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

df = pd.read_csv("Zomato data .csv")

df.head(10)
```

```
                                                 name online_order
book_table  \
0                                               Jalsa          Yes
Yes
1                                      Spice Elephant          Yes
No
2                                     San Churro Cafe          Yes
No
3                               Addhuri Udupi Bhojana           No
No
4                                       Grand Village           No
No
5                                     Timepass Dinner          Yes
No
6  Rosewood International Hotel - Bar & Restaurant           No
No
7                                             Onesta          Yes
Yes
8                                      Penthouse Cafe          Yes
No
9                                           Smacznego          Yes
No

    rate  votes  approx_cost(for two people) listed_in(type)
0  4.1/5    775                          800          Buffet
1  4.1/5    787                          800          Buffet
2  3.8/5    918                          800          Buffet
3  3.7/5     88                          300          Buffet
4  3.8/5    166                          600          Buffet
5  3.8/5    286                          600          Buffet
6  3.6/5      8                          800          Buffet
7  4.6/5   2556                          600           Cafes
8  4.0/5    324                          700           other
9  4.2/5    504                          550           Cafes
```

```
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    object
 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: int64(2), object(5)
memory usage: 8.2+ KB
```

```
df.isnull().sum().sum()
```

```
0
```

```
df.describe()
```

```
             votes  approx_cost(for two people)
count   148.000000                   148.000000
mean    264.810811                   418.243243
std     653.676951                   223.085098
min       0.000000                   100.000000
25%       6.750000                   200.000000
50%      43.500000                   400.000000
75%     221.750000                   600.000000
max    4884.000000                   950.000000
```

```
def ratting(value):
    value = str(value).split("/")
    value = value[0]
    return float(value)
df["rate"] = df["rate"].apply(ratting)
```

```
df.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
4          Grand Village           No         No   3.8    166

