Swiggy dataset

In [38]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [39]:
```
swiggy = pd.read_csv("swiggy.csv")
```

These are all data

In [40]:
```
swiggy
```

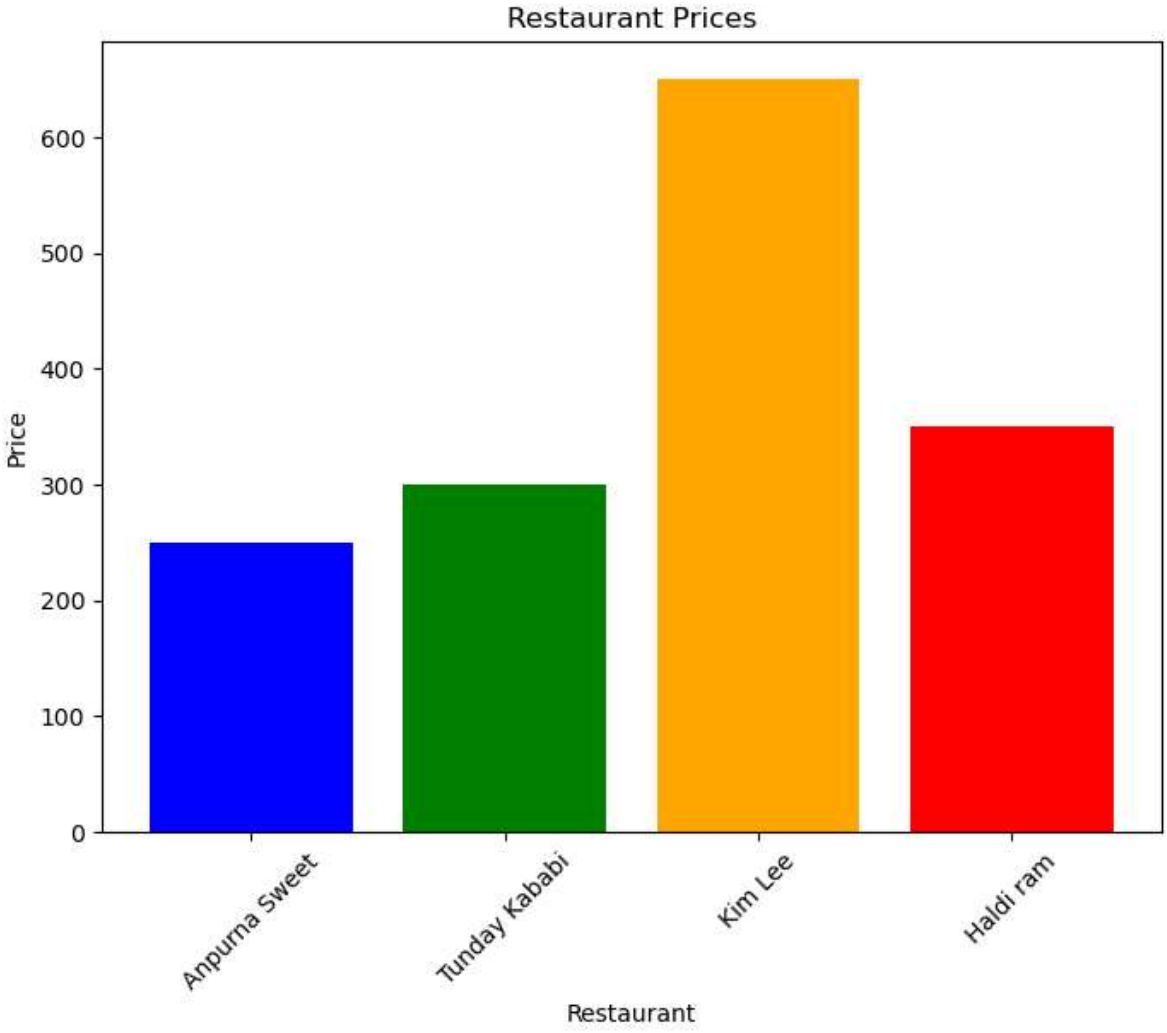
Out[40]:

