PRICE RANGE DISTRIBUTION

IMPORT LIBRARY

In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
```

DATA COLLECTION

In [2]:
```
df=pd.read_csv('Dataset .csv',encoding='unicode_escape')
```

In [3]:
```
df.head()
```

Out[3]:

	ï»¿Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose	Longitude	Latitude	Cuisines	...	C
0	6317637	Le Petit Souffle	162	Makati City	Third Floor, Century City Mall, Kalayaan Avenu...	Century City Mall, Poblacion, Makati City	Century City Mall, Poblacion, Makati City, Mak...	121.027535	14.565443	French, Japanese, Desserts	...	B
1	6304287	Izakaya Kikufuji	162	Makati City	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	Little Tokyo, Legaspi Village, Makati City	Little Tokyo, Legaspi Village, Makati City, Ma...	121.014101	14.553708	Japanese	...	B
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	Edsa Shangri-La, Ortigas, Mandaluyong City	Edsa Shangri-La, Ortigas, Mandaluyong City, Ma...	121.056831	14.581404	Seafood, Asian, Filipino, Indian	...	B
3	6318506	Ooma	162	Mandaluyong City	Third Floor, Mega Fashion Hall, SM Megamall, O...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall, Ortigas, Mandaluyong City, Mandal...	121.056475	14.585318	Japanese, Sushi	...	B
4	6314302	Sambo Kojin	162	Mandaluyong City	Third Floor, Mega Atrium, SM Megamall, Ortigas...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall, Ortigas, Mandaluyong City, Mandal...	121.057508	14.584450	Japanese, Korean	...	B

5 rows × 21 columns

In [4]:
```
df.shape
```

Out[4]:
```
(9551, 21)
```

In [5]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 9551 entries, 0 to 9550
Data columns (total 21 columns):
 #   Column                Non-Null Count  Dtype  
---  ------                --------------  -----  
 0   ï»¿Restaurant ID      9551 non-null   int64  
 1   Restaurant Name       9551 non-null   object 
 2   Country Code          9551 non-null   int64  
 3   City                  9551 non-null   object 
 4   Address               9551 non-null   object 
 5   Locality              9551 non-null   object 
 6   Locality Verbose      9551 non-null   object 
 7   Longitude             9551 non-null   float64
 8   Latitude              9551 non-null   float64
 9   Cuisines              9542 non-null   object 
 10  Average Cost for two  9551 non-null   int64  
 11  Currency              9551 non-null   object 
 12  Has Table booking     9551 non-null   object 
 13  Has Online delivery   9551 non-null   object 
 14  Is delivering now     9551 non-null   object 
 15  Switch to order menu  9551 non-null   object 
 16  Price range           9551 non-null   int64  
 17  Aggregate rating      9551 non-null   float64
 18  Rating color          9551 non-null   object 
 19  Rating text           9551 non-null   object 
 20  Votes                 9551 non-null   int64  
dtypes: float64(3), int64(5), object(13)
memory usage: 1.5+ MB
```

In [6]:
```
pd.isnull(df).sum()
```

Out[6]:
```
ï»¿Restaurant ID        0
Restaurant Name         0
Country Code            0
City                    0
Address                 0
Locality                0
Locality Verbose        0
Longitude               0
Latitude                0
Cuisines                9
Average Cost for two    0
Currency                0
Has Table booking       0
Has Online delivery     0
Is delivering now       0
Switch to order menu    0
Price range             0
Aggregate rating        0
Rating color            0
Rating text             0
Votes                   0
dtype: int64
```

In [7]:
```
df.dropna(inplace=True)
```

In [8]:
```
df.shape
```

Out[8]:
```
(9542, 21)
```

In [9]:
```
df.dtypes
```

Out[9]:
```
ï»¿Restaurant ID         int64
Restaurant Name          object
Country Code              int64
City                     object
Address                  object
Locality                 object
Locality Verbose         object
Longitude               float64
Latitude                float64
Cuisines                 object
Average Cost for two      int64
Currency                 object
Has Table booking        object
Has Online delivery      object
Is delivering now        object
Switch to order menu     object
Price range               int64
Aggregate rating        float64
Rating color             object
Rating text              object
Votes                     int64
dtype: object
```

In [10]:
```
df.describe()
```

Out[10]:

	ï»¿Restaurant ID	Country Code	Longitude	Latitude	Average Cost for two	Price range	Aggregate rating	Votes
count	9.542000e+03	9542.000000	9542.000000	9542.000000	9542.000000	9542.000000	9542.000000	9542.000000
mean	9.043301e+06	18.179208	64.274997	25.848532	1200.326137	1.804968	2.665238	156.772060
std	8.791967e+06	56.451600	41.197602	11.010094	16128.743876	0.905563	1.516588	430.203324
min	5.300000e+01	1.000000	-157.948486	-41.330428	0.000000	1.000000	0.000000	0.000000
25%	3.019312e+05	1.000000	77.081565	28.478658	250.000000	1.000000	2.500000	5.000000
50%	6.002726e+06	1.000000	77.192031	28.570444	400.000000	2.000000	3.200000	31.000000
75%	1.835260e+07	1.000000	77.282043	28.642711	700.000000	2.000000	3.700000	130.000000
max	1.850065e+07	216.000000	174.832089	55.976980	800000.000000	4.000000	4.900000	10934.000000