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

```
df.info()
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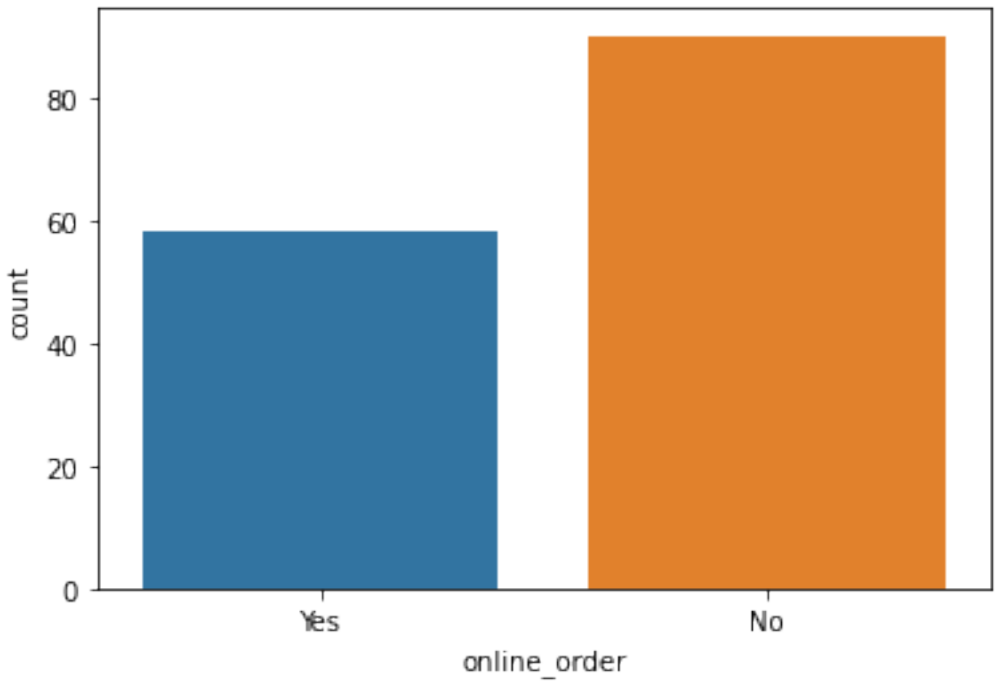
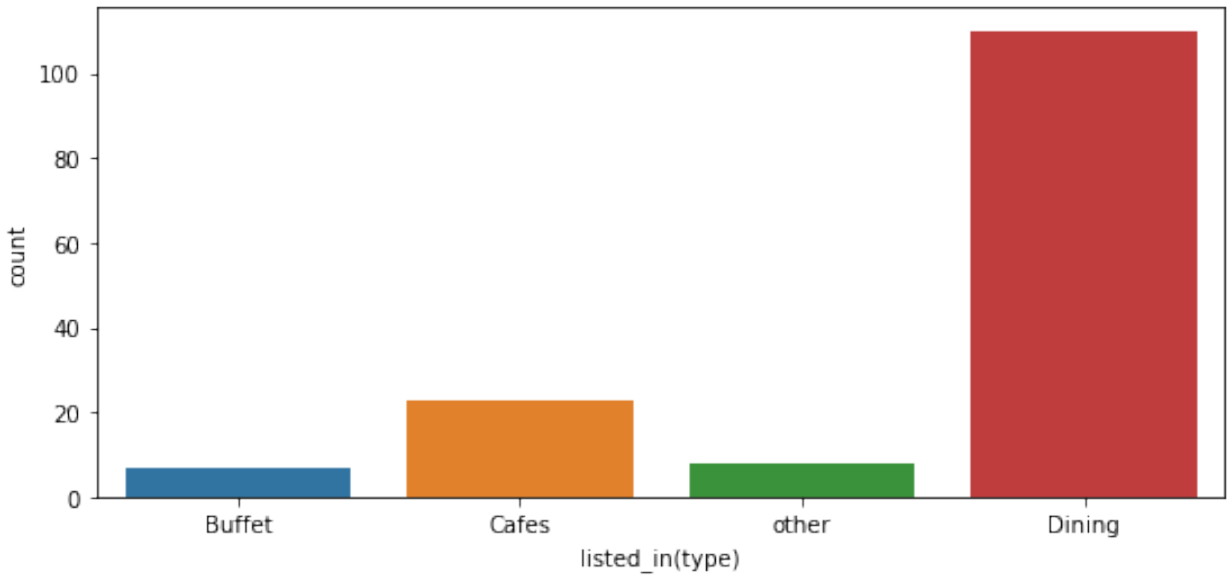
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 148 entries, 0 to 147
Data columns (total 7 columns):
 #   Column                       Non-Null Count  Dtype
---  ------                       --------------  -----
 0   name                         148 non-null    object
 1   online_order                 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
```

```
sns.countplot(x = "online_order", data = df)
plt.show()
```