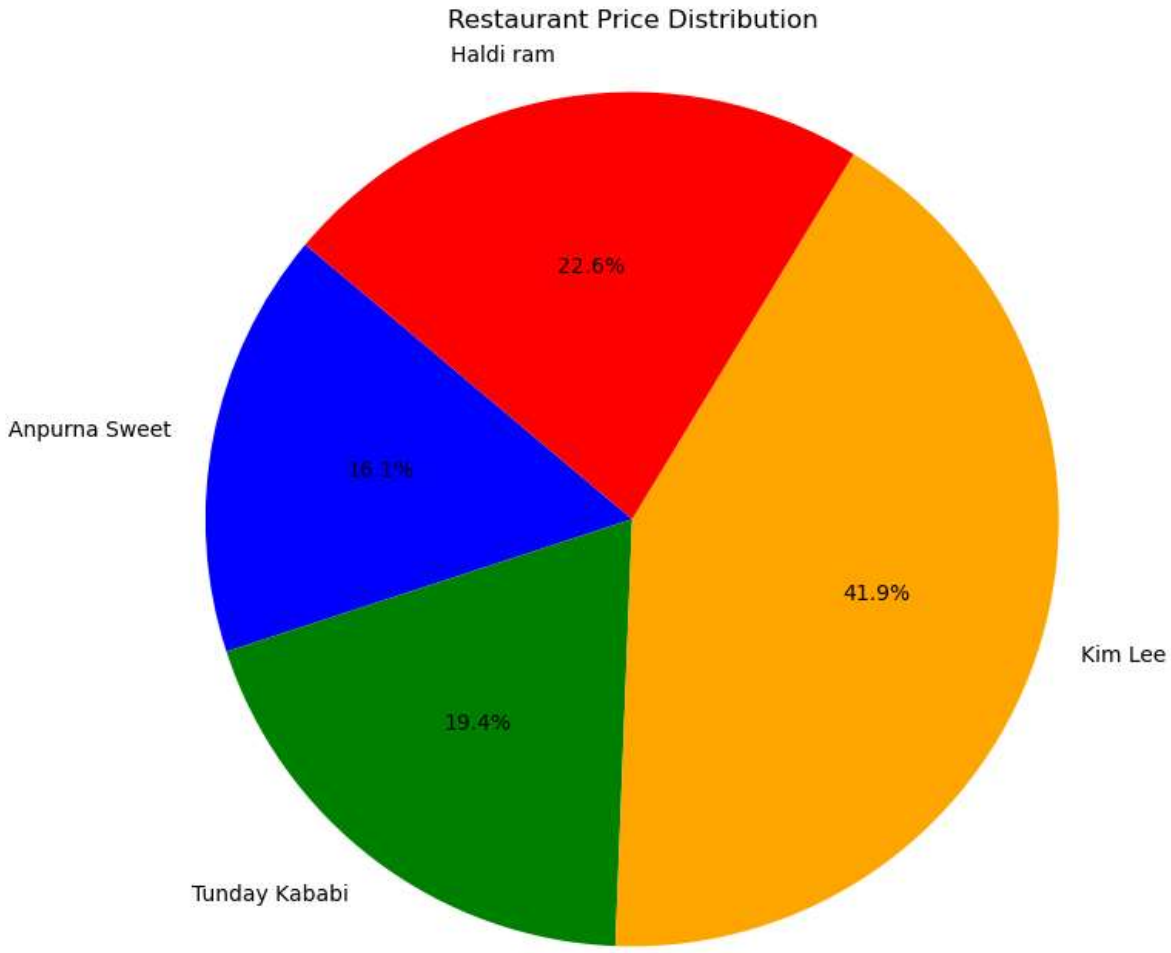
	ID	Area	City	Restaurant	Price	Avg ratings	Total ratings	
0	2247344	motihari	Bihar	Anpurna Sweet	300.0	4.1	100	Biryani,sweet,
1	2246064	motihari	Bihar	Tunday Kababi	300.0	4.1	100	Mugl
2	2247230	Chapra	Bihar	Kim Lee	650.0	4.4	100	
3	2247310	motihari	Bihar	New Punjabi Hotel	250.0	3.9	500	North Indian,Punjabi,Tan
4	2246039	muzfarpur	Bihar	Haldi ram	350.0	4.0	50	Rajasthani,(Indian,Sna
...	...	...	...	...	...	...	...	
516	2247353	Madhubani	Bihar	Movenpick Ice Cream Boutique	500.0	4.5	20	Ice Cream,Bevera
517	2247366	Betiah	Bihar	Bachan'S Tandoori Club	250.0	4.5	500	
518	2247355	Maansarowar	jaipur	govind Sweet	400.0	4.1	100	M
519	2247079	Bhagalpur	Bihar	Pikwik Since 1991	600.0	4.1	500	Indian,Chinese,Continental,M
520	2246034	West champaran	Bihar	Culinaria By Pikwik	200.0	4.2	500	North Indian,Cont

