In [79]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as py
import pandas_profiling as pp
import sweetviz
import math
```

We have imported the necessary packages to do the analysis

Next we get the dataset from the local dataset

In [80]:
```
df=pd.read_csv("zomato_dataset.csv",header=0)
```

first 5 rows of the dataset

In [81]:
```
df.head()
```

Out[81]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City	Item Name	Be
0	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Platter Kebab Combo	BES
1	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Rumali Shawarma	BES
2	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Tandoori Salad	
3	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken BBQ Salad	BES
4	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Special Doner Wrap Combo	M

last 5 rows

In [82]:
```
df.tail()
```

Out[82]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City	Item Name	Be
123652	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Reshmi Kebab	
123653	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Large Tikka	
123654	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Chukandri Tikka	
123655	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Golden Kebab	
123656	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Gosht Gilawat Chop	BEST

data preparation

we detect duplicated columns and correct it

In [83]:
```
# Identify duplicate columns
duplicate_cols = df.columns.duplicated()

# Drop duplicate columns
df = df.loc[:, ~duplicate_cols]
df
```

Out[83]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City	Item Name
0	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Platter Kebab Combo
1	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Rumali Shawarma
2	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Tandoori Salad
3	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken BBQ Salad
4	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Special Doner Wrap Combo
...	...	...	...	...	...	...	...	...	...
123652	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Reshmi Kebab
123653	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Large Tikka
123654	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Chukandri Tikka
123655	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Murgh Golden Kebab
123656	Ariena Boutique Hotel	3.9	4.2	13	523	Pizza	Purena	Raipur	Gosht Gilawat Chop

123657 rows × 12 columns

In [84]:
```
df=df.drop_duplicates()
```

dataset shape

In [85]:
```
df.shape
```

Out[85]:
```
(101530, 12)
```

dataset info

In [86]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 101530 entries, 0 to 123635
Data columns (total 12 columns):
 #   Column           Non-Null Count   Dtype  
---  ------           --------------   -----  
 0   Restaurant Name  101530 non-null  object 
 1   Dining Rating    74572 non-null   float64
 2   Delivery Rating  100286 non-null  float64
 3   Dining Votes     101530 non-null  int64  
 4   Delivery Votes   101530 non-null  int64  
 5   Cuisine          101530 non-null  object 
 6   Place Name       101530 non-null  object 
 7   City             101530 non-null  object 
 8   Item Name        101530 non-null  object 
 9   Best Seller      19143 non-null   object 
 10  Votes            101530 non-null  int64  
 11  Prices           101530 non-null  float64
dtypes: float64(3), int64(3), object(6)
memory usage: 10.1+ MB
```

Restoring values correctly by stripping it.

In [87]:
```
def sh(col):
    df[col]=df[col].str.strip()
```

In [88]:
```
sh("Restaurant Name")
sh("Cuisine ")
sh("Place Name")
sh("City")
sh("Item Name")
sh("Best Seller")
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\2182141491.py:2: SettingWi
thCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/s
table/user_guide/indexing.html#returning-a-view-versus-a-copy (https://panda
s.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-ver
sus-a-copy)
  df[col]=df[col].str.strip()
```

Next we do imputation in the datset

In [89]:
```
df.isnull().sum()
```

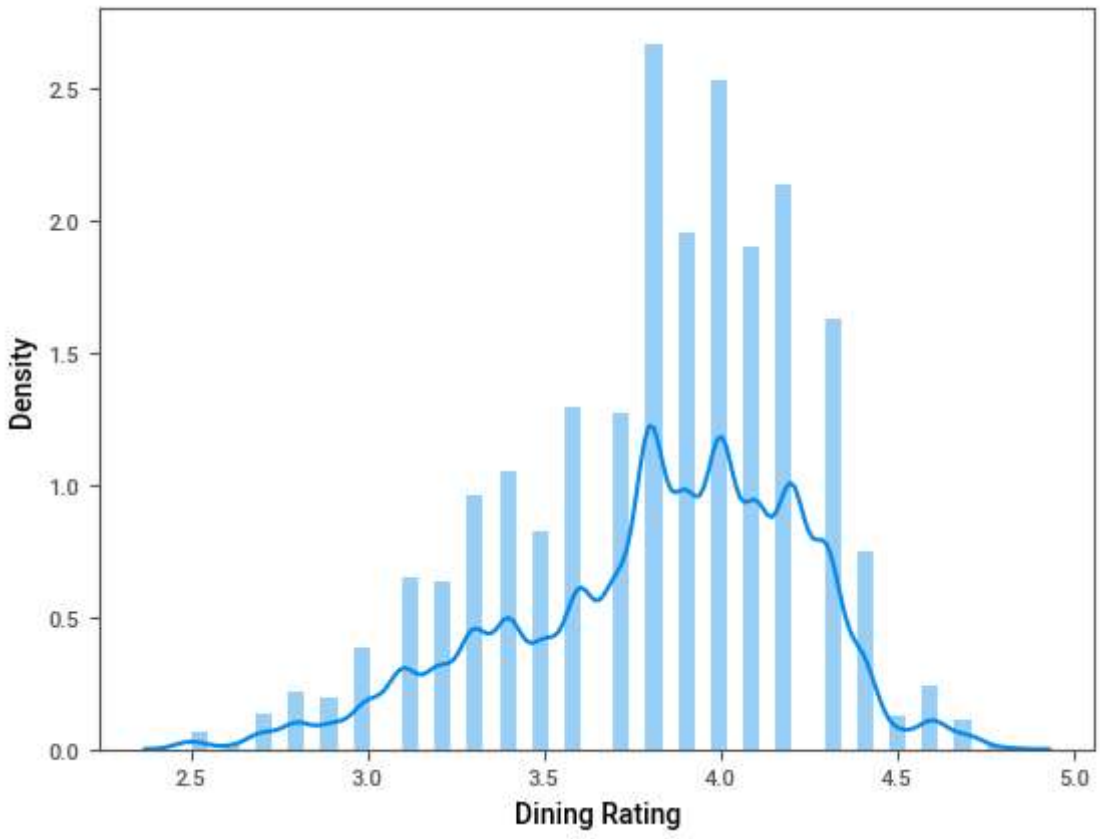
Out[89]:
```
Restaurant Name        0
Dining Rating      26958
Delivery Rating     1244
Dining Votes           0
Delivery Votes         0
Cuisine                0
Place Name             0
City                   0
Item Name              0
Best Seller        82387
Votes                  0
Prices                 0
dtype: int64
```

we analyze the skewness of the Dining rate so that we can decide whether we can use median or mean to fill the null values

In [90]:
```
sns.distplot(df["Dining Rating"])
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\276008510.py:1: UserWarnin
g:

`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

Please adapt your code to use either `displot` (a figure-level function with
similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751 (https://gis
t.github.com/mwaskom/de44147ed2974457ad6372750bbe5751)

  sns.distplot(df["Dining Rating"])
```

Out[90]: <Axes: xlabel='Dining Rating', ylabel='Density'>



pearson skewness to check the skewness

In [91]:
```
def skewvalid(col):
    #print(col.head())
    m1=col.median()
    m2=col.mean()
    m3=col.std()
    return 3*((m2-m1)/m3)
```

In [92]:
```
p1=skewvalid(df["Dining Rating"])
p1
```

Out[92]:
```
-0.5797375954366699
```

the skweness is mediocre so we use mean.

In [93]:
```
r=df["Dining Rating"].mean()
round(r,1)
```

Out[93]:
```
3.8
```

In [94]:
```
df["Dining Rating"].fillna(round(r,1),inplace=True)
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\4197186286.py:1: SettingWi
thCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/s
table/user_guide/indexing.html#returning-a-view-versus-a-copy (https://panda
s.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-ver
sus-a-copy)
  df["Dining Rating"].fillna(round(r,1),inplace=True)
```

In [95]:
```
df.isnull().sum()
```

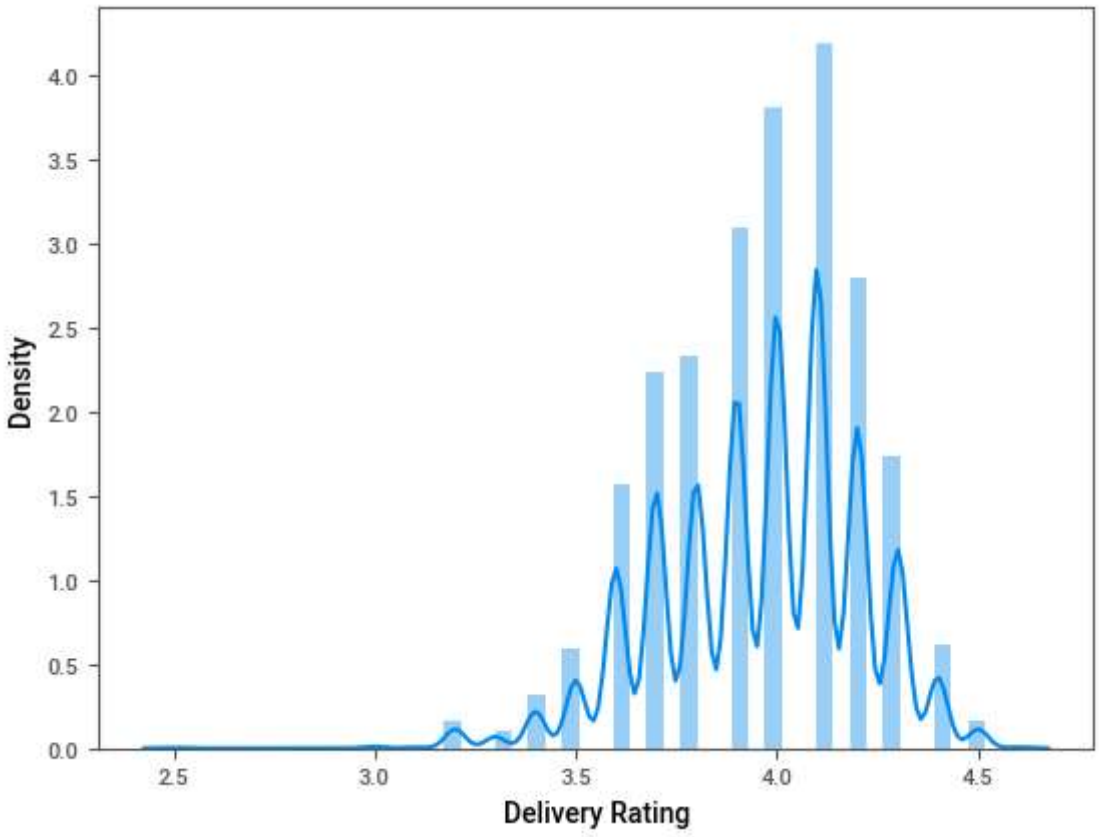
Out[95]:
```
Restaurant Name        0
Dining Rating          0
Delivery Rating     1244
Dining Votes           0
Delivery Votes         0
Cuisine                0
Place Name             0
City                   0
Item Name              0
Best Seller        82387
Votes                  0
Prices                 0
dtype: int64
```