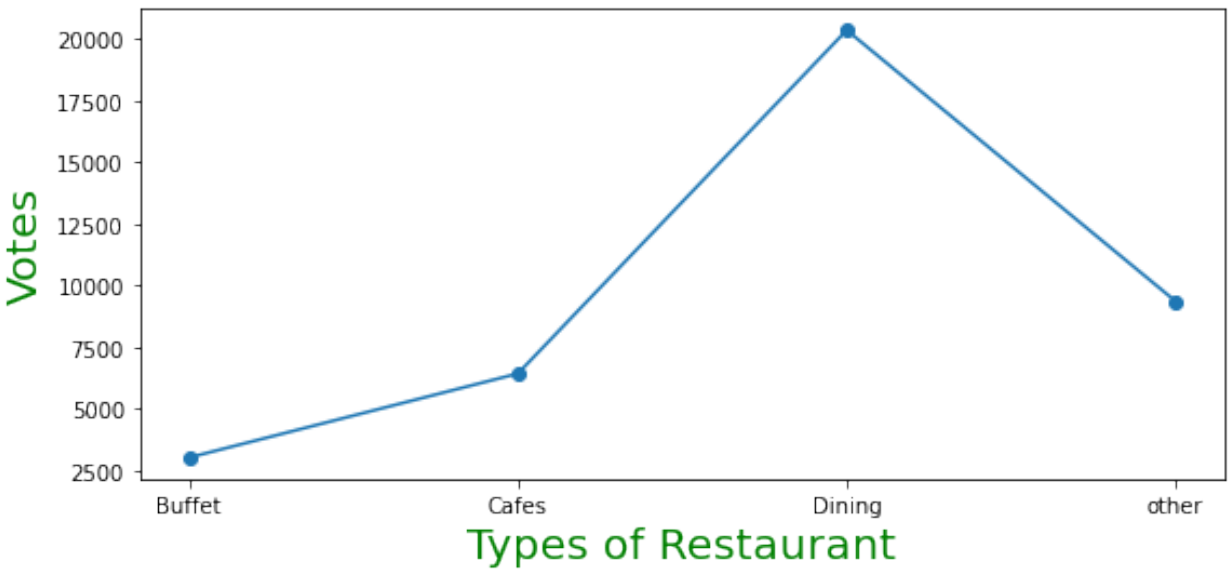



```
plt.figure(figsize=(9,4))
sns.countplot(x ="listed_in(type)",data = df)
plt.show()
```



Conclusion = "Majority of Customer falls into Dinning Category"

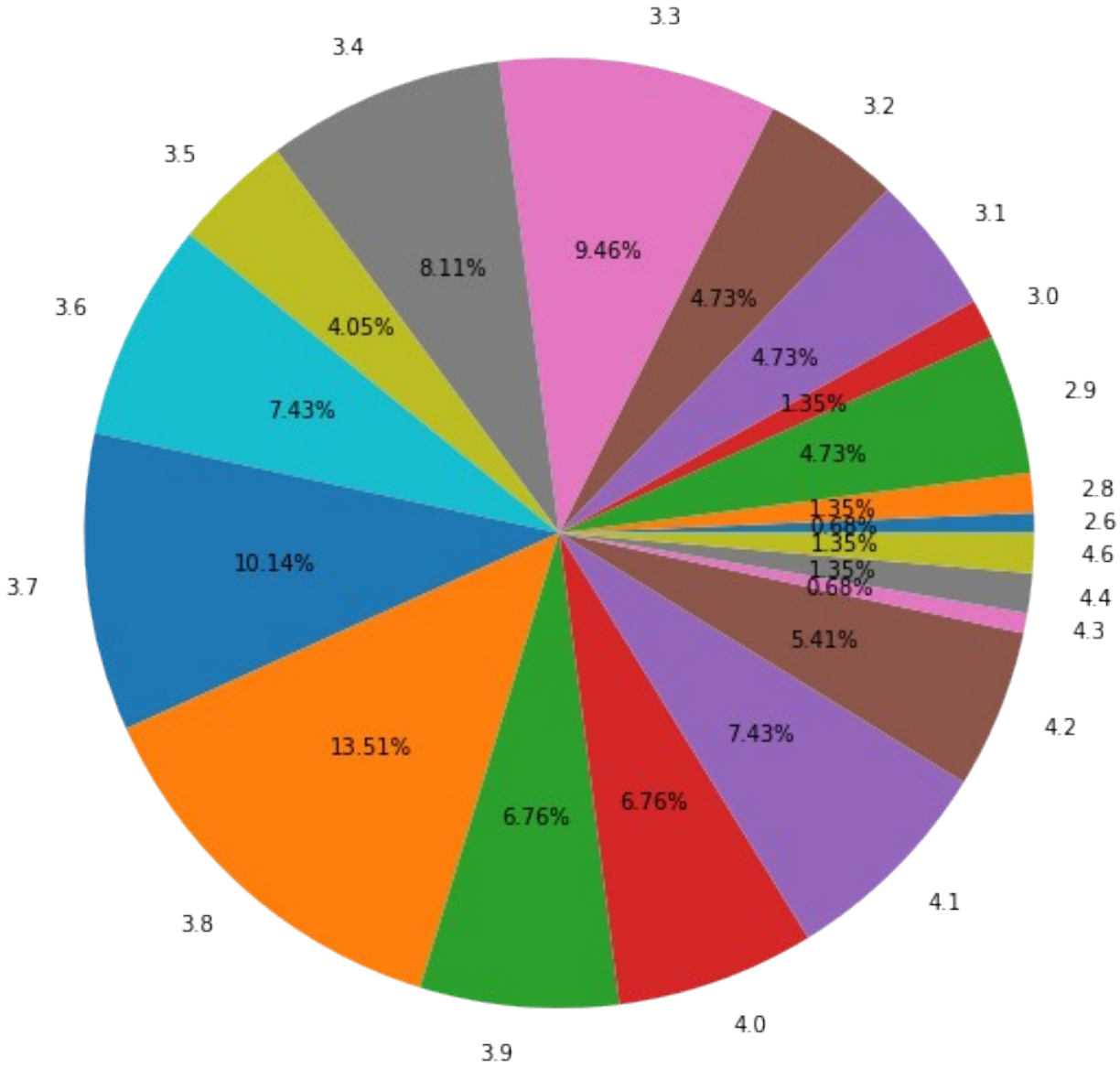
```
plt.figure(figsize=(9,4))
gb = df.groupby("listed_in(type)")["votes"].sum()
result = pd.DataFrame({"votes": gb})
plt.plot(result, marker = "o")
plt.xlabel("Types of Restaurant",size = 20, color = "green")
plt.ylabel("Votes",size = 20,color = "green")
plt.show()
```



