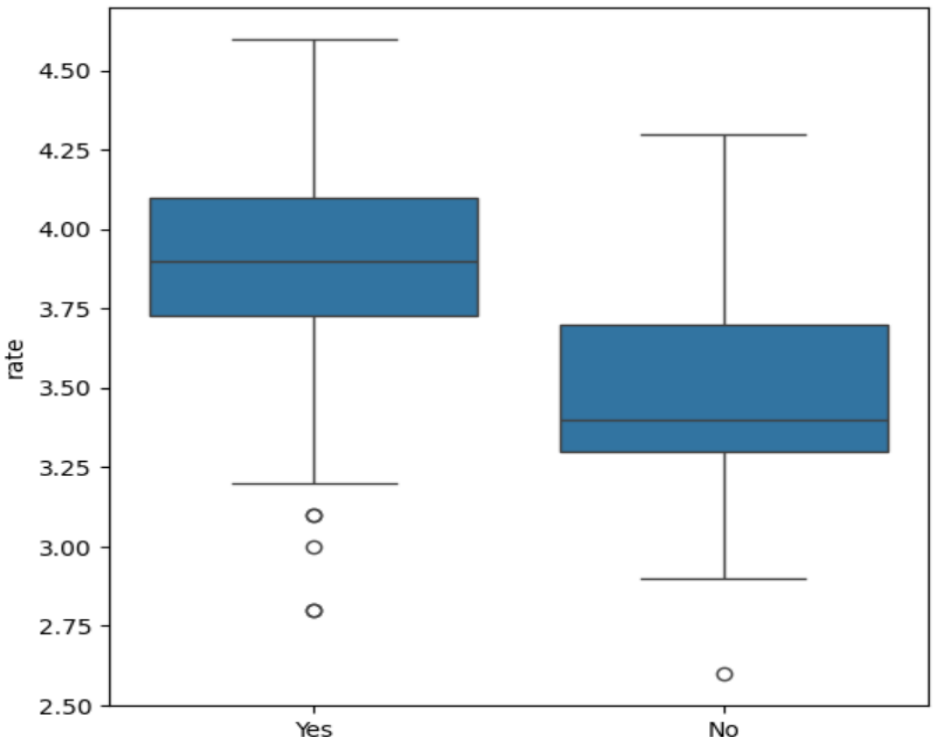
```
[41]: couple_data=dataframe['approx_cost(for two people)']
      sns.countplot(x=couple_data)
```

```
[41]: <Axes: xlabel='approx_cost(for two people)', ylabel='count'>
```



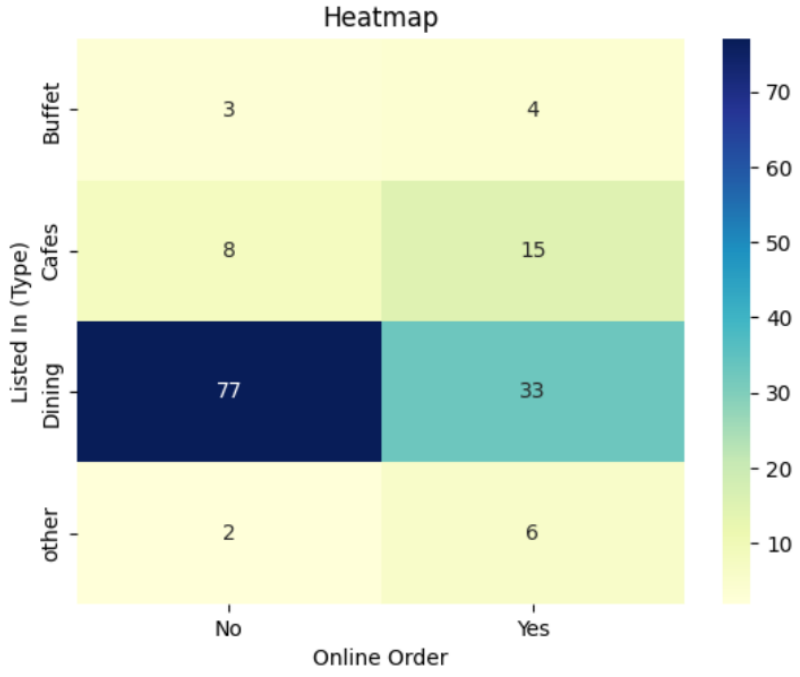
Majority of couples prefer restaurants with approx. cost 300 rupees.

[42]: <Axes: xlabel='online_order', ylabel='rate'>



Offline orders received lower ratings in comparison to online orders.

[43]:
```
pivot_table = dataframe.pivot_table(index='listed_in(type)', columns='online_order', aggfunc='size', fill_value=0)
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.

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