Now we do the same for Delivery rating

In [97]:
```
sns.distplot(df["Delivery Rating"])
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\3216823001.py:1: UserWarni
ng:

`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

Please adapt your code to use either `displot` (a figure-level function with
similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751 (https://gis
t.github.com/mwaskom/de44147ed2974457ad6372750bbe5751)

  sns.distplot(df["Delivery Rating"])
```

Out[97]:
```
<Axes: xlabel='Delivery Rating', ylabel='Density'>
```



In [98]:
```
p2=skewvalid(df["Delivery Rating"])
p2
```

Out[98]:
```
-0.4926517022540743
```

In [99]:
```
r2=df["Delivery Rating"].mean()
df["Delivery Rating"].fillna(round(r2,1),inplace=True)
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\1330755521.py:2: SettingWi
thCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/s
table/user_guide/indexing.html#returning-a-view-versus-a-copy (https://panda
s.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-ver
sus-a-copy)
  df["Delivery Rating"].fillna(round(r2,1),inplace=True)
```

In [100]:
```
df.isnull().sum()
```

Out[100]:
```
Restaurant Name        0
Dining Rating          0
Delivery Rating        0
Dining Votes           0
Delivery Votes         0
Cuisine                0
Place Name             0
City                   0
Item Name              0
Best Seller        82387
Votes                  0
Prices                 0
dtype: int64
```

The columns Dining rating and Delivery rating null values has been filled but now I have Best seller column which has null values covering 75 % of the column so I can drop the column but instead I'm filling the null values as "Regular order" in the datset

In [101]:
```
df["Best Seller"].value_counts()
```

Out[101]:
```
BESTSELLER                 9884
MUST TRY                   4106
Not eligible for coupons   1743
CHEF'S SPECIAL             1332
SPICY                       993
Not on Pro                  564
NEW                         375
SEASONAL                     82
Eggless available            28
VEGAN                        20
GLUTEN FREE                   8
FODMAP FRIENDLY               6
DAIRY FREE                    2
Name: Best Seller, dtype: int64
```

In [102]:
```
df["Special mentions"]=df["Best Seller"]
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\2590144570.py:1: SettingWi
thCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/s
table/user_guide/indexing.html#returning-a-view-versus-a-copy (https://panda
s.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-ver
sus-a-copy)
  df["Special mentions"]=df["Best Seller"]
```

In [103]:
```
df=df.drop("Best Seller",axis=1)
```

In [104]:
```
df["Special mentions"]=df["Special mentions"].fillna("Regular")
```

In [105]:
```
df.isnull().sum()
```

Out[105]:
```
Restaurant Name     0
Dining Rating       0
Delivery Rating     0
Dining Votes        0
Delivery Votes      0
Cuisine             0
Place Name          0
City                0
Item Name           0
Votes               0
Prices              0
Special mentions    0
dtype: int64
```

now we did necessary imputations and now we can procide with futher analysis

Finding unique values in the dataset

In [106]:
```
df.nunique()
```

Out[106]:
```
Restaurant Name       826
Dining Rating          24
Delivery Rating        18
Dining Votes          294
Delivery Votes        263
Cuisine                48
Place Name            324
City                   17
Item Name           55693
Votes                 760
Prices               2710
Special mentions       14
dtype: int64
```

describing the dataset using describe function

In [107]:
```
df.describe(include="all")
```

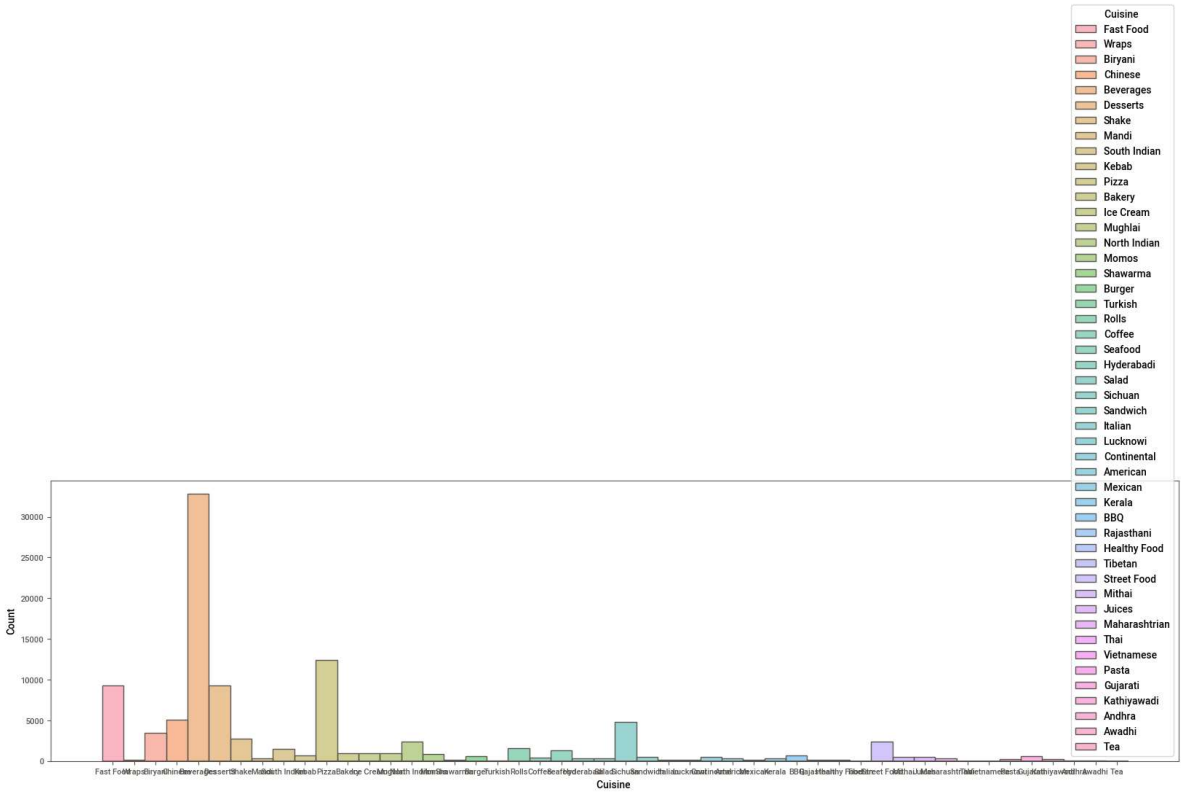
Out[107]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	I N
count	101530	101530.000000	101530.000000	101530.000000	101530.000000	101530	10
unique	826	NaN	NaN	NaN	NaN	48	
top	McDonald's	NaN	NaN	NaN	NaN	Beverages	Scl
freq	1526	NaN	NaN	NaN	NaN	32818	
mean	NaN	3.815473	3.960016	151.559726	116.704009	NaN	
std	NaN	0.350181	0.245030	230.662157	243.856446	NaN	
min	NaN	2.500000	2.500000	0.000000	0.000000	NaN	
25%	NaN	3.700000	3.800000	0.000000	0.000000	NaN	
50%	NaN	3.800000	4.000000	30.000000	0.000000	NaN	
75%	NaN	4.000000	4.100000	221.000000	37.000000	NaN	
max	NaN	4.800000	4.600000	997.000000	983.000000	NaN	

Visualizations

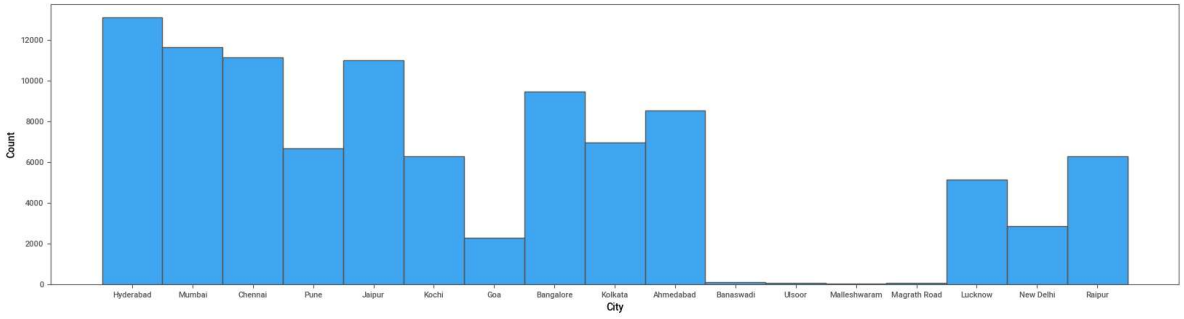
Univariate analysis

In [108]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df,x="Cuisine ",hue="Cuisine ")
plt.show()
```



the sales of beverages is more compared to other dishes

In [109]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df,x="City")
plt.show()
```

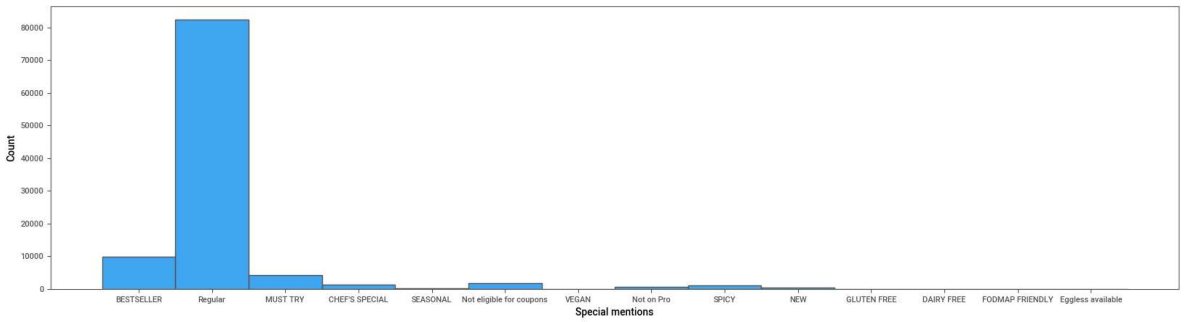


Hyderbad, chennai, mumbai, pune, jaipur, Kochi, Banglore, kolkata, Ahmedabad has more orders

In [ ]:

In [110]:
```
plt.figure(figsize=(20,5))

sns.histplot(df["Special mentions"])
```

Out[110]: <Axes: xlabel='Special mentions', ylabel='Count'>



People prefer Bestseller mentions after regular options followed by must try.

city wise analysis on major cities where zomato orders are more.