conclusion: Dining restaurant got heighest votes

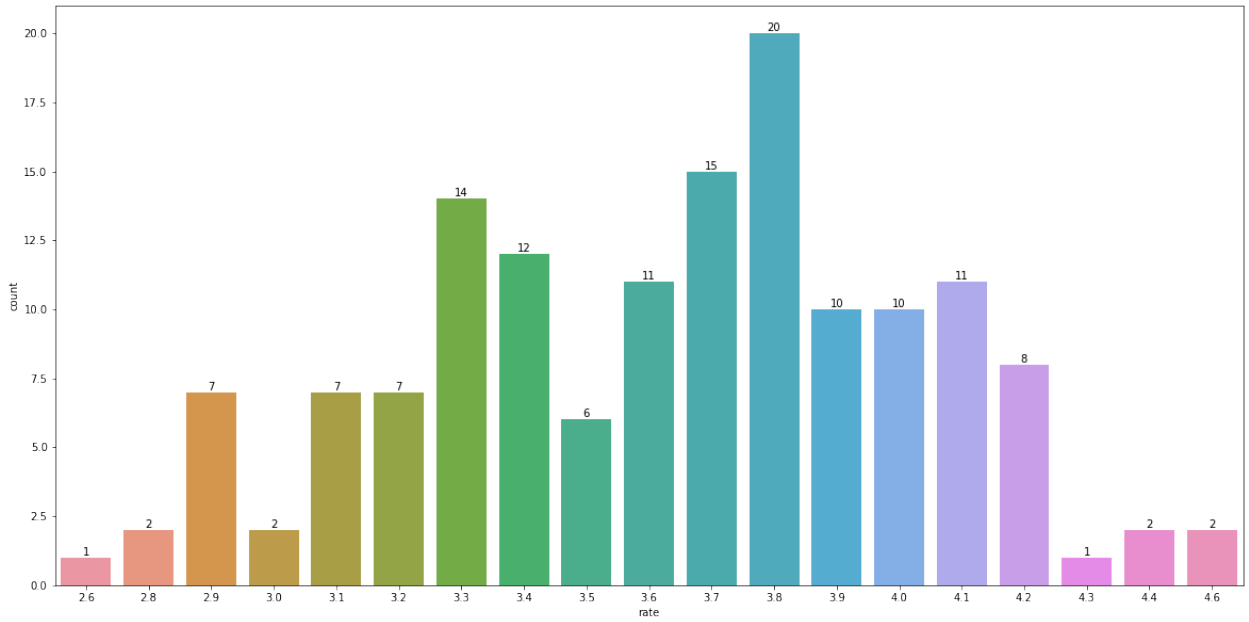
```
plt.figure(figsize = (5,5))
gb = df.groupby("rate").agg({"rate":"count"})
plt.figure(figsize=(9,4))
plt.pie(gb["rate"], labels = gb.index, autopct = "%1.2f%%", radius
=2.5 )
plt.show()
```

```
<Figure size 360x360 with 0 Axes>
```

