Zomato Data Analysis Project

Importing Libraries

In [4]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

Creating Data Frame

In [5]:
```
df=pd.read_csv("Zomato data .csv")
df.head()
```

Out[5]:

	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

In [7]:
```
df.isnull().sum()
```

Out[7]:
```
name                           0
online_order                   0
book_table                     0
rate                           0
votes                          0
approx_cost(for two people)    0
listed_in(type)                0
```

Convert data in Rating

In [11]:
```
def handleRate(value):
    value=str(value).split("/")
    value=value[0]
    return float(value)

df['rate']=df['rate'].apply(handleRate)
df.head()
```

Out[11]:

	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 [12]:
```
df.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
```

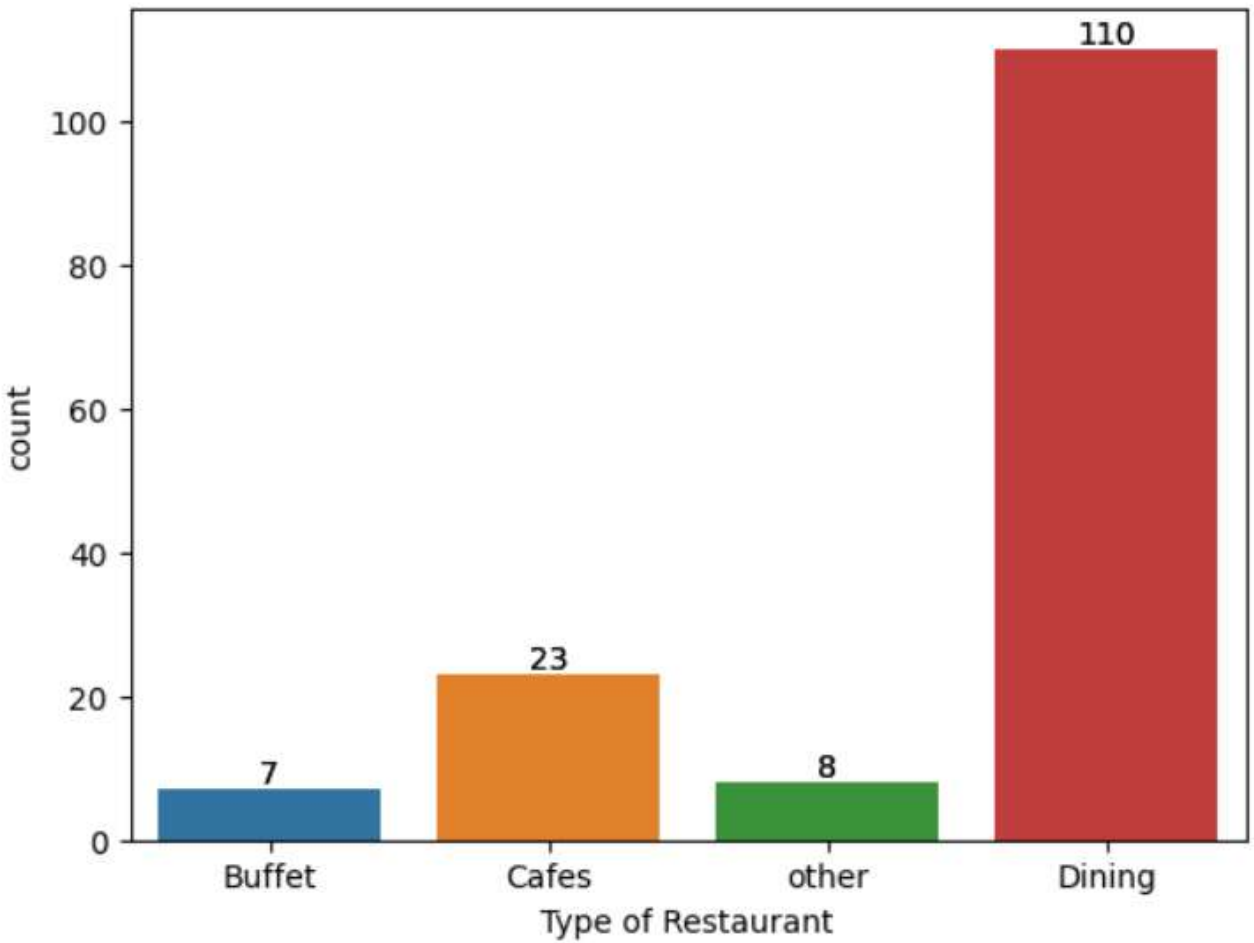
In [13]:
```
df.describe()
```

Out[13]:

	rate	votes	approx_cost(for two people)
count	148.000000	148.000000	148.000000
mean	3.633108	264.810811	418.243243
std	0.402271	653.676951	223.085098
min	2.600000	0.000000	100.000000
25%	3.300000	6.750000	200.000000
50%	3.700000	43.500000	400.000000
75%	3.900000	221.750000	600.000000
max	4.600000	4884.000000	950.000000