For hyderabad

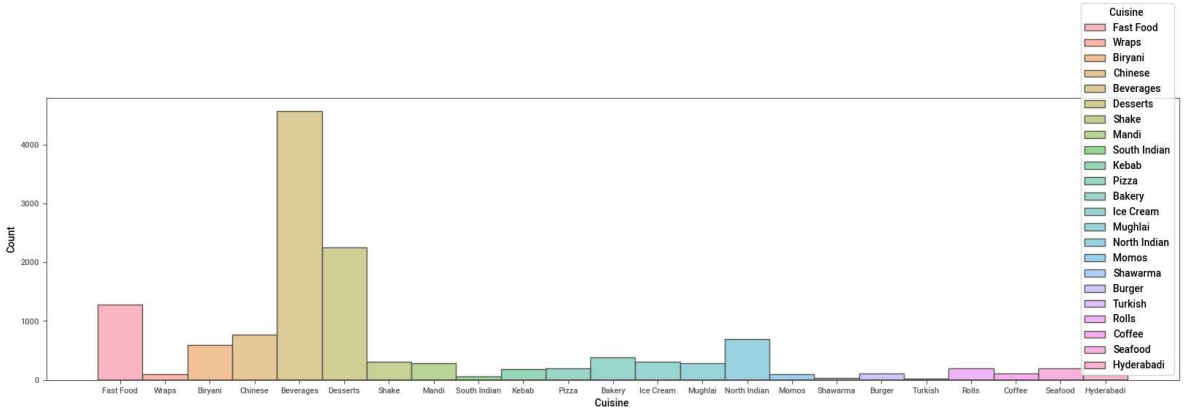
In [111]:
```
df_hyderabad=df[df["City"]=="Hyderabad"]
```

In [112]:
```
df_hyderabad.head()
```

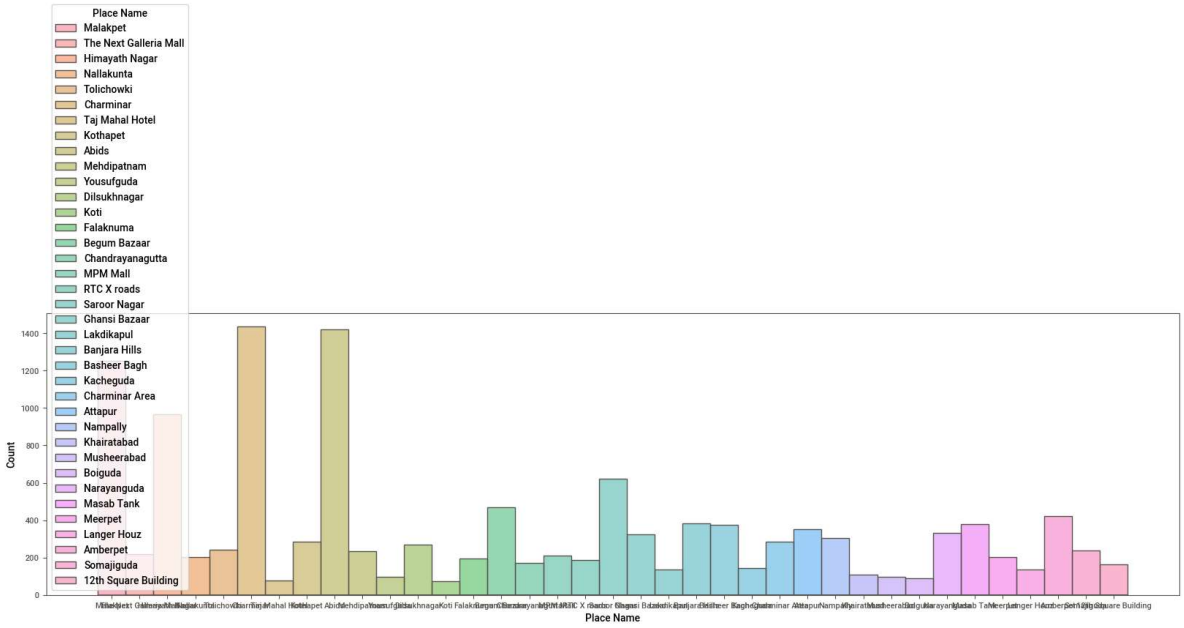
Out[112]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City	Item Name	Votes
0	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Platter Kebab Combo	8
1	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Rumali Shawarma	4
2	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Tandoori Salad	3
3	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken BBQ Salad	4
4	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Special Doner Wrap Combo	3

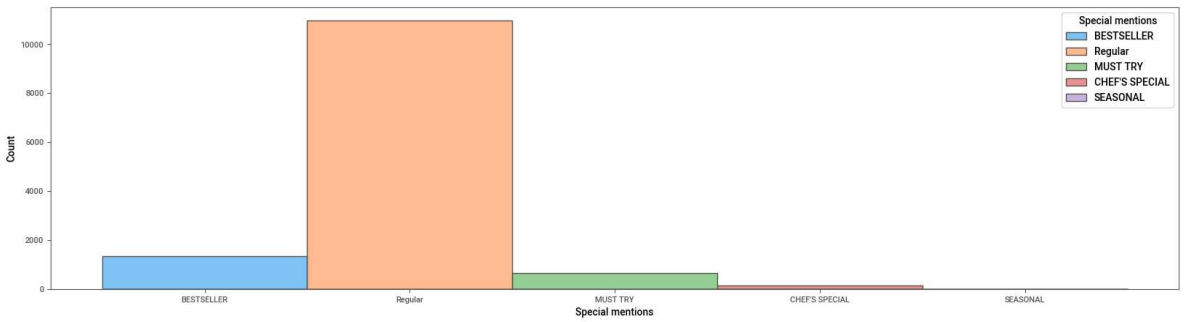
In [113]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df_hyderabad,x="Cuisine ",hue="Cuisine ")
plt.show()
```



In [114]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df_hyderabad,x="Place Name",hue="Place Name")
plt.show()
```



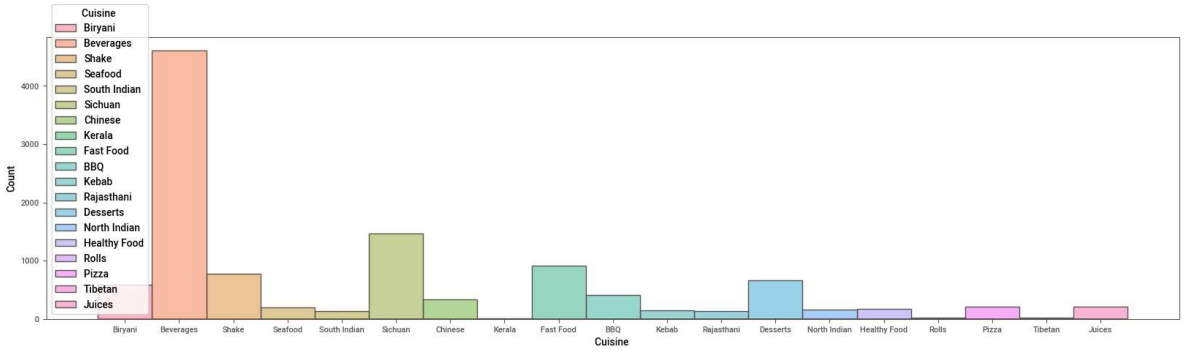
In [115]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df_hyderabad,x="Special mentions",hue="Special mentions")
plt.show()
```



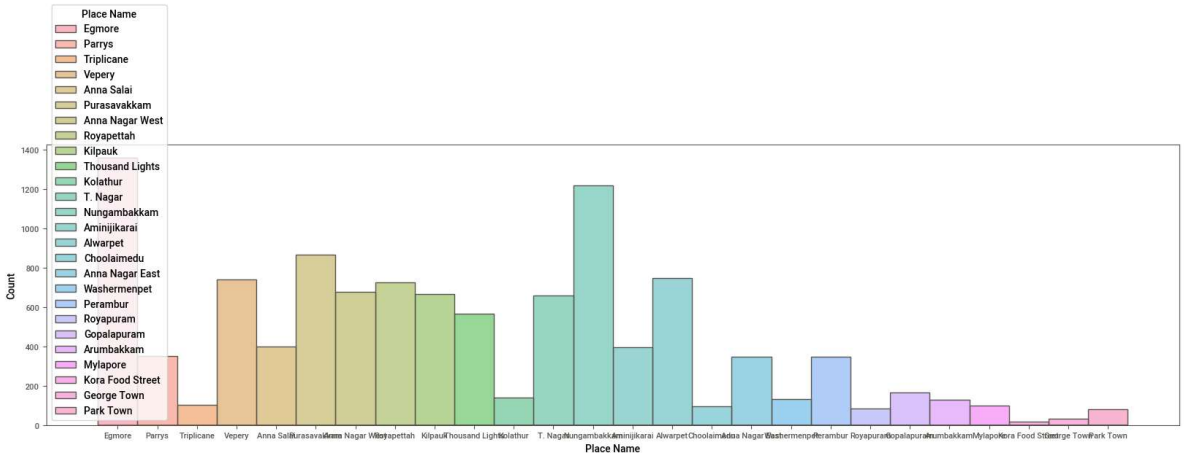
for chennai

In [116]:
```
df_chennai=df[df["City"]=="Chennai"]
```

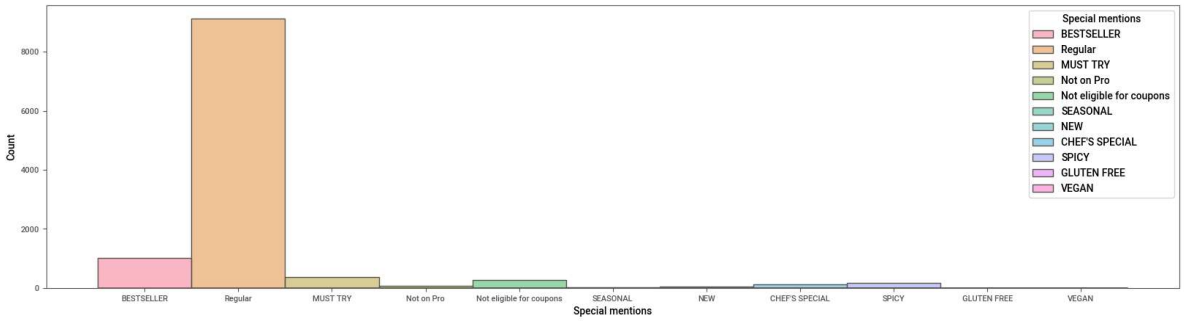
In [117]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df_chennai,x="Cuisine ",hue="Cuisine ")
plt.show()
```



