Zomato Data Analysis Using Python

Step-1 Import Libraries

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

Step-2 Create a dataframe

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

```
                      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
..                     ...          ...        ...    ...    ...
143       Melting Melodies           No         No  3.3/5      0
144        New Indraprasta           No         No  3.3/5      0
145           Anna Kuteera          Yes         No  4.0/5    771
146                 Darbar           No         No  3.0/5     98
147          Vijayalakshmi          Yes         No  3.9/5     47

     approx_cost(for two people) listed_in(type)
0                             800          Buffet
1                             800          Buffet
2                             800          Buffet
3                             300          Buffet
4                             600          Buffet
..                            ...             ...
143                           100          Dining
144                           150          Dining
145                           450          Dining
146                           800          Dining
147                           200          Dining

[148 rows x 7 columns]
```

```
df.head()
```

```
                    name online_order book_table  rate  votes  \
0                  Jalsa          Yes        Yes   4.1    775
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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()

<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
```

Convert Data type Column rate

```
def handlerate(value):
    value=str(value).split('/')
    value=value[0];
    return float(value)
df['rate']=df['rate'].apply(handlerate)
print(df.head())

                    name online_order book_table  rate  votes  \
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   approx_cost(for two people) listed_in(type)
0                         800          Buffet
1                         800          Buffet
```
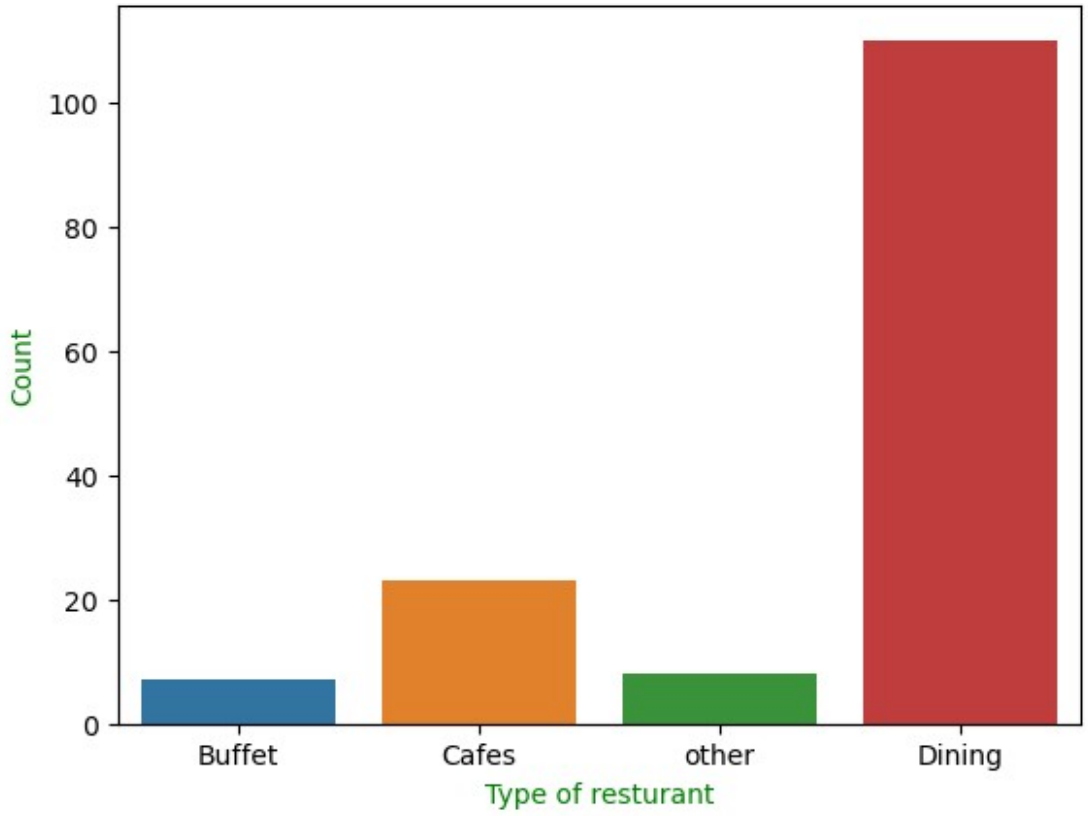

```
2                              800           Buffet
3                              300           Buffet
4                              600           Buffet
```

What type of resturant do the majority of cystomers order from ?

```
sns.countplot(x=df ['listed_in(type)'])
plt.xlabel("Type of resturant", c='green')
plt.ylabel("Count", c='green')
plt.show()
```



Conslusion - Majority of resturant falls in dinning category

How many votes has each type of resturants have received ?