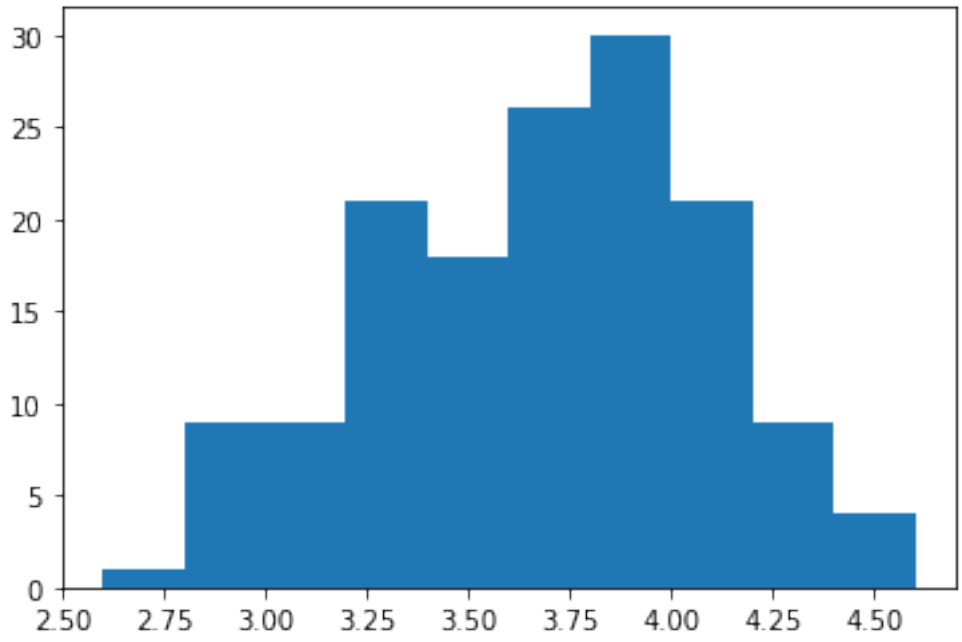



```
plt.figure(figsize = (20,10))
ax = sns.countplot(x = "rate", data  = df)
```

```
ax.bar_label(ax.containers[0])
plt.show()
```




```
plt.hist(df["rate"], bins = 10)
plt.show()
```



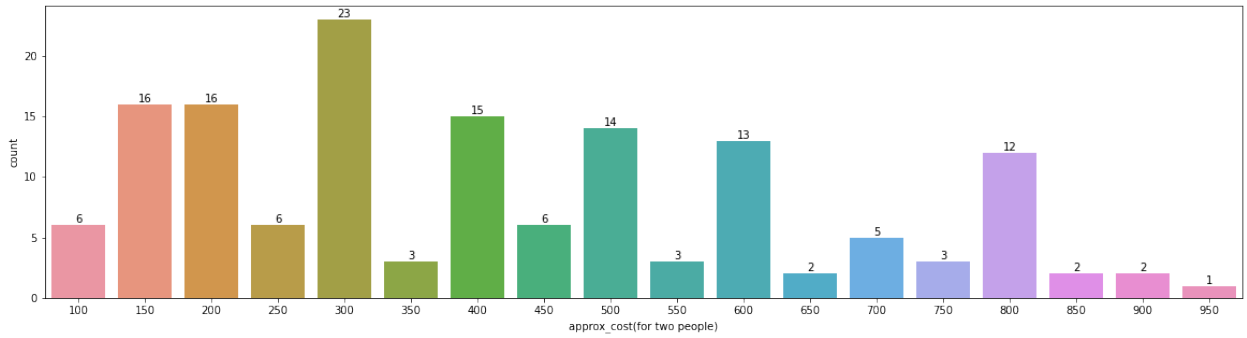
Conclusion : The majority restaurant received rating in between 3.5 to 4

```
df.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
4          Grand Village           No         No   3.8    166

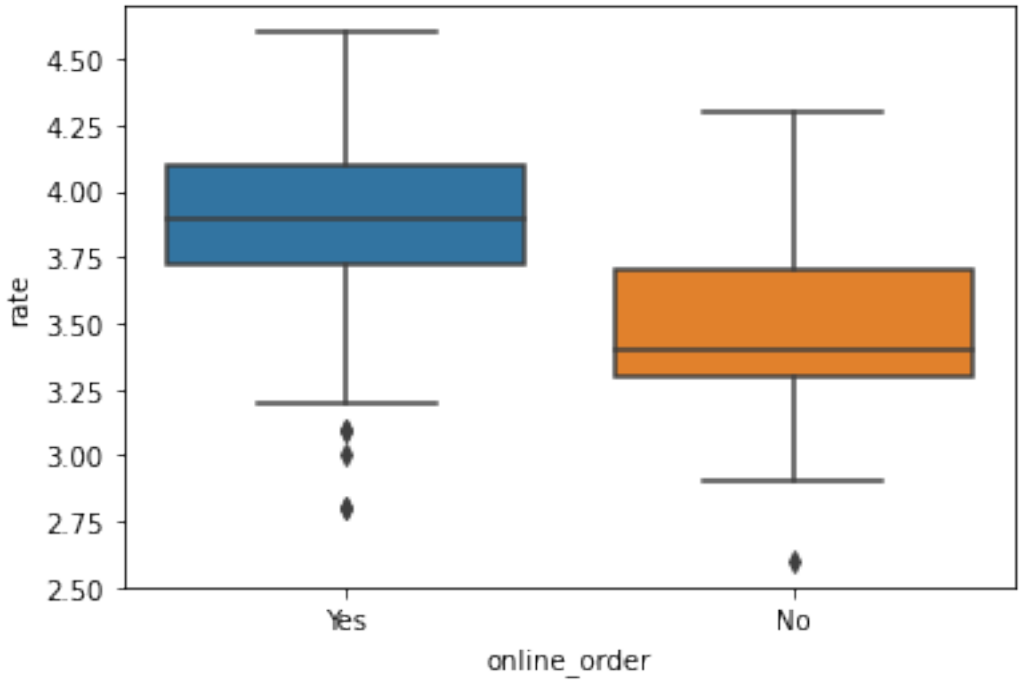
   approx_cost(for two people) listed_in(type)
0                          800          Buffet
1                          800          Buffet
2                          800          Buffet
3                          300          Buffet
4                          600          Buffet
```

```
plt.figure(figsize=(20,5))
ax =sns.countplot(x = "approx_cost(for two people)", data = df)
ax.bar_label(ax.containers[0])
plt.show()
```