In [118]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df_chennai,x="Place Name",hue="Place Name")
plt.show()
```

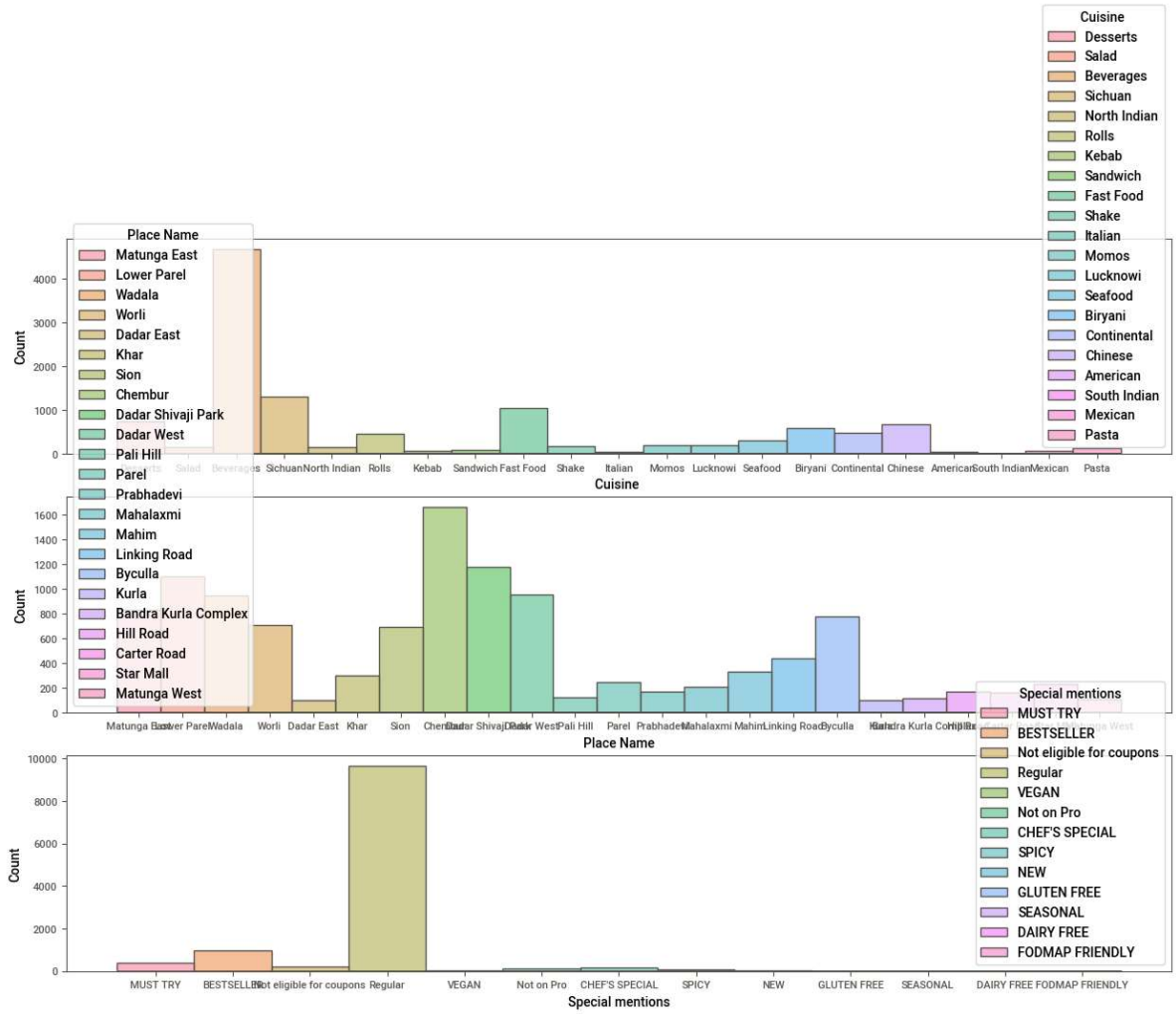


In [119]:
```
plt.figure(figsize=(20,5))
sns.histplot(data=df_chennai,x="Special mentions",hue="Special mentions")
plt.show()
```



For mumbai

In [120]:
```
df_mumbai=df[df["City"]=="Mumbai"]
plt.figure(figsize=(15,10))
plt.subplot(3,1,1)
sns.histplot(data=df_mumbai,x="Cuisine ",hue="Cuisine ")
plt.subplot(3,1,2)
sns.histplot(data=df_mumbai,x="Place Name",hue="Place Name")
plt.subplot(3,1,3)
sns.histplot(data=df_mumbai,x="Special mentions",hue="Special mentions")
plt.show()
```

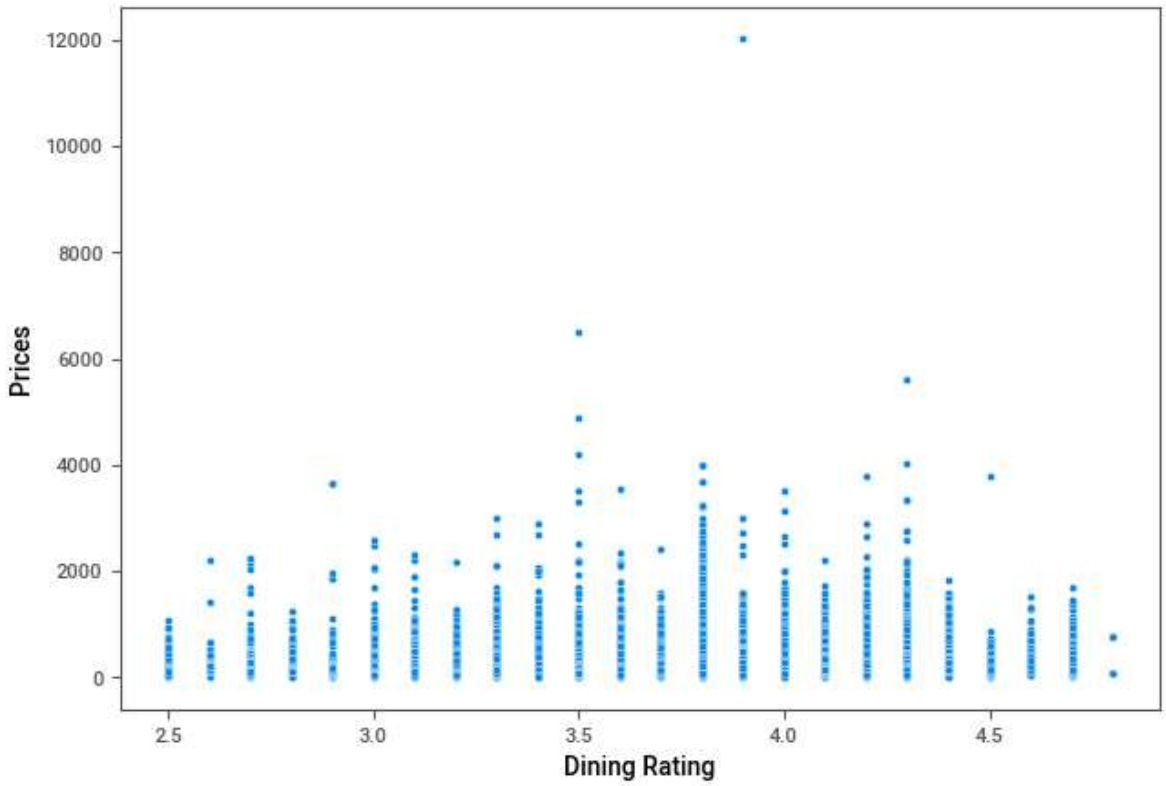


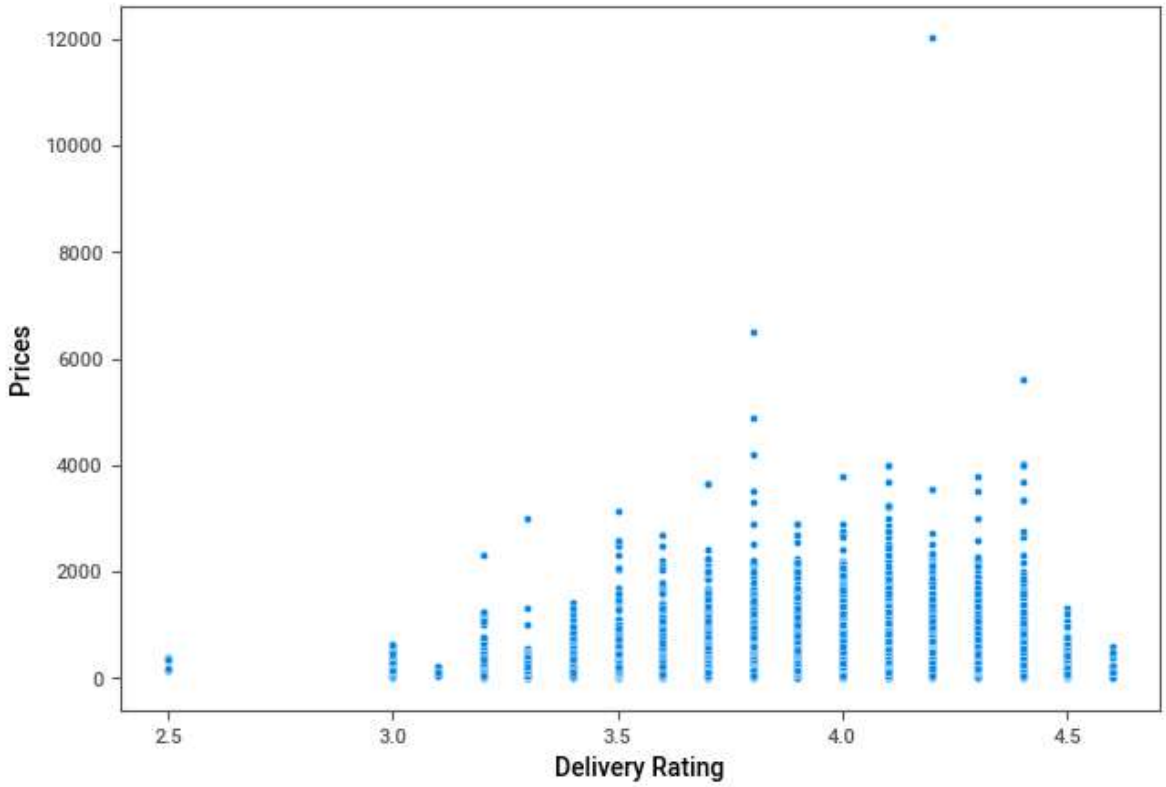
In [ ]:
```
```

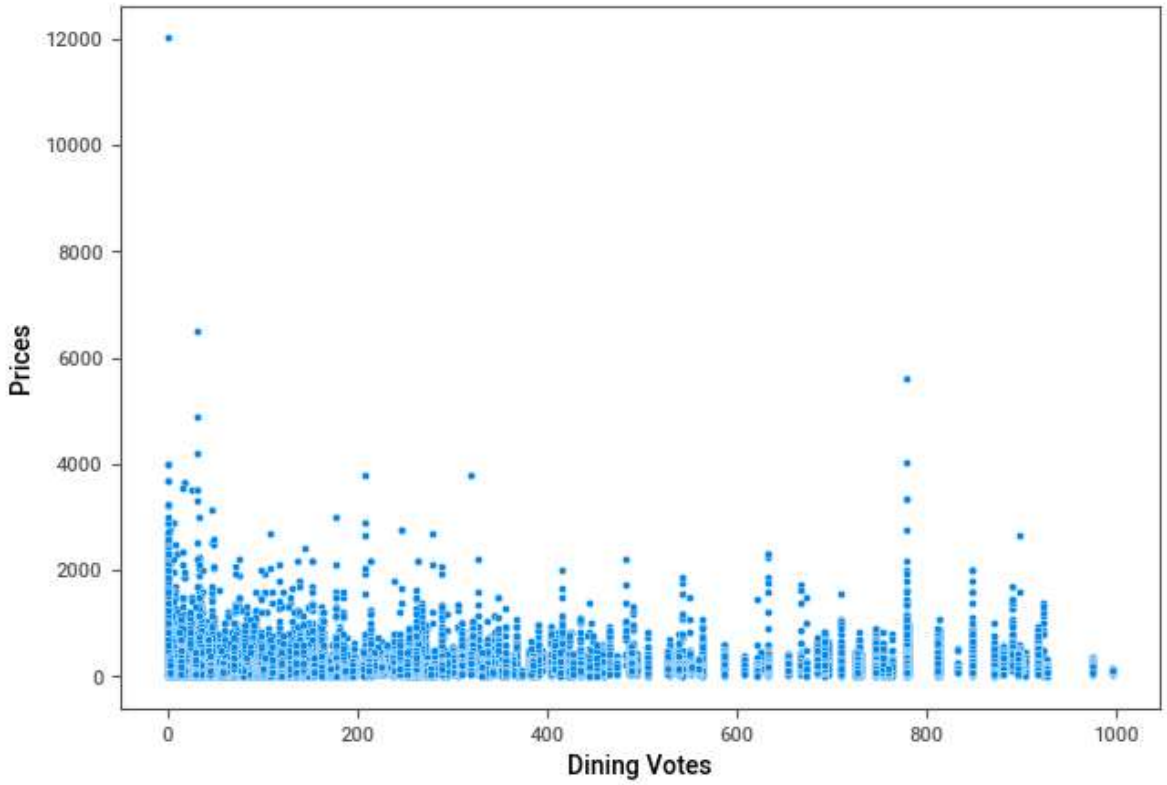
Bivariate analysis

In [121]:
```
def sct(col,i):
    plt.figure(figsize=(25,5))
    plt.subplot(1,3,i)
    sns.scatterplot(data=df,x=col,y="Prices")
    plt.show()
```

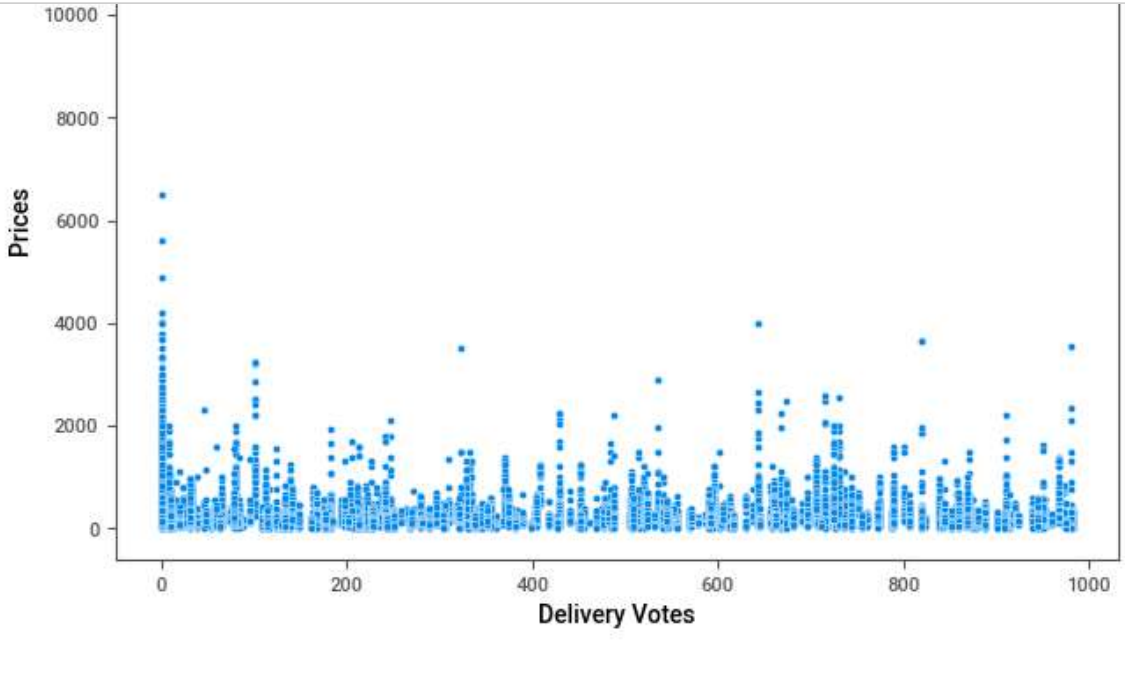
In [122]:
```
sct("Dining Rating",1)
sct("Delivery Rating",2)
sct("Dining Votes",3)
```







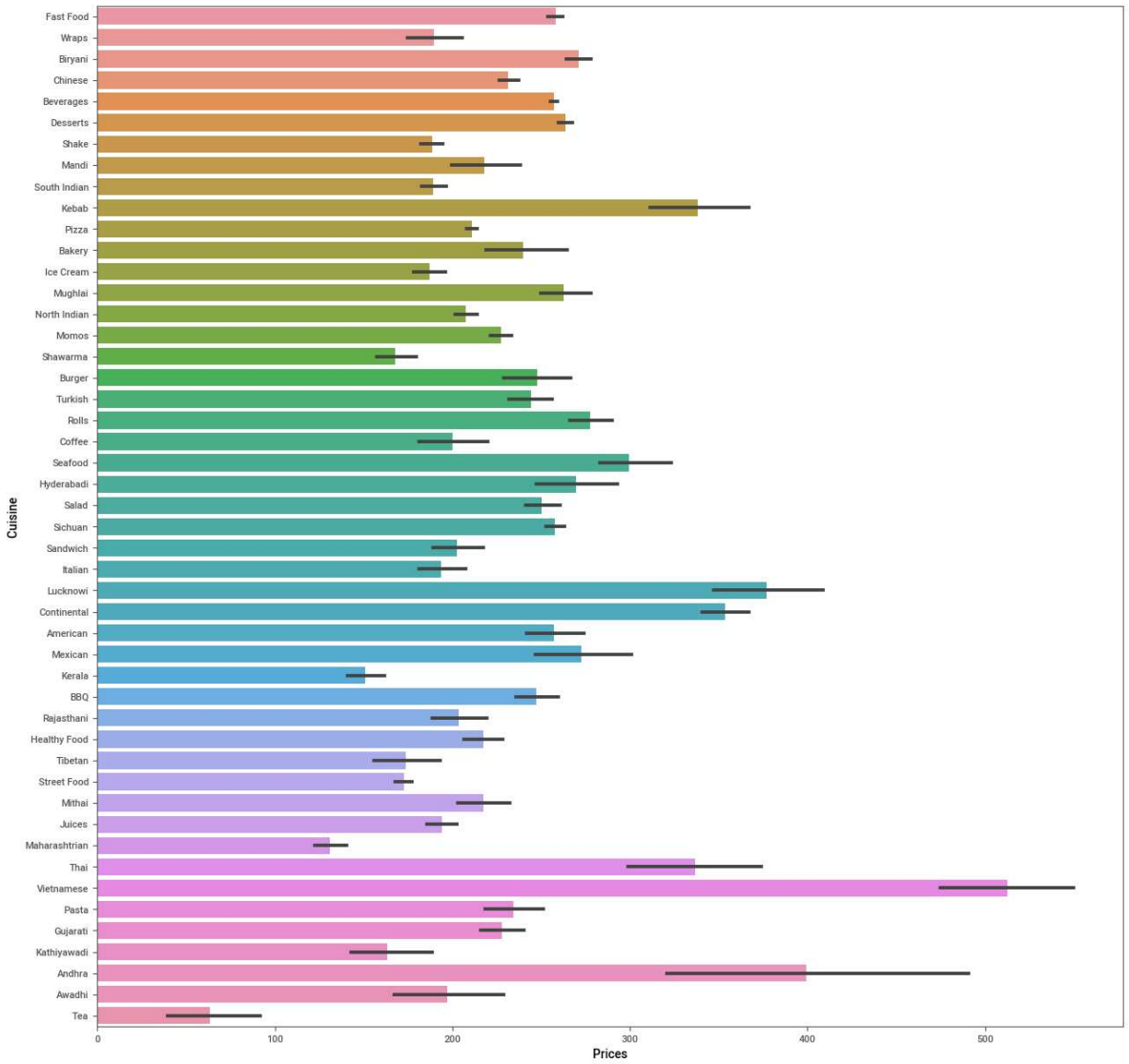
In [123]:
```
sct("Delivery Votes",1)