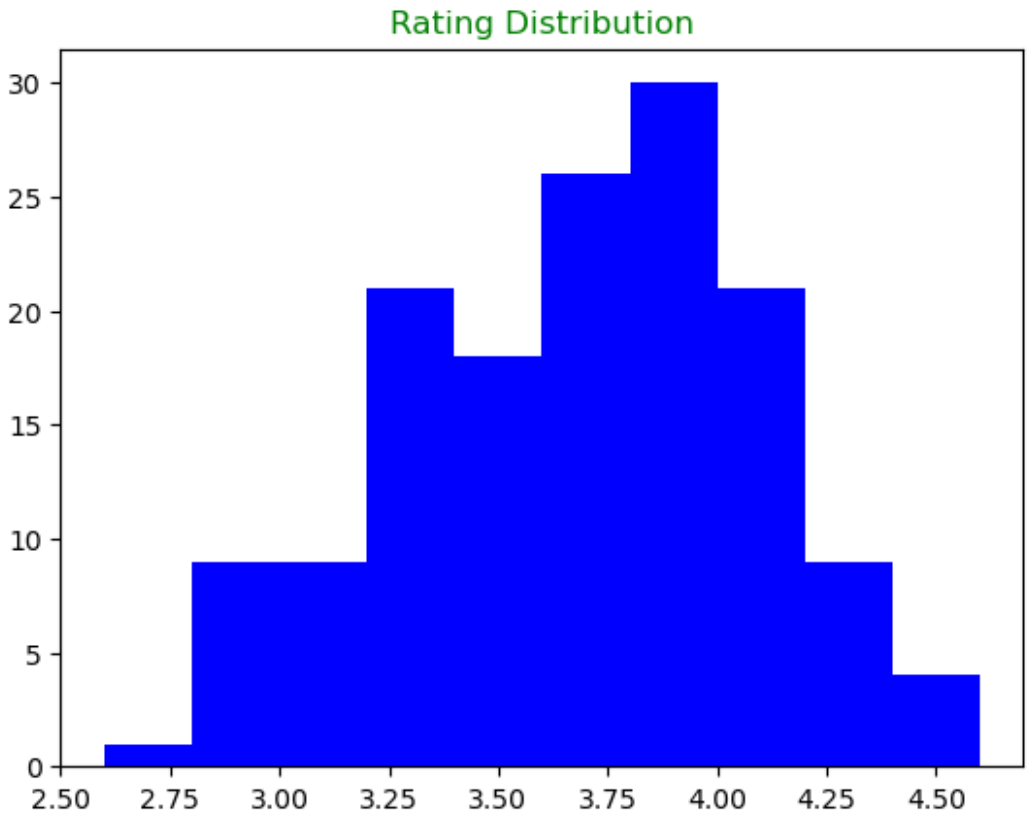
```
group_data = df.groupby('listed_in(type)')['votes'].sum()
result = pd.DataFrame({'votes': group_data})
plt.plot(result, c='blue', marker='o')
plt.xlabel("Type of Resturnat", c='green', size=15)
plt.ylabel("Votes", c='green', size=15)
```

```
Text(0, 0.5, 'Votes')
```

Conclusion : Dinning Resturant has received Maximum votes

What are the rating that majority of resturnt have received ?

```
plt.hist(df['rate'], bins=10, color='blue')
plt.title("Rating Distribution", c='green')
plt.show()
```