521 rows × 10 columns

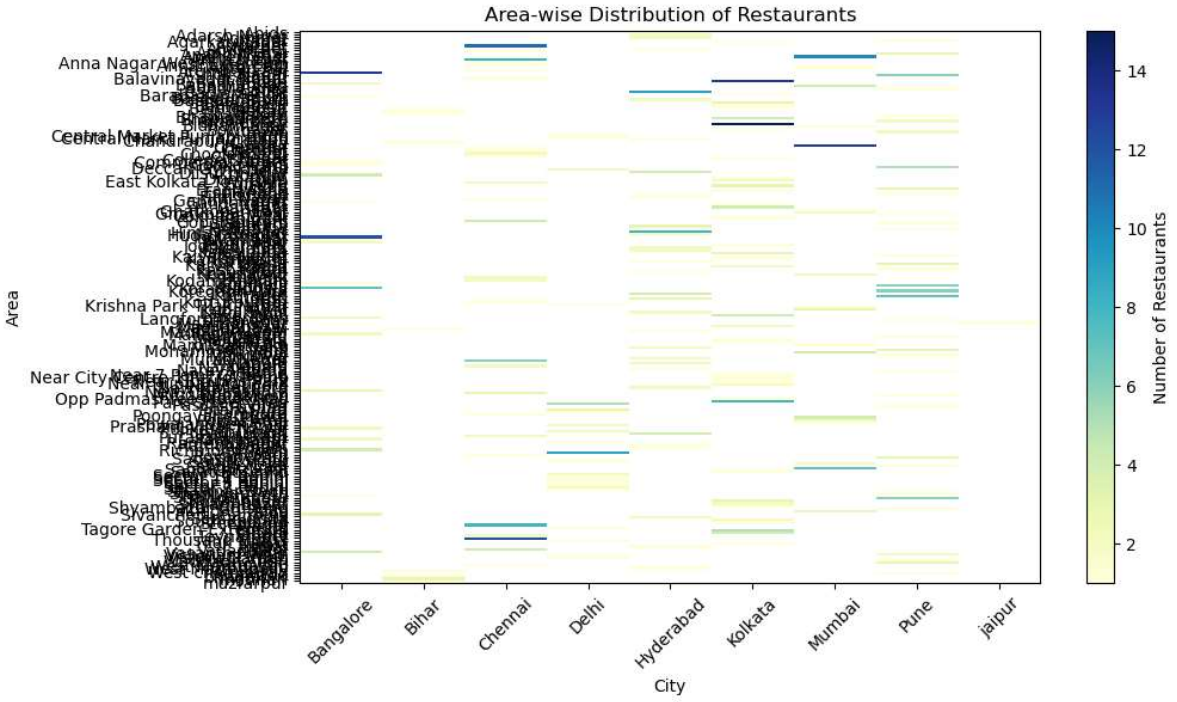
In [74]:

```
import matplotlib.pyplot as plt

# Data for the graph
Restaurant = ['Anpurna Sweet', 'Tunday Kababi', 'Kim Lee', 'Haldi ram']
Price = [250, 300, 650, 350]

# Creating a bar graph
plt.figure(figsize=(8, 6))
plt.bar(Restaurant, Price, color=['blue', 'green', 'orange', 'red'])
plt.xlabel('Restaurant')
plt.ylabel('Price')
plt.title('Restaurant Prices')
plt.xticks(rotation=45)  # Rotate x-axis labels for better readability

# Display the bar graph
plt.show()

# Creating a pie chart
plt.figure(figsize=(8, 8))
plt.pie(Price, labels=Restaurant, autopct='%1.1f%%', startangle=140, colors=['
plt.title('Restaurant Price Distribution')
plt.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a circle.

# Display the pie chart
plt.show()
```