sct("Votes",2)
```



In the above column we infer that the colum votes is unncessary as items with zero votes sold more, this gives wrong interpretation.

In [124]:
```
plt.figure(figsize=(15,15))
sns.barplot(data=df,x="Prices",y="Cuisine ")
```

Out[124]:
```
<Axes: xlabel='Prices', ylabel='Cuisine '>
```



vietnamese and lucknowi cost more compared to other dishes

In [125]:
```
df=df.drop("Votes",axis=1)
```

In [126]:
```
df.head()
```

Out[126]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City	Item Name	Price
0	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Platter Kebab Combo	249
1	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Rumali Shawarma	129
2	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken Tandoori Salad	189
3	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Chicken BBQ Salad	189
4	Doner King	3.9	4.2	39	0	Fast Food	Malakpet	Hyderabad	Special Doner Wrap Combo	205

In [127]:
```
corr=df.corr()
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\2572779251.py:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future version, it will default to False. Select only valid columns or specify the value of numeric_only to silence this warning.
  corr=df.corr()
```

In [128]:
```
sns.heatmap(corr)
```

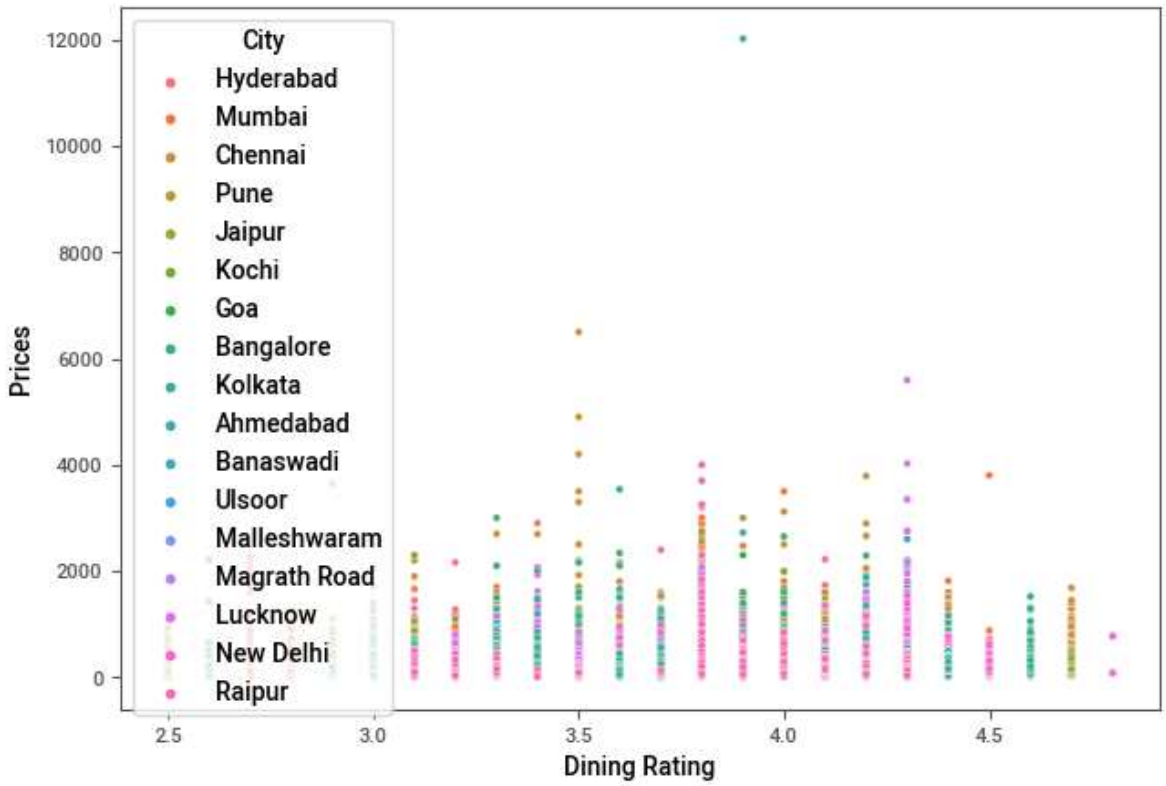
Out[128]: <Axes: >

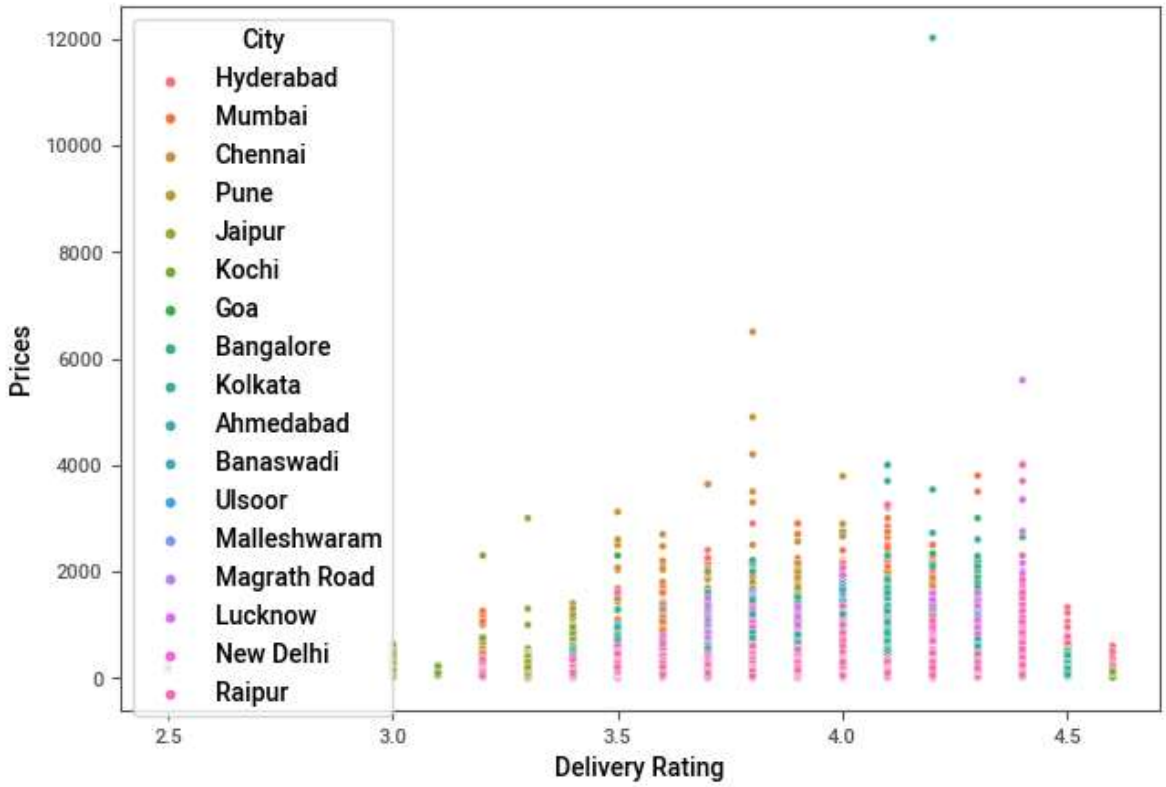
In [ ]:
```

```

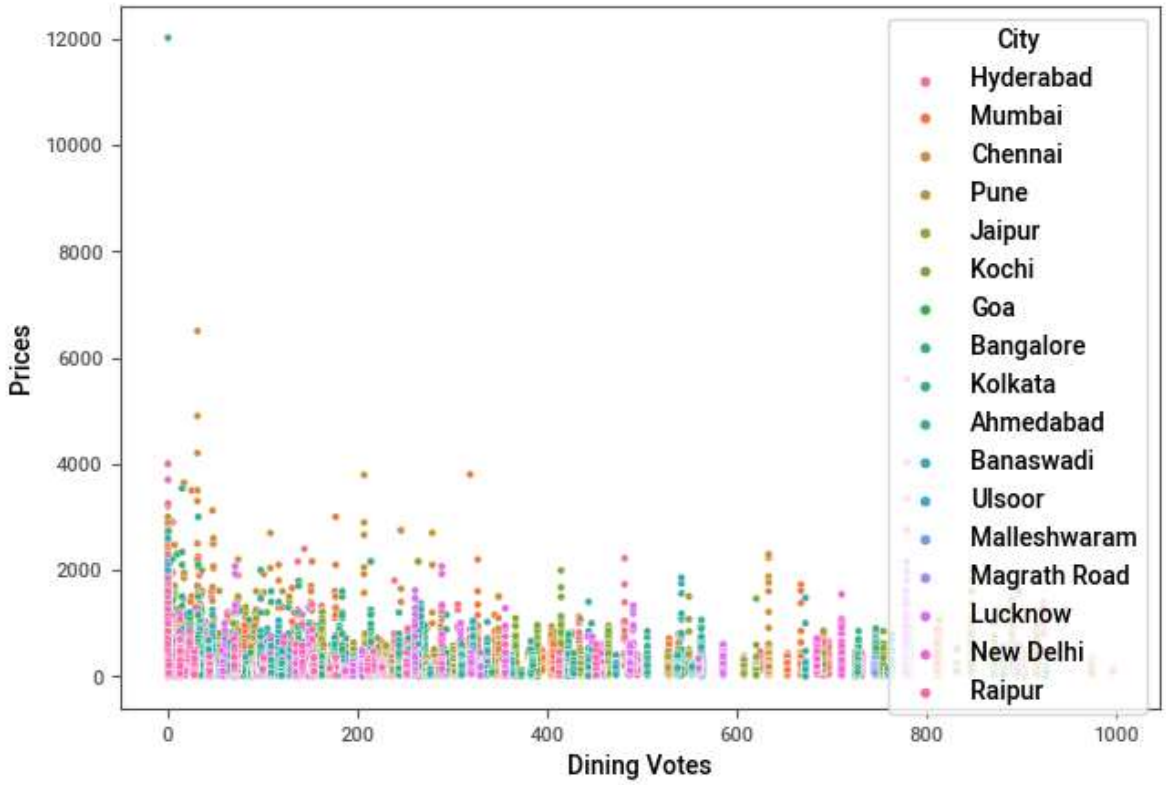
multivariate analysis

In [129]:
```
def scat(col,i):
    plt.figure(figsize=(25,5))
    plt.subplot(1,3,i)
    sns.scatterplot(data=df,x=col,y="Prices",hue="City")
    plt.show()
```

In [130]:
```
scat("Dining Rating",1)
scat("Delivery Rating",2)
scat("Dining Votes",3)
```

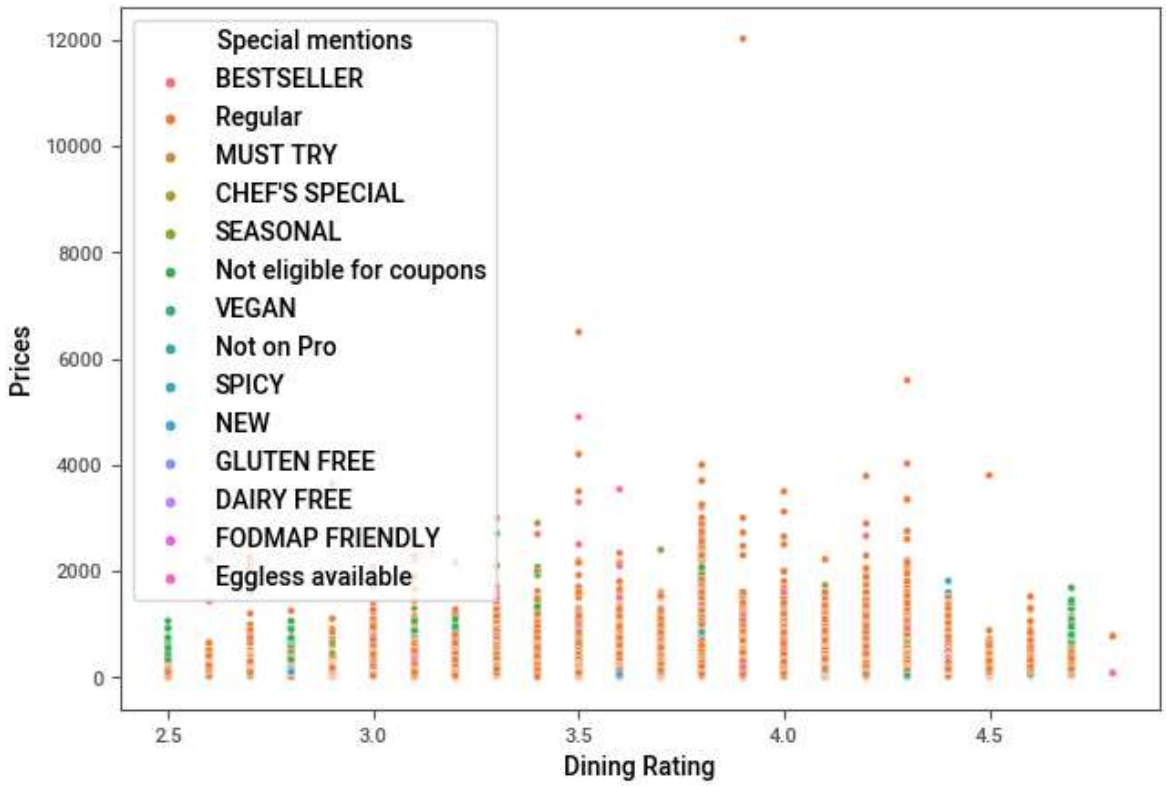


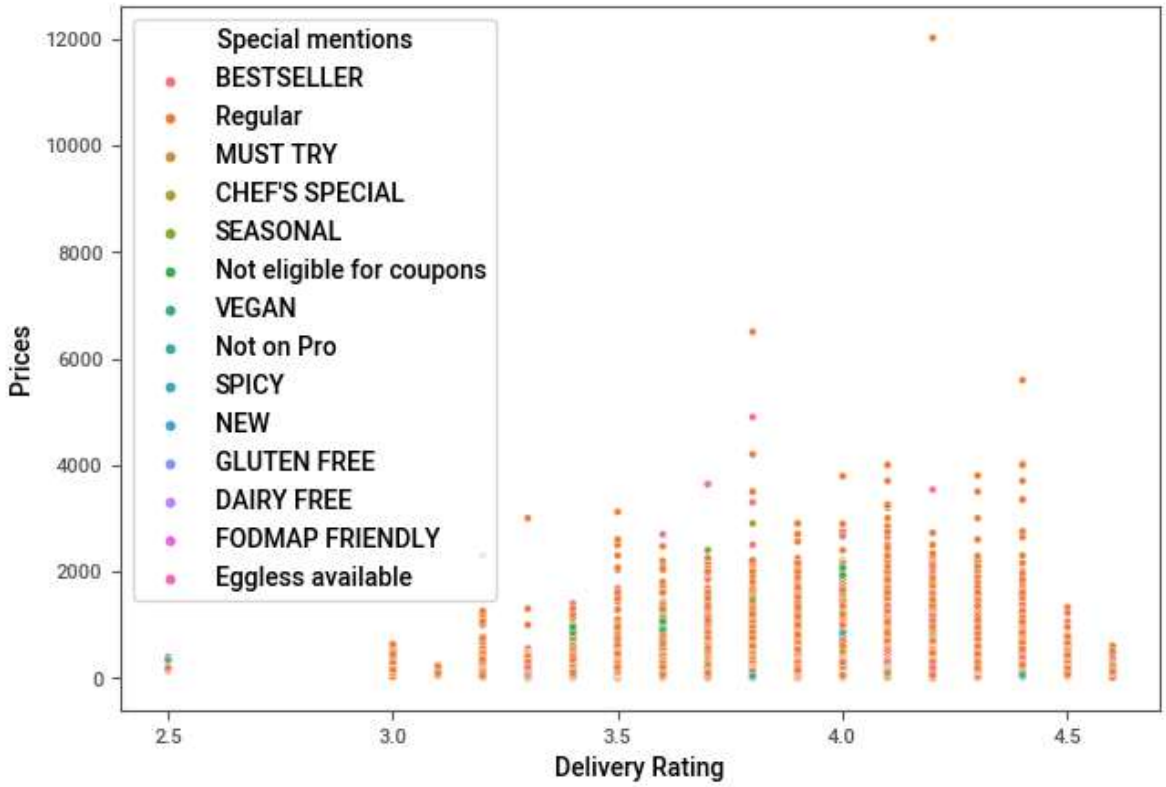


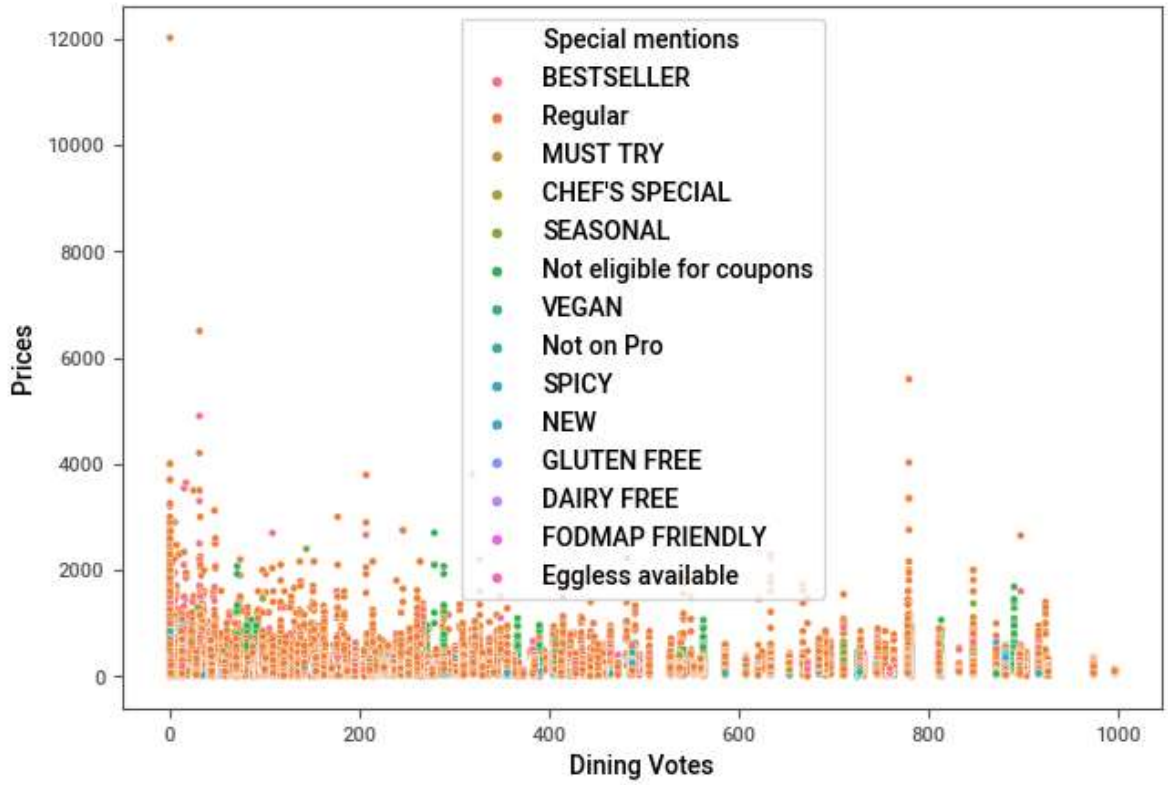


In [131]:
```
def scat_1(col,i):
    plt.figure(figsize=(25,5))
    plt.subplot(1,3,i)
    sns.scatterplot(data=df,x=col,y="Prices",hue="Special mentions")
    plt.show()
```

In [132]:
```
scat_1("Dining Rating",1)
scat_1("Delivery Rating",2)
scat_1("Dining Votes",3)
```







we can easily interpret that the special mentions "Best Seller" sold the most with higher rates.

Finding which cuisine is more rated with respect to price

In [133]:
```
rated=df.groupby("Cuisine ")
```

In [134]:
```
rated.mean()
```