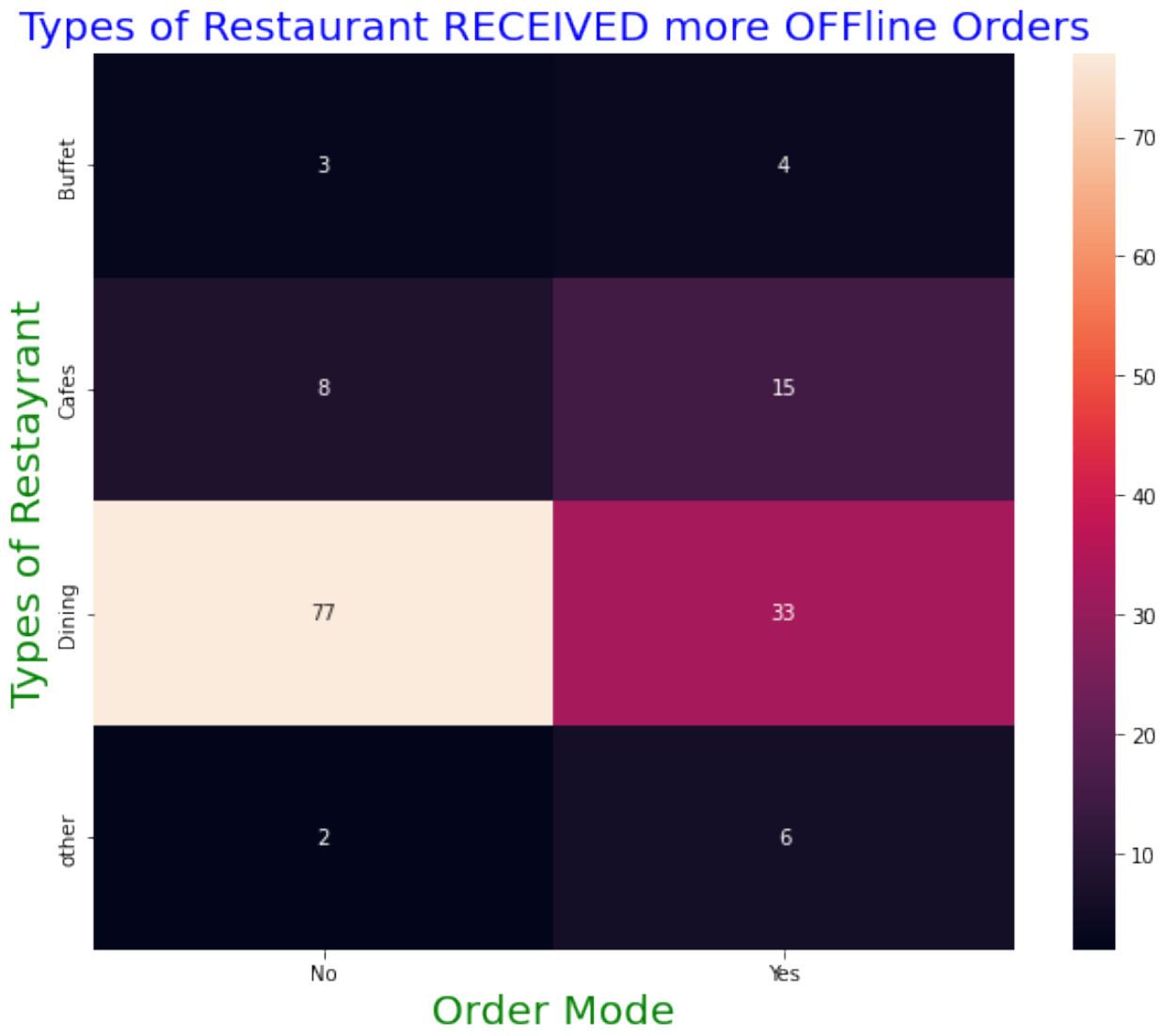
conclusion : Average Order Amount is 300

```
sns.boxplot(x = "online_order", y = "rate", data = df)
plt.show()
```



conclusion: Online mode received max rating

```
plt.figure(figsize=(10,8))
pivot_table = df.pivot_table(index = "listed_in(type)", columns =
"online_order" , aggfunc ='size', fill_value = 0)
sns.heatmap(pivot_table, annot = True,  fmt = 'd')
plt.xlabel("Order Mode", size = 20 , color = "green")
plt.ylabel("Types of Restayrant", size = 20, color = "green")
plt.title("Types of Restaurant RECEIVED more OFFline Orders", color =
"blue", size= 20)
plt.show()
```



conclusion: Dining Restaurant primarily accept Offline orders wghereas cafes primarily accept online orders