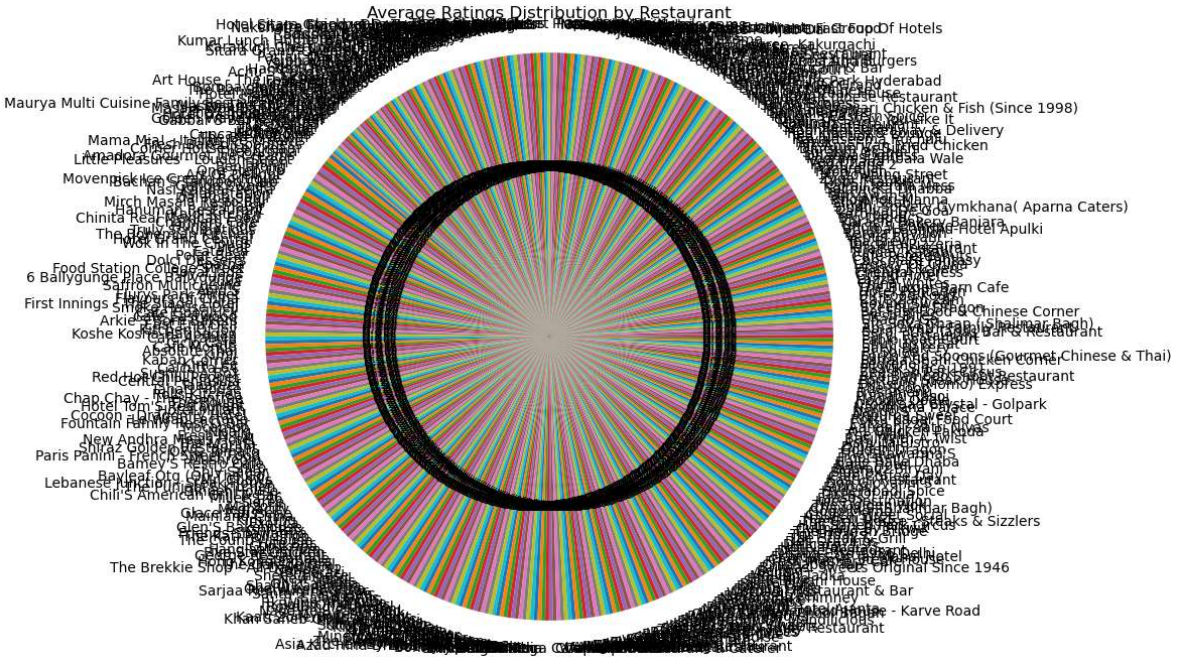

Restaurant Prices
Price
0
100
200
300
400
500
600
Anpurna Sweet
Tunday Kababi
Kim Lee
Haldi ram
Restaurant


Restaurant Price Distribution
Haldi ram
22.6%
Anpurna Sweet
16.1%
41.9%
Kim Lee
19.4%
Tunday Kababi

In [81]:
```
# Assuming the DataFrame has columns 'city', 'area', and 'restaurant'
# You can replace these with the actual column names from your DataFrame
restaurants_by_area = swiggy.groupby(['City', 'Area'])['Restaurant'].count().r

# Pivot the data for easier visualization
restaurants_by_area_pivot = restaurants_by_area.pivot('Area', 'City', 'Restaur

# Create a heatmap
plt.figure(figsize=(10, 6))
plt.imshow(restaurants_by_area_pivot, cmap='YlGnBu', aspect='auto', interpolat
plt.colorbar(label='Number of Restaurants')
plt.title('Area-wise Distribution of Restaurants')
plt.xlabel('City')
plt.ylabel('Area')
plt.xticks(range(len(restaurants_by_area_pivot.columns)), restaurants_by_area_
plt.yticks(range(len(restaurants_by_area_pivot.index)), restaurants_by_area_pi

# Show the graph
plt.show()
```



In [73]:
```
import pandas as pd
import matplotlib.pyplot as plt

# Read data from the CSV file into a DataFrame
swiggy = pd.read_csv("swiggy.csv")

# Assuming the DataFrame has columns 'Restaurant', 'Price', and 'Avg ratings'
# You can replace these with the actual column names from your DataFrame
avg_ratings_by_restaurant = swiggy.groupby('Restaurant')['Avg ratings'].mean()

# Sort the data by average ratings in descending order
avg_ratings_by_restaurant = avg_ratings_by_restaurant.sort_values(by='Avg rati

# Create a pie chart
plt.figure(figsize=(8, 8))
plt.pie(avg_ratings_by_restaurant['Avg ratings'], labels=avg_ratings_by_restau
plt.title('Average Ratings Distribution by Restaurant')
plt.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a circle.

# Show the pie chart
plt.show()
```