```
C:\Users\SURIYA\AppData\Local\Temp\ipykernel_17280\1103666212.py:1: FutureWar
ning: The default value of numeric_only in DataFrameGroupBy.mean is deprecate
d. In a future version, numeric_only will default to False. Either specify nu
meric_only or select only columns which should be valid for the function.
  rated.mean()
```

Out[134]:

Cuisine	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Prices
American	3.742857	4.081395	0.504983	9.129568	257.398671
Andhra	4.200000	4.300000	0.000000	0.000000	399.505051
Awadhi	4.500000	4.000000	0.000000	0.000000	197.272727
BBQ	3.336481	3.881402	97.735336	214.499285	247.280401
Bakery	4.015739	4.121734	266.433619	79.471092	239.715075
Beverages	3.844500	4.010119	200.140959	95.554299	257.376054
Biryani	3.845494	3.907308	172.411034	82.348354	271.045043
Burger	3.690846	3.830743	100.687392	212.331606	247.585406
Chinese	3.803178	3.934445	106.206869	127.618239	231.458289
Coffee	3.644444	4.054422	2.145125	577.346939	200.172562
Continental	3.808349	3.666793	1.168880	0.000000	353.618216
Desserts	3.879935	4.029887	177.003985	101.185137	263.730066
Fast Food	3.706798	3.911232	112.139620	169.798662	258.217865
Gujarati	3.465157	3.739024	91.292683	0.000000	227.703432
Healthy Food	3.800000	4.200000	0.000000	0.000000	217.477011
Hyderabadi	3.800000	4.080743	17.199324	230.932432	269.858108
Ice Cream	3.795756	4.057867	200.534161	81.953416	187.272308
Italian	3.800000	3.512195	0.000000	529.365854	193.682927
Juices	3.827985	3.931343	165.697761	87.895522	194.005354
Kathiyawadi	3.693277	3.613445	2.000000	517.579832	163.436975
Kebab	3.788271	4.034436	183.230075	232.661654	338.252466
Kerala	3.728481	3.917722	73.136076	81.455696	150.677215
Lucknowi	3.800000	3.900000	0.000000	0.000000	376.963158
Maharashtrian	3.875433	3.630796	79.017301	186.570934	131.048443
Mandi	3.803514	3.763243	460.889189	194.227027	218.155595
Mexican	4.141379	3.986207	0.000000	322.793103	272.376437
Mithai	3.800000	4.104527	0.000000	0.000000	217.305000
Momos	3.829439	3.785981	118.460280	139.366822	227.141612
Mughlai	3.546372	3.709043	81.002103	226.930599	262.482650
North Indian	3.824836	3.991831	123.281609	131.192939	207.732003
Pasta	3.854804	3.958719	73.580071	124.953737	234.227758
Pizza	3.816078	3.944529	110.099491	116.453848	210.762465
Rajasthani	3.269091	4.081212	161.272727	393.066667	203.551515
Rolls	3.788243	3.812971	72.881789	99.275399	277.747220

Cuisine	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Prices
Salad	3.800000	4.189078	0.911263	32.436860	250.470990
Sandwich	3.441571	3.826820	41.818008	67.000000	202.793103
Seafood	4.003972	4.056464	106.028816	70.658100	299.275794
Shake	3.923060	3.891020	60.376078	77.147270	188.431239
Shawarma	3.088535	3.694268	18.777070	0.000000	167.770701
Sichuan	3.848421	3.872382	193.055694	177.573150	257.709106
South Indian	3.728968	3.907937	188.708333	78.306878	189.309854
Street Food	3.785787	3.973218	159.099536	78.632223	172.497204
Tea	3.800000	4.400000	0.000000	0.000000	63.461538
Thai	3.800000	4.000000	0.000000	0.000000	336.500000
Tibetan	3.900000	4.100000	99.000000	0.000000	173.705882
Turkish	4.100000	4.100000	208.000000	699.000000	244.090909
Vietnamese	3.800000	4.000000	0.000000	3.000000	512.500000
Wraps	4.172263	3.724818	112.299270	145.875912	189.763285

Finding which restaurant has best dining in a particular city

In [135]:
```
rated_2=df.groupby(["City"])["Dining Rating"].idxmax()
rated_2=df.loc[rated_2]
rated_2
```

Out[135]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City
89172	Urban Khichdi	4.6	4.1	0	0	Beverages	Navrangpura	Ahmedabad
94473	GOPIZZA	3.7	3.8	47	139	Fast Food	Orion East	Banaswadi
65625	Truffles	4.6	4.3	0	0	Desserts	St. Marks Road	Bangalore
32723	AB's - Absolute Barbecues	4.7	3.7	0	0	Desserts	T. Nagar	Chennai
63090	Ritz Classic	4.4	4.1	105	405	Beverages	Mall De Goa	Goa
15354	Exotica	4.6	4.3	0	0	Beverages	12th Square Building	Hyderabad
76069	Thali and More	4.7	4.1	0	0	Beverages	C Scheme	Jaipur
56766	Cafe 17	4.6	4.1	259	0	Beverages	Ravipuram	Kochi
72232	Chowman	4.4	4.1	882	0	Beverages	Hatibagan	Kolkata
100331	Dastarkhwan	4.5	4.0	0	0	Awadhi	Kaiserbagh	Lucknow
99791	Keventers Ice Cream	3.5	3.7	0	112	Desserts	Garuda Mall	Magrath Road
96031	Rajdhani	4.0	4.0	746	0	Rajasthani	Mantri Square	Malleshwaram
17436	Chaitanya	4.5	4.4	0	0	Beverages	Dadar West	Mumbai
106300	Natural Ice Cream	4.8	4.5	0	0	Beverages	Connaught Place	New Delhi
43248	Sukanta	4.2	4.1	0	0	Beverages	Deccan Gymkhana	Pune
118057	Creams N Caffeine	4.3	3.5	217	0	Pizza	Samta Colony	Raipur

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City
94757	Dum Safar Biryani	3.8	4.0	0	7	Desserts	Lido Mall	Ulsoor

To determine which restaurant tops a particular place in a city

In [136]:
```
rated_2=df_chennai.groupby(["Place Name"])["Dining Rating"].idxmax()
rated_2=df_chennai.loc[rated_2]
rated_2
```

Out[136]:

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City	Ite
36171	Eating Circles	4.6	4.1	875	0	South Indian	Alwarpet	Chennai	
31626	WOW! China	4.0	3.8	77	709	Seafood	Aminijikarai	Chennai	
37719	Kim Ling Chinese Restaurant	4.3	4.3	539	0	Beverages	Anna Nagar East	Chennai	Mai I Tl
38147	Chidambaram New Moorthy Cafe	4.3	4.1	246	0	Beverages	Anna Nagar West	Chennai	
29177	Hotel Sennthur	3.8	4.2	171	0	Beverages	Anna Salai	Chennai	
36886	Armaani Biryani	3.8	3.6	0	84	Seafood	Arumbakkam	Chennai	(5 3
33309	Zam Zam Briyani	3.3	3.4	24	0	North Indian	Choolaimedu	Chennai	
28327	Babal Da Punjabi Dabha	4.4	4.2	405	0	Beverages	Egmore	Chennai	I
38970	Taste Of Turkey	3.8	4.3	0	258	Kebab	George Town	Chennai	B
35861	The Kati Roll Shop	4.2	4.0	422	0	Kebab	Gopalapuram	Chennai	
33804	Hotel Paramount	4.1	4.2	975	0	Beverages	Kilpauk	Chennai	
30704	Bismillah Briyani & Fast Foods	3.9	3.8	176	0	Sichuan	Kolathur	Chennai	
38127	Tibet Momo - World Class Pan Asian Cuisine	3.9	4.1	99	0	Tibetan	Kora Food Street	Chennai	S
37343	Gusto Pizza	3.8	3.8	0	77	Fast Food	Mylapore	Chennai	I
37148	Toscano	4.7	4.1	891	0	Beverages	Nungambakkam	Chennai	Ha V
69134	KFC	3.6	3.8	0	32	Fast Food	Park Town	Chennai	

	Restaurant Name	Dining Rating	Delivery Rating	Dining Votes	Delivery Votes	Cuisine	Place Name	City	Ite
28220	Madurai Sri Thevar Hotel	3.8	3.7	112	0	South Indian	Parrys	Chennai	V
36923	Tower Burger	3.8	3.7	0	64	Beverages	Perambur	Chennai	
33426	Shree Konar Vilas	4.3	3.9	208	0	Biryani	Purasavakkam	Chennai	
35186	Cafe Amin	4.1	4.2	260	0	Beverages	Royapettah	Chennai	
35762	Jango'z	3.9	3.6	7	674	Fast Food	Royapuram	Chennai	N
32723	AB's - Absolute Barbecues	4.7	3.7	0	0	Desserts	T. Nagar	Chennai	E Se
30109	Savoury Sea Shell	4.0	4.1	848	0	Sichuan	Thousand Lights	Chennai	
27894	Salem RR Biriyani Unavagam	4.0	3.5	47	0	Seafood	Triplicane	Chennai	
28714	Liza Restaurant	3.9	4.1	141	0	Beverages	Vepery	Chennai	Fr
34078	Grill A Delics	4.1	3.8	142	303	Beverages	Washermenpet	Chennai	

Similary it goes for other cities in the dataset

In [74]:
```
pp.ProfileReport(df)
```

Summarize dataset: 100% 45/45 [00:06<00:00, 5.65it/s, Completed]

Generate report structure: 100% 1/1 [00:02<00:00, 2.49s/it]

Render HTML: 100% 1/1 [00:01<00:00, 1.48s/it]

Total characters	1566027
Distinct characters	77
Distinct categories	10 (https://en.wikipedia.org/wiki/Unicode_character_property#General_Categ
Distinct scripts	2 (https://en.wikipedia.org/wiki/Script_(Unicode)#List_of_scripts_in_Unicode
Distinct blocks	2 (https://en.wikipedia.org/wiki/Unicode_block)

The Unicode Standard assigns character properties to each code point, which can be used to analyse textual variables.

Unique

Unique	0	?
Unique (%)	0.0%	

Sample

1st row	Doner King
2nd row	Doner King
3rd row	Doner King
4th row	Doner King
5th row	Doner King

Common Values

Value	Count	Frequency (%)
McDonald's	1526	1.5%

Out[74]:

In [75]:
```
fc=sweetviz.FeatureConfig(force_cat="Prices")
```

In [76]:
```
myreport=sweetviz.analyze(df,None,fc)
```