Type of Resturent

In [19]:
```
sns.countplot(x=df['listed_in(type)'])
ax = sns.countplot(x=df['listed_in(type)'])
plt.xlabel("Type of Restaurant")
# Add data labels
for container in ax.containers:
    ax.bar_label(container)
plt.show()
```



Mejority of Restaurant Falls in Dining Category

In [37]:

```
grouped = df.groupby('listed_in(type)')['votes'].sum().reset_index()
sns.lineplot(data=grouped, x="listed_in(type)",y='votes',marker="o",color='g')
plt.title("Votes Category Plot")
plt.xlabel("Type of Restaurant")
plt.show()
```

In [37]:

```
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sns.lineplot(data=grouped, x="listed_in(type)",y='votes',marker="o",color='g')
plt.title("Votes Category Plot")
plt.xlabel("Type of Restaurant")
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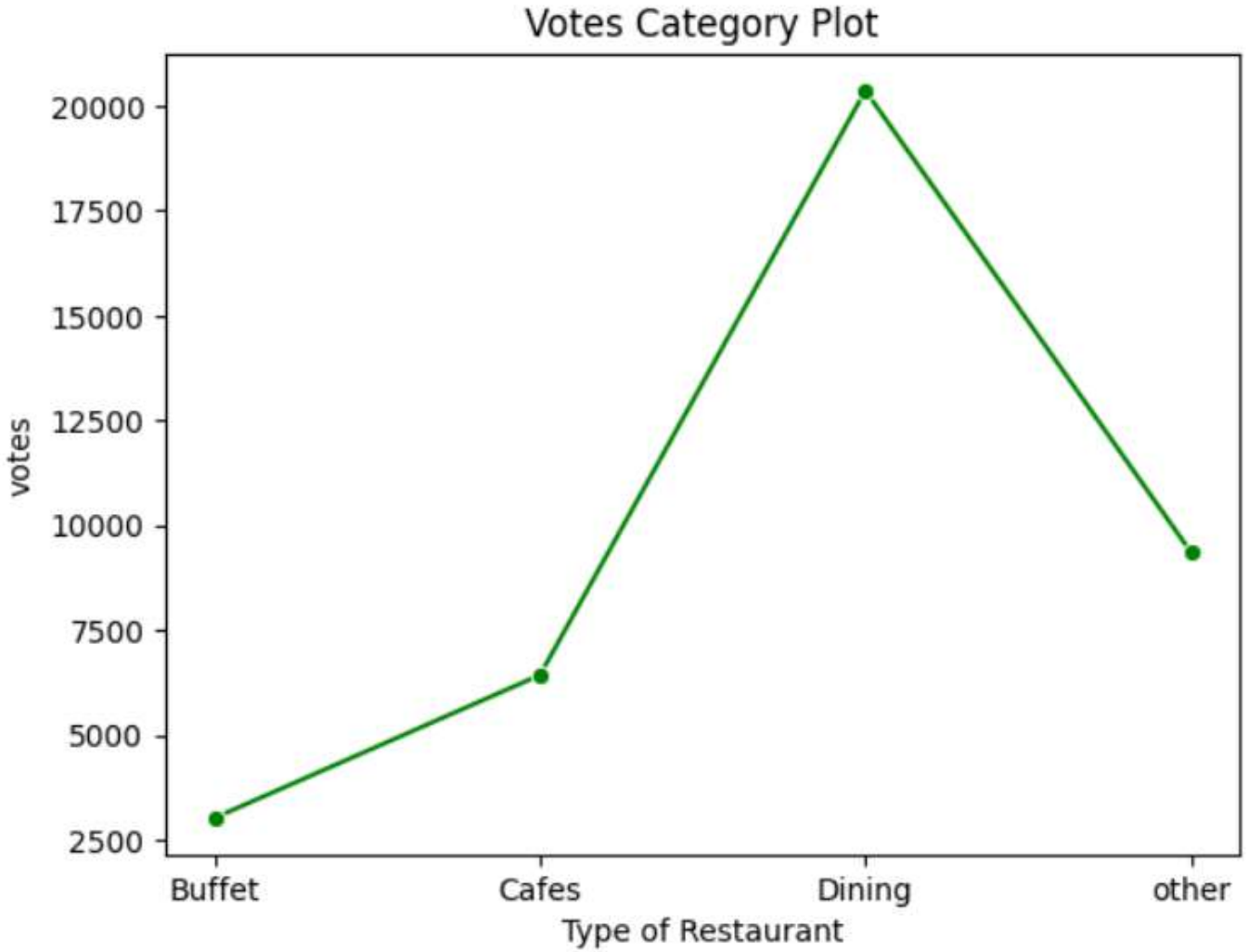


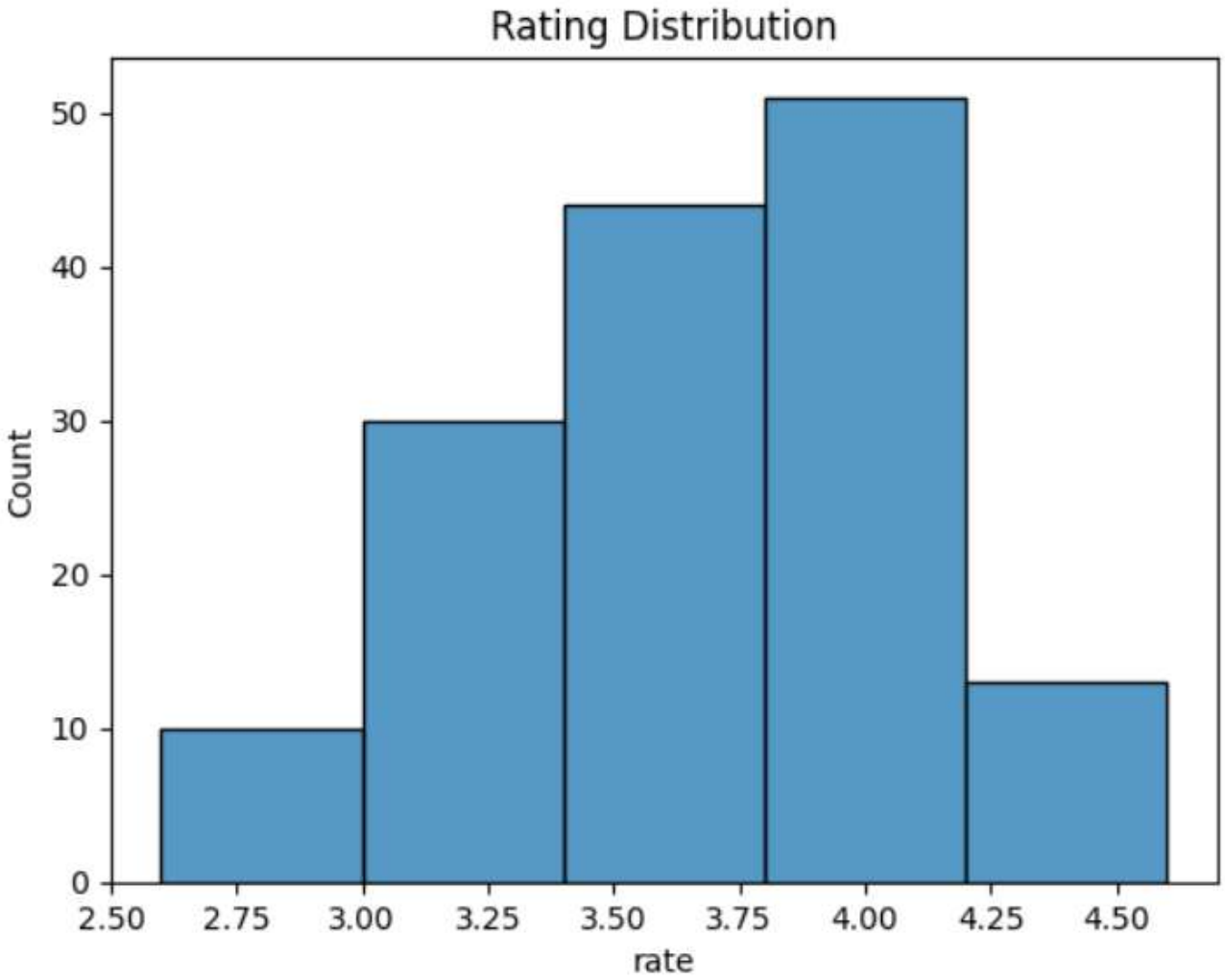
Dinning restaurent have maximum votes

In [39]:

```
df.head()
```

In [46]:

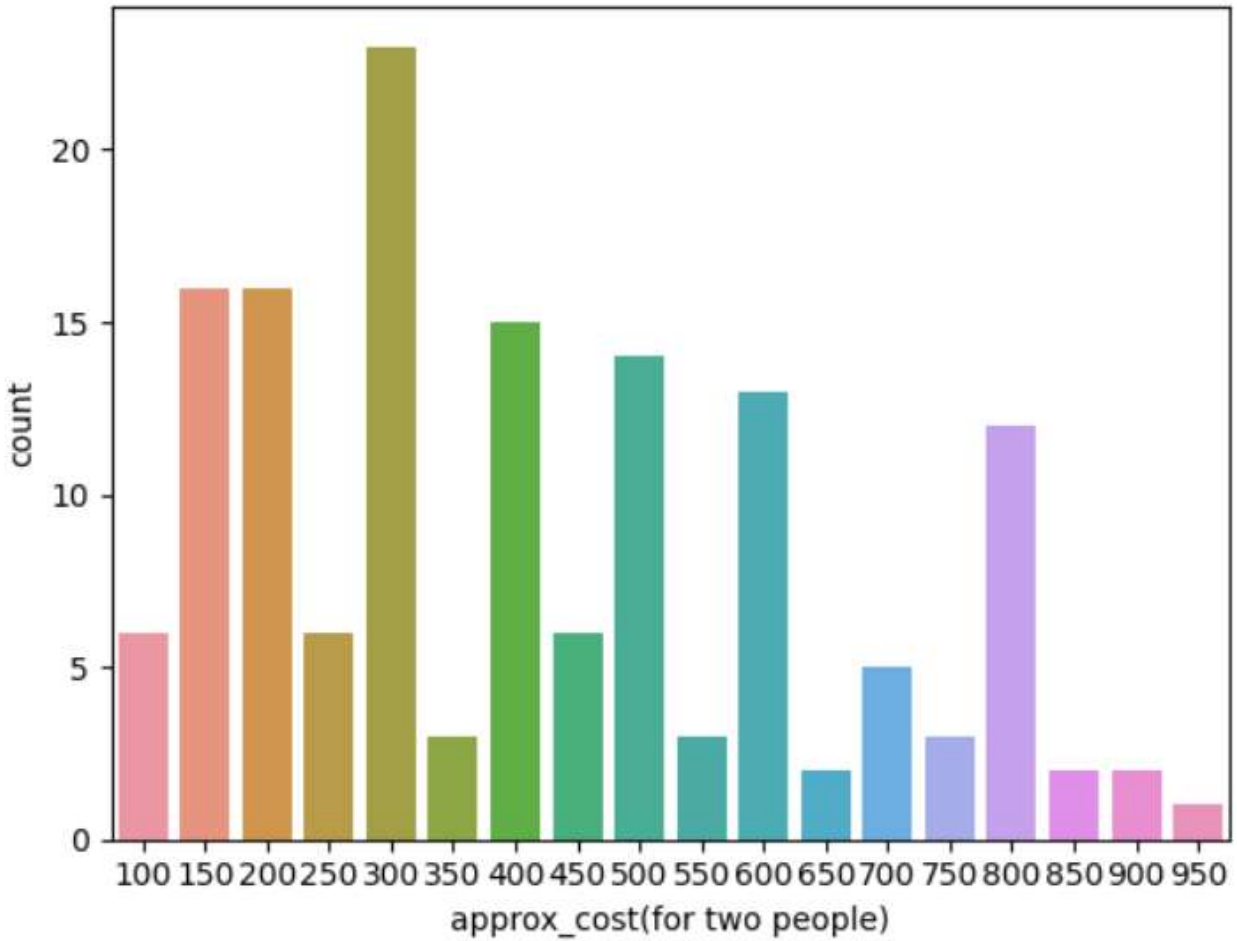
```
sns.histplot(data=df, x='rate',bins=5)
plt.title("Rating Distribution")
plt.show()
```



Majority restaurant getting rating in range 3.5 to 4.2