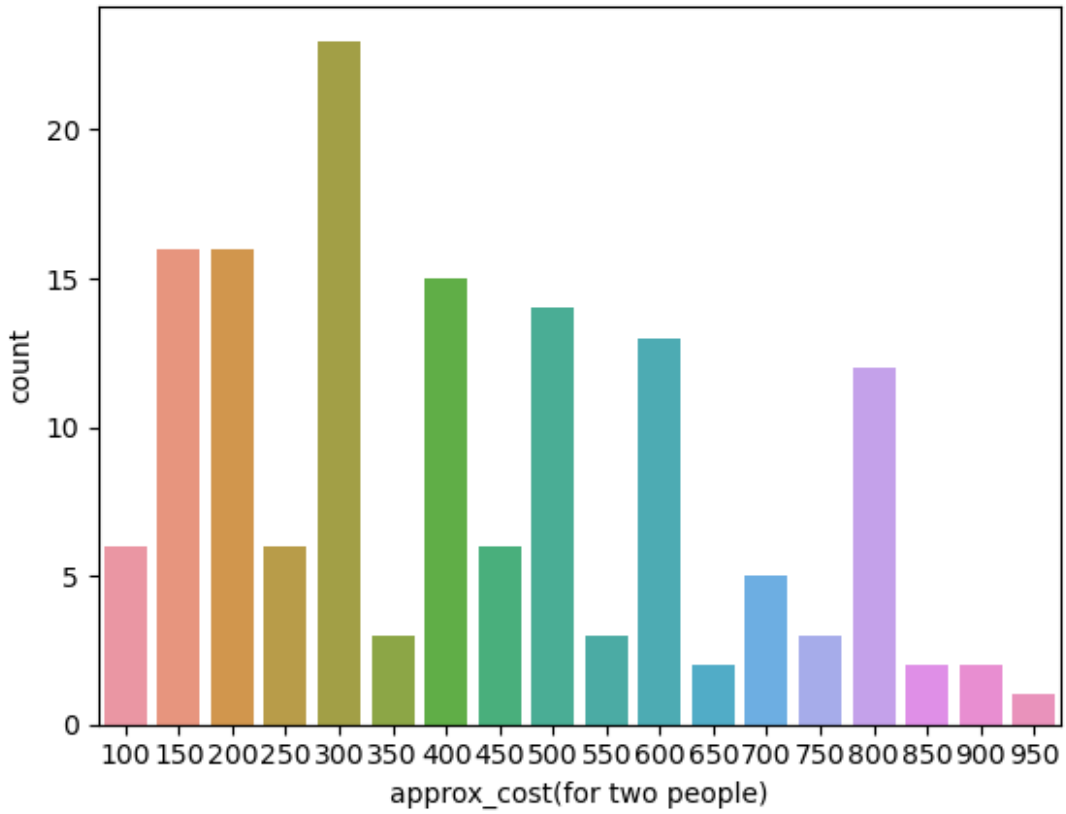


Conclusion: The majority resturant received ratings from 3.5 to 4 -->

Zomoto has observed that most of couple order most of their foods online. What is their average Spending on each other ?