```
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\dataframe_
report.py:74: FutureWarning: iteritems is deprecated and will be removed in a
future version. Use .items instead.
  all_source_names = [cur_name for cur_name, cur_series in source_df.iteritem
s()]
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\dataframe_
report.py:109: FutureWarning: iteritems is deprecated and will be removed in
a future version. Use .items instead.
  filtered_series_names_in_source = [cur_name for cur_name, cur_series in sou
rce_df.iteritems()
```

Done! Use 'show' commands to display/save. [100%] 00:00 -> (00:00 left)

```
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_text.py:19: FutureWarning: iteritems is deprecated and will be removed
in a future version. Use .items instead.
  for item in to_process.source_counts["value_counts_without_nan"].iteritems
():
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_numeric.py:25: FutureWarning: The 'mad' method is deprecated and will b
e removed in a future version. To compute the same result, you may do `(df -
df.mean()).abs().mean()`.
  stats["mad"] = series.mad()
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_numeric.py:25: FutureWarning: The 'mad' method is deprecated and will b
e removed in a future version. To compute the same result, you may do `(df -
df.mean()).abs().mean()`.
  stats["mad"] = series.mad()
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_numeric.py:25: FutureWarning: The 'mad' method is deprecated and will b
e removed in a future version. To compute the same result, you may do `(df -
df.mean()).abs().mean()`.
  stats["mad"] = series.mad()
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_numeric.py:25: FutureWarning: The 'mad' method is deprecated and will b
e removed in a future version. To compute the same result, you may do `(df -
df.mean()).abs().mean()`.
  stats["mad"] = series.mad()
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_cat.py:28: FutureWarning: iteritems is deprecated and will be removed i
n a future version. Use .items instead.
  for item in category_counts.iteritems():
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_text.py:19: FutureWarning: iteritems is deprecated and will be removed
in a future version. Use .items instead.
  for item in to_process.source_counts["value_counts_without_nan"].iteritems
():
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_cat.py:28: FutureWarning: iteritems is deprecated and will be removed i
n a future version. Use .items instead.
  for item in category_counts.iteritems():
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_text.py:19: FutureWarning: iteritems is deprecated and will be removed
in a future version. Use .items instead.
  for item in to_process.source_counts["value_counts_without_nan"].iteritems
():
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_cat.py:28: FutureWarning: iteritems is deprecated and will be removed i
n a future version. Use .items instead.
  for item in category_counts.iteritems():
C:\Users\SURIYA\AppData\Local\anaconda3\lib\site-packages\sweetviz\series_ana
lyzer_cat.py:28: FutureWarning: iteritems is deprecated and will be removed i
n a future version. Use .items instead.
  for item in category_counts.iteritems():
```

In [77]:
```
myreport.show_html("Zomato_Analysis.html")
```

```
Report Zomato_Analysis.html was generated! NOTEBOOK/COLAB USERS: the web brow
ser MAY not pop up, regardless, the report IS saved in your notebook/colab fi
les.
```

Carrying the refined dataset to out repository

In [78]:
```
df.to_csv("zomato_dataset_refined.csv")
```

In [ ]:
```

```