In [12]:
```
df[df.duplicated()]
```

Out[12]:

ï»¿Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose	Longitude	Latitude	Cuisines	...	Currency	Has Table booking	Oı deli

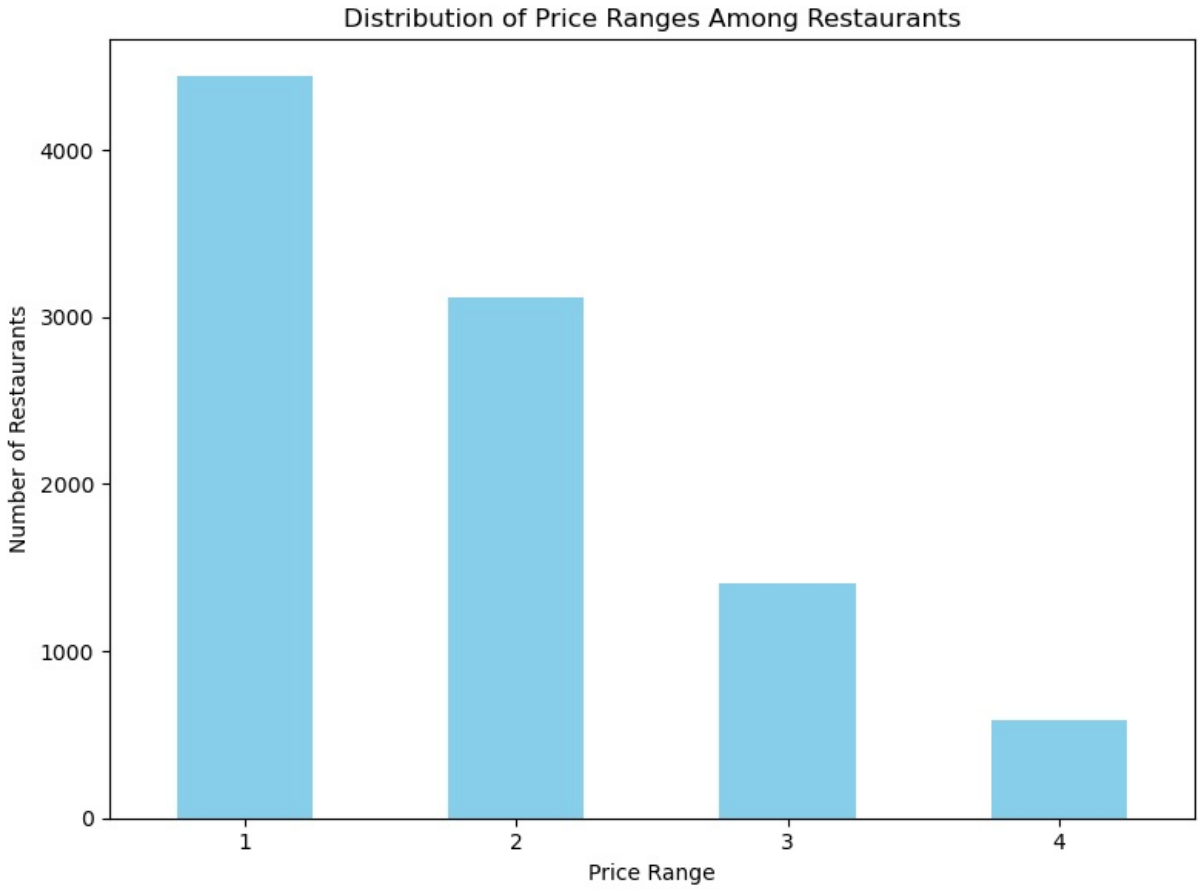
0 rows × 21 columns

CREATE A HISTOGRAM OR BAR CHART TO VISUALIZE THE DITRIBUTION OF PRICE RANGES AMONG THE RESTAURANTS.

In [13]:
```
df.columns
```

Out[13]:
```
Index(['ï»¿Restaurant ID', 'Restaurant Name', 'Country Code', 'City',
       'Address', 'Locality', 'Locality Verbose', 'Longitude', 'Latitude',
       'Cuisines', 'Average Cost for two', 'Currency', 'Has Table booking',
       'Has Online delivery', 'Is delivering now', 'Switch to order menu',
       'Price range', 'Aggregate rating', 'Rating color', 'Rating text',
       'Votes'],
      dtype='object')
```

In [15]:
```
# Plot the distribution of price ranges using a histogram or bar chart
plt.figure(figsize=(8, 6))
df['Price range'].value_counts().sort_index().plot(kind='bar', color='skyblue')
plt.title('Distribution of Price Ranges Among Restaurants')
plt.xlabel('Price Range')
plt.ylabel('Number of Restaurants')
plt.xticks(rotation=0)
plt.tight_layout()
plt.show()
```



CALCULATE THE PERCENTAGE OF RESTAURANTS IN EACH PRICE PRICE RANGE CATEGORY.

In [53]:
```
# Calculate the total number of restaurants
total_restaurants = len(df)
```

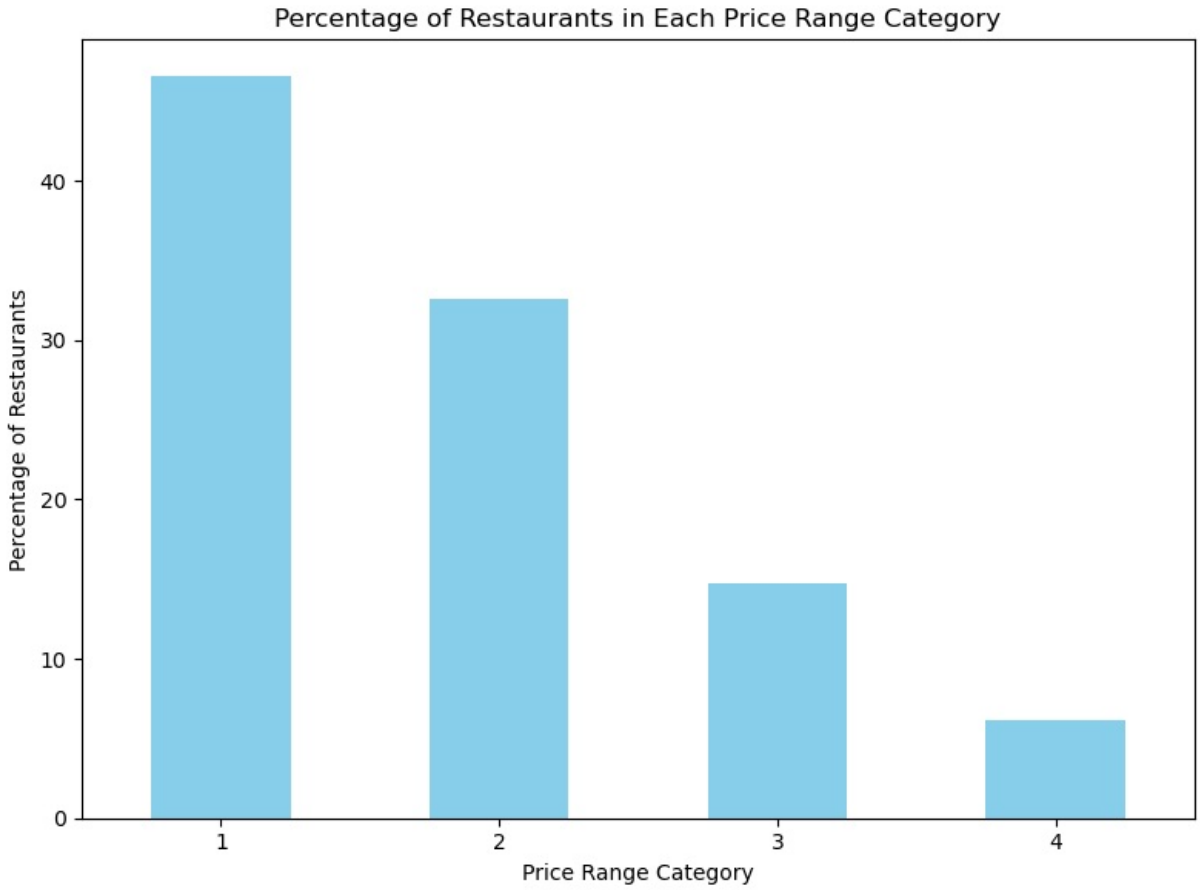
In [55]:
```
# Calculate the number of restaurants in each price range category
price_range_counts = df['Price range'].value_counts()
```

In [56]:
```
# Calculate the percentage of restaurants in each price range category
percentage_price_range = (price_range_counts / total_restaurants) * 100
```

In [57]:
```
print("Percentage of restaurants in each price range category:")
print(percentage_price_range)
```

```
Percentage of restaurants in each price range category:
Price range
1    46.529159
2    32.593446
3    14.741912
4     6.135483
Name: count, dtype: float64
```

In [58]:
```
# Plot the data
plt.figure(figsize=(8, 6))
percentage_price_range.plot(kind='bar', color='skyblue')
plt.title('Percentage of Restaurants in Each Price Range Category')
plt.xlabel('Price Range Category')
plt.ylabel('Percentage of Restaurants')
plt.xticks(rotation=0)
plt.tight_layout()
plt.show()
```



THANKYOU

CONNECT WITH ME:

LinkedIn: https://www.linkedin.com/in/harshita-sharma-b68154220/

GitHub: https://github.com/DATAPREDICTS

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YouTube: https://youtube.com/@Datapredicts?si=eDKAqVciVxg23zab