Now we will start the Analysis of data

finding the index

In [41]:
```
swiggy.index
```

Out[41]:
```
RangeIndex(start=0, stop=521, step=1)
```

finding the shape

In [42]:
```
swiggy.shape
```

Out[42]:
```
(521, 10)
```

In [43]:
```
np.dtype
```

Out[43]:
```
numpy.dtype
```

finding the count in dataset

In [44]:
```
swiggy.count()
```

Out[44]:
```
ID               521
Area             521
City             521
Restaurant       521
Price            521
Avg ratings      521
Total ratings    521
Food type        521
 Owner           521
Delivery time    521
dtype: int64
```

finding the minimum value

In [45]:
```
swiggy.min()
```

Out[45]:
```
ID                                36
Area                           Abids
City                       Bangalore
Restaurant          Conclave At Afraa
Price                            99.0
Avg ratings                       2.1
Total ratings                      19
Food type        American,Continental
 Owner                     12Th Main
Delivery time                      24
dtype: object
```

finding the maximum value

In [46]:
```
swiggy.max()
```

Out[46]:
```
ID                                2247366
Area                             muzfarpur
City                                jaipur
Restaurant                   govind Sweet
Price                              1700.0
Avg ratings                           4.7
Total ratings                       10000
Food type        Tribal,Seafood,Chinese
 Owner                       vikash kumar
Delivery time                         90
dtype: object
```

finding the integer location

In [47]:
```
swiggy.iloc[0]
```

Out[47]:
```
ID                                    2247344
Area                                 motihari
City                                    Bihar
Restaurant                     Anpurna Sweet
Price                                  300.0
Avg ratings                              4.1
Total ratings                            100
Food type        Biryani,sweet,Indian eating
 Owner                        Raushan pandey
Delivery time                             59
Name: 0, dtype: object
```

In [48]:
```
swiggy.loc[0:5]
```

Out[48]:

	ID	Area	City	Restaurant	Price	Avg ratings	Total ratings	Food ty
0	2247344	motihari	Bihar	Anpurna Sweet	300.0	4.1	100	Biryani,sweet,Indian eati
1	2246064	motihari	Bihar	Tunday Kababi	300.0	4.1	100	Mughlai,Lucknc
2	2247230	Chapra	Bihar	Kim Lee	650.0	4.4	100	Chine
3	2247310	motihari	Bihar	New Punjabi Hotel	250.0	3.9	500	No Indian,Punjabi,Tandoor,Chine
4	2246039	muzfarpur	Bihar	Haldi ram	350.0	4.0	50	Rajasthani,Gujarati,No Indian,Snacks,Desse
5	2246098	Indiranagar	Bangalore	Treat	800.0	4.5	100	Mughlai,North Indi

find the head

In [49]:
```
swiggy.head()
```

Out[49]:

	ID	Area	City	Restaurant	Price	Avg ratings	Total ratings	Food type	
0	2247344	motihari	Bihar	Anpurna Sweet	300.0	4.1	100	Biryani,sweet,Indian eating	F
1	2246064	motihari	Bihar	Tunday Kababi	300.0	4.1	100	Mughlai,Lucknowi	R
2	2247230	Chapra	Bihar	Kim Lee	650.0	4.4	100	Chinese	F
3	2247310	motihari	Bihar	New Punjabi Hotel	250.0	3.9	500	North Indian,Punjabi,Tandoor,Chinese	
4	2246039	muzfarpur	Bihar	Haldi ram	350.0	4.0	50	Rajasthani,Gujarati,North Indian,Snacks,Desser...	V

finding the integer location

In [50]:
```
swiggy.iloc[0:5]
```

Out[50]:

	ID	Area	City	Restaurant	Price	Avg ratings	Total ratings	Food type	
0	2247344	motihari	Bihar	Anpurna Sweet	300.0	4.1	100	Biryani,sweet,Indian eating	F
1	2246064	motihari	Bihar	Tunday Kababi	300.0	4.1	100	Mughlai,Lucknowi	R
2	2247230	Chapra	Bihar	Kim Lee	650.0	4.4	100	Chinese	F
3	2247310	motihari	Bihar	New Punjabi Hotel	250.0	3.9	500	North Indian,Punjabi,Tandoor,Chinese	
4	2246039	muzfarpur	Bihar	Haldi ram	350.0	4.0	50	Rajasthani,Gujarati,North Indian,Snacks,Desser...	V

find the description of the data in the DataFrame.

