# Task: Price Range Analysis

## Import libraries

In [48]:
```
import pandas as pd
from collections import Counter as CN
import matplotlib.pyplot as plt
```

## Load Dataset

In [2]:
```
df=pd.read_csv('D:\Intern\Cognifyz Intern\Dataset .csv')
```

## Data chacteristics

In [4]:
```
df.head()
```

Out[4]:

| | Restaurant ID | Restaurant Name | Country Code | City | Address | Locality | Locality Verbose | Longitu |
|---|---|---|---|---|---|---|---|---|
| **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... | 121.0275 |
| **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... | 121.0141 |
| **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... | 121.0568 |
| **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... | 121.0564 |
| **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... | 121.0575 |

5 rows × 21 columns

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

Out[5]:

| | Restaurant ID | Country Code | Longitude | Latitude | Average Cost for two | Price range | Aggr |
|---|---|---|---|---|---|---|---|
| **count** | 9.551000e+03 | 9551.000000 | 9551.000000 | 9551.000000 | 9551.000000 | 9551.000000 | 9551.0 |
| **mean** | 9.051128e+06 | 18.365616 | 64.126574 | 25.854381 | 1199.210763 | 1.804837 | 2.6 |
| **std** | 8.791521e+06 | 56.750546 | 41.467058 | 11.007935 | 16121.183073 | 0.905609 | 1.5 |
| **min** | 5.300000e+01 | 1.000000 | -157.948486 | -41.330428 | 0.000000 | 1.000000 | 0.0 |
| **25%** | 3.019625e+05 | 1.000000 | 77.081343 | 28.478713 | 250.000000 | 1.000000 | 2.5 |
| **50%** | 6.004089e+06 | 1.000000 | 77.191964 | 28.570469 | 400.000000 | 2.000000 | 3.2 |
| **75%** | 1.835229e+07 | 1.000000 | 77.282006 | 28.642758 | 700.000000 | 2.000000 | 3.7 |
| **max** | 1.850065e+07 | 216.000000 | 174.832089 | 55.976980 | 800000.000000 | 4.000000 | 4.9 |

# Determine the most common price range among all the restaurants

In [10]:
```
price_value_count=df['Price range'].value_counts()
print(price_count)
```

```
Price range
1    4444
2    3113
3    1408
4     586
Name: count, dtype: int64
```

In [12]:
```
price_count=CN(df['Price range'])
print(price_count)
```

```
Counter({1: 4444, 2: 3113, 3: 1408, 4: 586})
```

In [32]:
```
most_com_price_range = price_count.most_common(1)[0][0]
print(f"Most Common Price range among the Restaurants :{most_com_price_range}"
```

```
Most Common Price range among the Restaurants :1
```

# Calculate the average rating for each price range

In [28]:
```
average_ratings=df['Votes'].mean()
print(average_ratings)
```

```
156.909747670401
```

In [35]:
```
avg_price_1=(4444*156)/9551
print(avg_price_1)
```

```
72.58548843053083
```

In [36]:
```
avg_price_2=(3113*156)/9551
print(avg_price_2)
```

```
50.84577531148571
```

In [37]:
```
avg_price_3=(1408*156)/9551
print(avg_price_3)
```

```
22.997382473039472
```

In [38]:
```
avg_price_4=(586*156)/9551
print(avg_price_4)
```

```
9.571353784943986
```

# Identify the color that represents the highest average rating among different price ranges

In [51]:
```
plt.scatter(x=df['Price range'],y=df['Votes'],c='Red')
plt.show()
```