Average order spending by couples

In [50]:
```
sns.countplot(x=df["approx_cost(for two people)"])
plt.show()
```

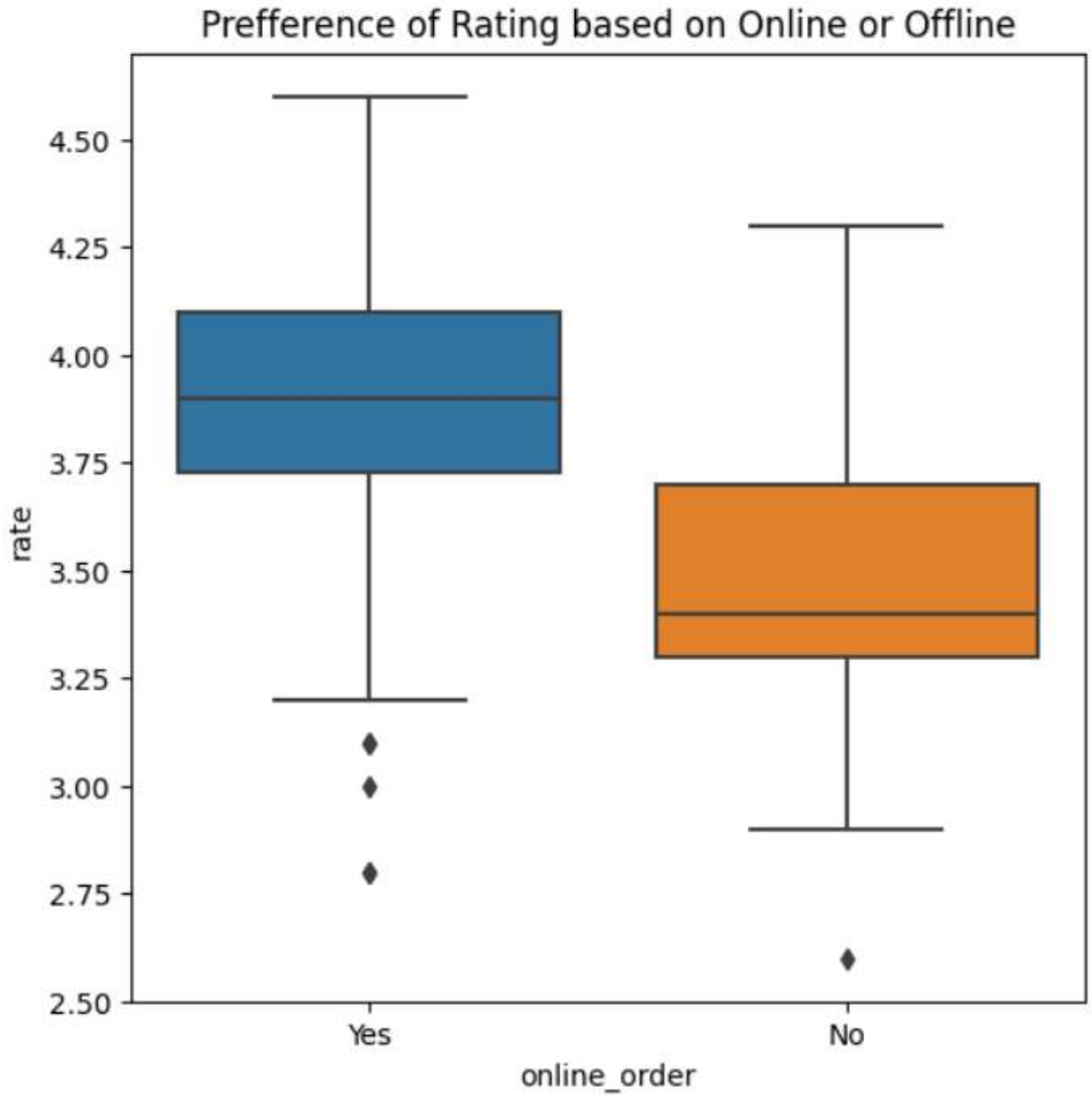


Majority of couples spend 300 Rs in restaurant

In [53]:

```
plt.figure(figsize=(6,6))
sns.boxplot(data=df,x="online_order",y="rate")
plt.title("Prefference of Rating based on Online or Offline")
```

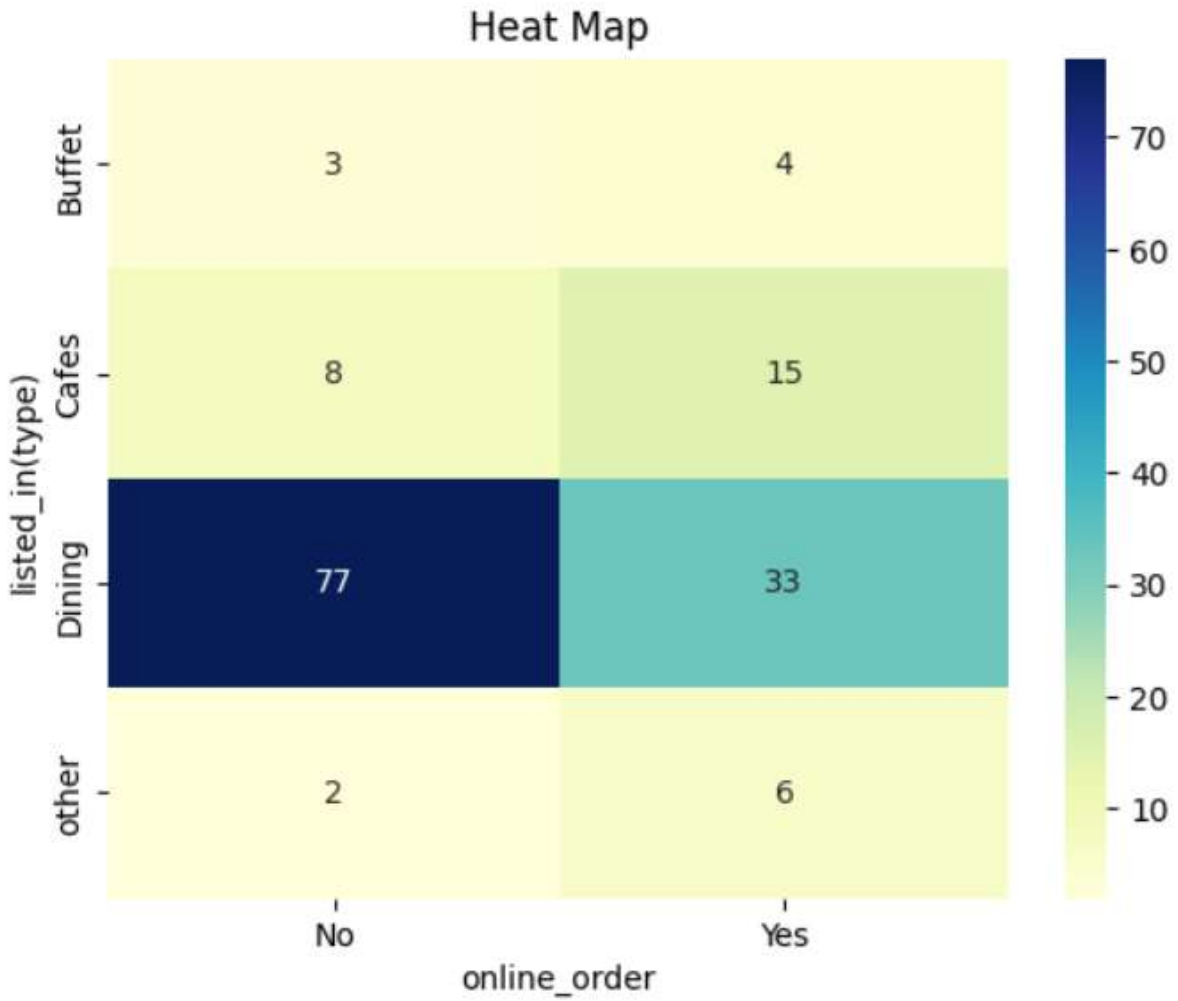
Out[53]: Text(0.5, 1.0, 'Prefference of Rating based on Online or Offline')



In [59]:

```
pivot_table=df.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("Heat Map")
plt.show()
```



Most of the orders in dinnig type of restaurant get offline order and rest of type get online order most