In [51]:
```
swiggy.describe()
```

Out[51]:

	ID	Price	Avg ratings	Total ratings	Delivery time
count	5.210000e+02	521.000000	521.000000	521.000000	521.000000
mean	5.838770e+04	521.677543	4.061612	339.748560	54.905950
std	3.217694e+05	317.364683	0.414757	876.130158	13.177369
min	3.600000e+01	99.000000	2.100000	19.000000	24.000000
25%	5.908000e+03	300.000000	3.900000	80.000000	46.000000
50%	1.057500e+04	400.000000	4.200000	100.000000	55.000000
75%	1.716700e+04	650.000000	4.300000	500.000000	65.000000
max	2.247366e+06	1700.000000	4.700000	10000.000000	90.000000

info maethod are used prints the information or summary of the dataframe.

In [52]:
```
swiggy.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 521 entries, 0 to 520
Data columns (total 10 columns):
 #   Column         Non-Null Count  Dtype  
---  ------         --------------  -----  
 0   ID             521 non-null    int64  
 1   Area           521 non-null    object 
 2   City           521 non-null    object 
 3   Restaurant     521 non-null    object 
 4   Price          521 non-null    float64
 5   Avg ratings    521 non-null    float64
 6   Total ratings  521 non-null    int64  
 7   Food type      521 non-null    object 
 8    Owner         521 non-null    object 
 9   Delivery time  521 non-null    int64  
dtypes: float64(2), int64(3), object(5)
memory usage: 40.8+ KB
```

find the values are replaced with a Boolean value True for NULL values, and otherwise False.

In [53]:
```
swiggy.isnull()
```

Out[53]:

	ID	Area	City	Restaurant	Price	Avg ratings	Total ratings	Food type	Owner	Delivery time
0	False	False	False	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False	False	False
...	...	...	...	...	...	...	...	...	...	...
516	False	False	False	False	False	False	False	False	False	False
517	False	False	False	False	False	False	False	False	False	False
518	False	False	False	False	False	False	False	False	False	False
519	False	False	False	False	False	False	False	False	False	False
520	False	False	False	False	False	False	False	False	False	False

521 rows × 10 columns

find the dublicatede value

In [54]:
```
swiggy.duplicated()
```

Out[54]:
```
0      False
1      False
2      False
3      False
4      False
       ...
516    False
517    False
518    False
519    False
520    False
Length: 521, dtype: bool
```

sum() is an efficient and Pythonic way to sum a list of numeric values.

In [55]:
```
swiggy.sum()
```

Out[55]:
```
ID                                                  30419992
Area             motiharimotihariChapramotiharimuzfarpurIndiran...
City             BiharBiharBiharBiharBiharBangaloreBangaloreBih...
Restaurant       Anpurna SweetTunday KababiKim LeeNew Punjabi H...
Price                                               271794.0
Avg ratings                                           2116.1
Total ratings                                         177009
Food type        Biryani,sweet,Indian eatingMughlai,LucknowiChi...
 Owner           Raushan pandeyRajababu kumarRituraj kr singhRi...
Delivery time                                          28606
dtype: object
```