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

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

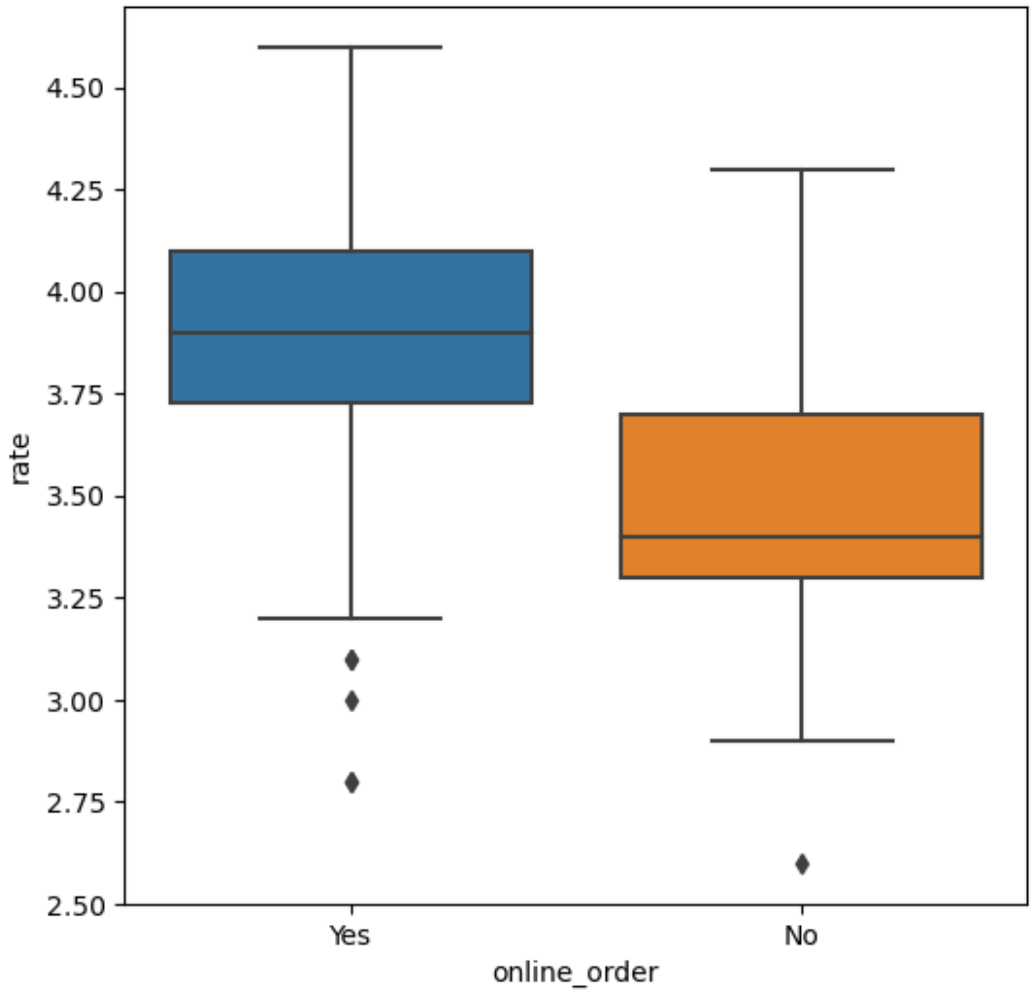


Conslusion : The majority of couple prefered resturnat with an appxorimate cost of rs. 300/-

Which mode(Online/offline) has received Maximum rating ?

```
plt.figure (figsize= (6,6))
sns.boxplot(x='online_order', y='rate', data=df)
```

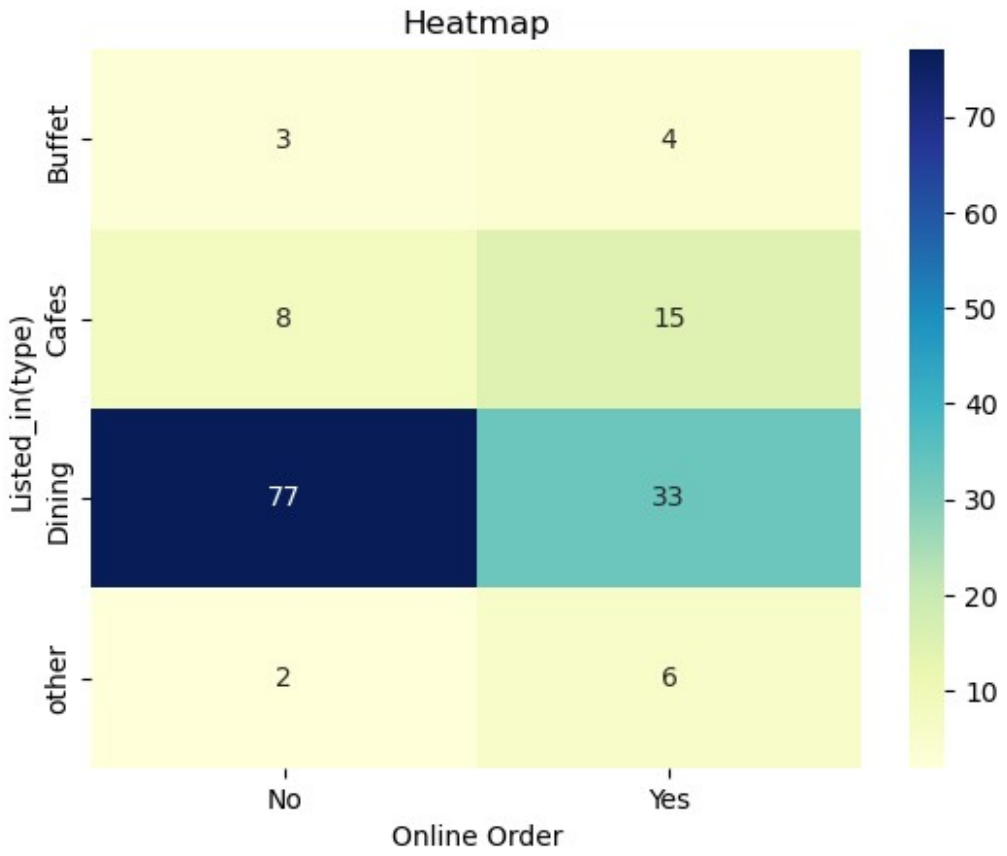
```
<Axes: xlabel='online_order', ylabel='rate'>
```



Conclusion : Offline order received lawer rating in comperision to online order.

Which type of resturnat received more offline orders, so that zomoto can provide those customers with some good offers ?

```
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("Heatmap")
plt.xlabel("Online Order")
plt.ylabel("Listed_in(type)")
plt.show()
```



Conclusion :Dinning resturnat primarily accept offline orders, whearas cafes primarily receive online orders . This suggest that client prefered orders in person at resturant, but prefer online ordering at cafes.