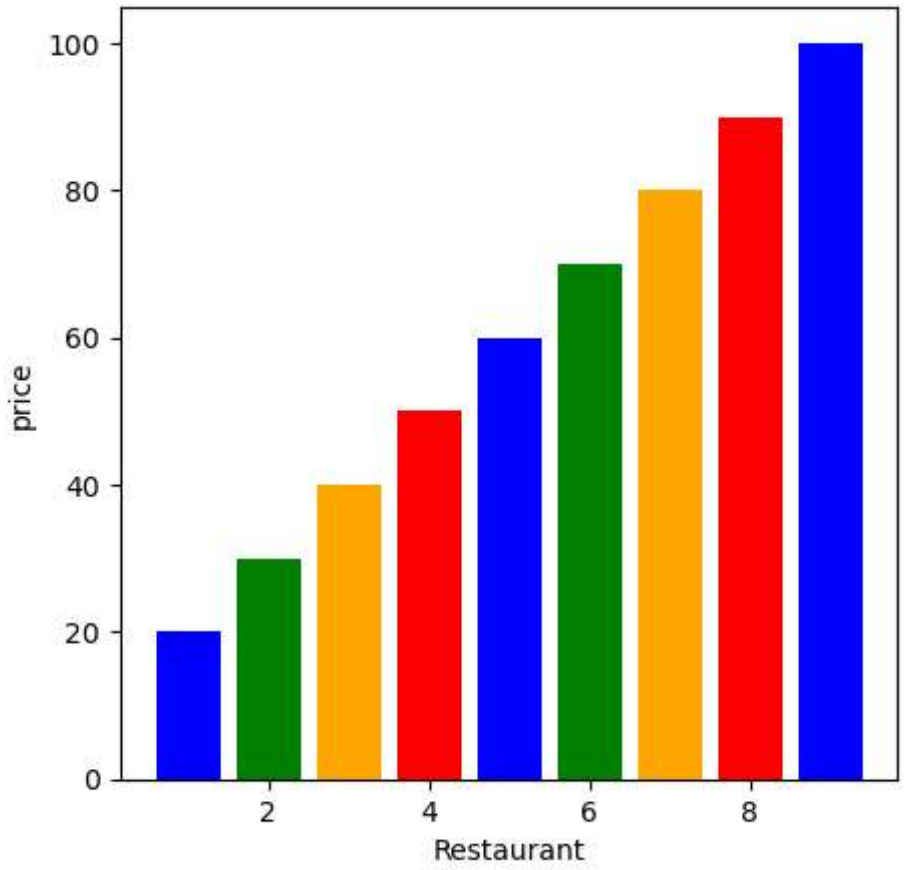
find the column alll value

In [56]:
```
swiggy.columns
```

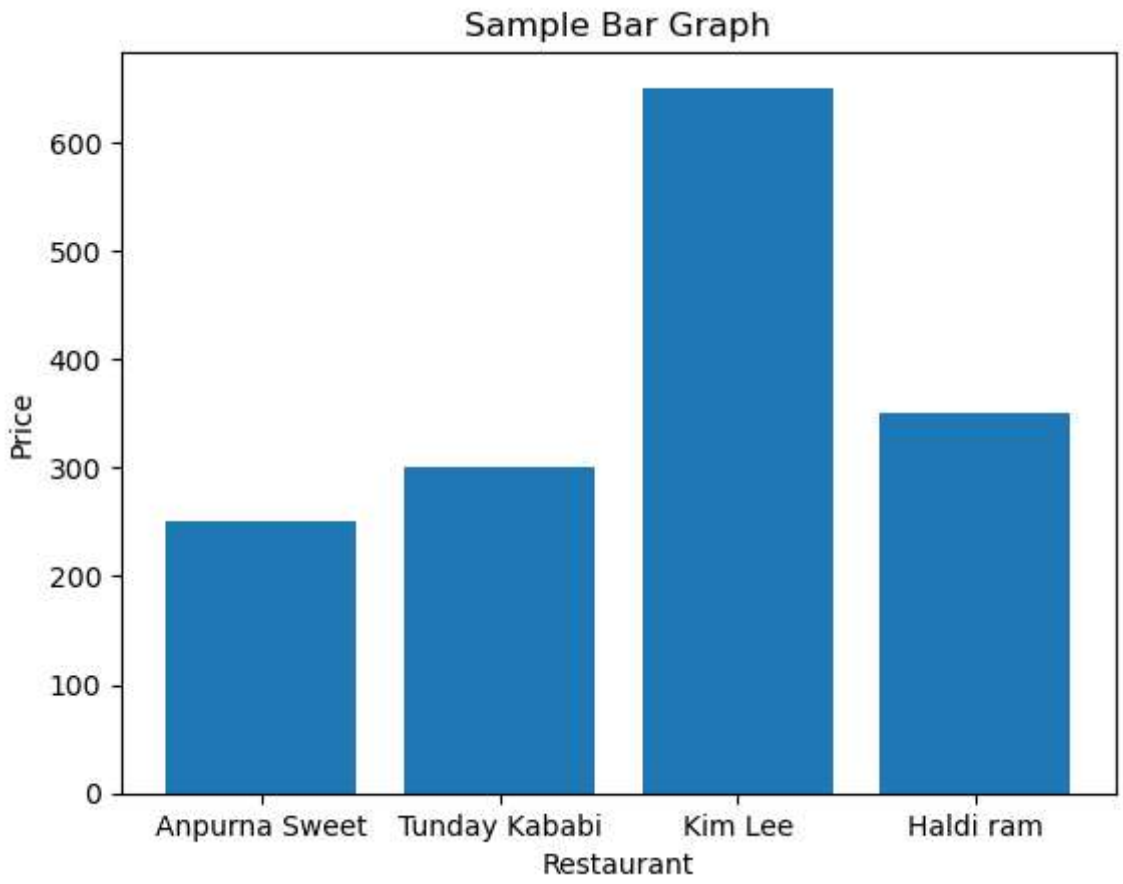
Out[56]:
```
Index(['ID', 'Area', 'City', 'Restaurant', 'Price', 'Avg ratings',
       'Total ratings', 'Food type', ' Owner', 'Delivery time'],
      dtype='object')
```

find the Price by graph and restaurant

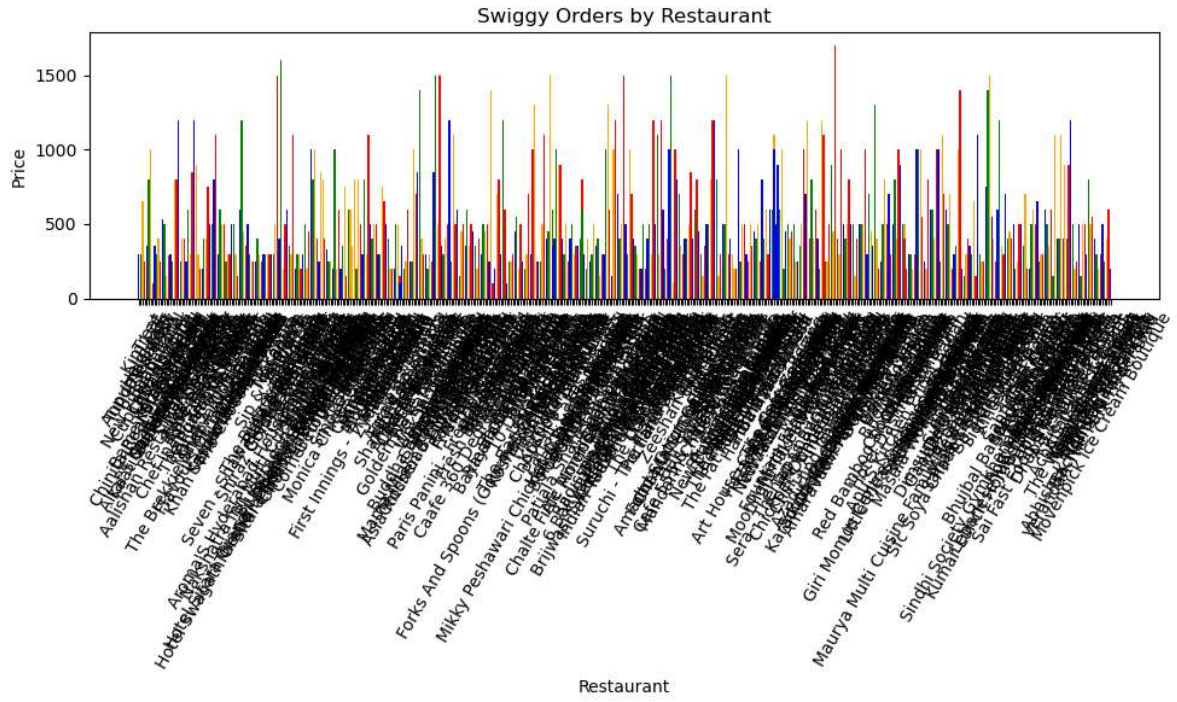
In [78]:
```
plt.figure(figsize =(5,5))
area = np.arange(1,10)
city = np.arange(20,110,10)
plt.bar(area,city, color=['blue', 'green', 'orange', 'red'])
plt.xlabel('Restaurant')
plt.ylabel('price')
plt.show()
```



In [58]:
```
# Data for the graph
Restaurant = ['Anpurna Sweet', 'Tunday Kababi', 'Kim Lee', 'Haldi ram']
Price = [250, 300, 650, 350]

# Creating a bar graph
plt.bar(Restaurant, Price)

# Adding labels and title
plt.xlabel('Restaurant')
plt.ylabel('Price')
plt.title('Sample Bar Graph')

# Display the graph
plt.show()
```



In [79]:
```
import pandas as pd
import matplotlib.pyplot as plt

# Read data from the CSV file into a DataFrame
swiggy = pd.read_csv("swiggy.csv")

# Assuming the DataFrame has columns 'Restaurant' and 'Orders'
# You can replace these with the actual column names from your DataFrame
restaurant_names = swiggy['Restaurant']
order_counts = swiggy['Price']

# Create a bar graph
plt.figure(figsize=(10, 6))  # Adjust the figure size if needed
plt.bar(restaurant_names, order_counts,color=['blue', 'green', 'orange', 'red'
plt.xlabel('Restaurant')
plt.ylabel('Price')
plt.title('Swiggy Orders by Restaurant')
plt.xticks(rotation=60)  # Rotate x-axis labels for better readability
plt.tight_layout()  # Adjust layout to prevent clipping of labels

# Show the graph
plt.show()
```



In [ ]:

In [ ]: