Task 1

Task: Restaurant Reviews

1.Analyze the text reviews to identify the most common positive and negative keywords.

2.Calculate the average length of reviews and explore if there is a relationship between review length and rating.

In [2]:
```python
# import library
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sb
```

In [4]:
```python
df=pd.read_csv("C:\\Users\\abhis\\Downloads\\Dataset .csv")
df
```

Out[4]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose
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..
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..
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..
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..
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..
...	...	...	...	...	...	...	..
9546	5915730	Namlı Gurme	208	��stanbul	Kemanke�� Karamustafa Pa��a Mahallesi, Rıhtım ...	Karak�_y	Karak�_y ��stanbu
9547	5908749	Ceviz A��acı	208	��stanbul	Ko��uyolu Mahallesi, Muhittin ��st�_nda�� Cadd...	Ko��uyolu	Ko��uyolu ��stanbu
9548	5915807	Huqqa	208	��stanbul	Kuru�_e��me Mahallesi, Muallim Naci Caddesi, N...	Kuru�_e��me	Kuru�_e��me ��stanbu
9549	5916112	A���k Kahve	208	��stanbul	Kuru�_e��me Mahallesi, Muallim Naci Caddesi, N...	Kuru�_e��me	Kuru�_e��me ��stanbu
9550	5927402	Walter's Coffee Roastery	208	��stanbul	Cafea��a Mahallesi, Bademaltı Sokak, No 21/B, ...	Moda	Moda ��stanbu

9551 rows × 21 columns

In [5]: `df.isnull().sum()`

Out[5]:
```
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]:
```
rating=df['Rating text']
rating
```

Out[7]:
```
0        Excellent
1        Excellent
2        Very Good
3        Excellent
4        Excellent
           ...
9546     Very Good
9547     Very Good
9548          Good
9549     Very Good
9550     Very Good
Name: Rating text, Length: 9551, dtype: object
```

In [8]: `rating.info`

Out[8]:
```
<bound method Series.info of 0        Excellent
1        Excellent
2        Very Good
3        Excellent
4        Excellent
           ...
9546     Very Good
9547     Very Good
9548          Good
9549     Very Good
9550     Very Good
Name: Rating text, Length: 9551, dtype: object>
```

In [32]: `rating.value_counts()`

```
Out[32]:  Average      3737
          Not rated    2148
          Good         2100
          Very Good    1079
          Excellent     301
          Poor          186
          Name: Rating text, dtype: int64
```
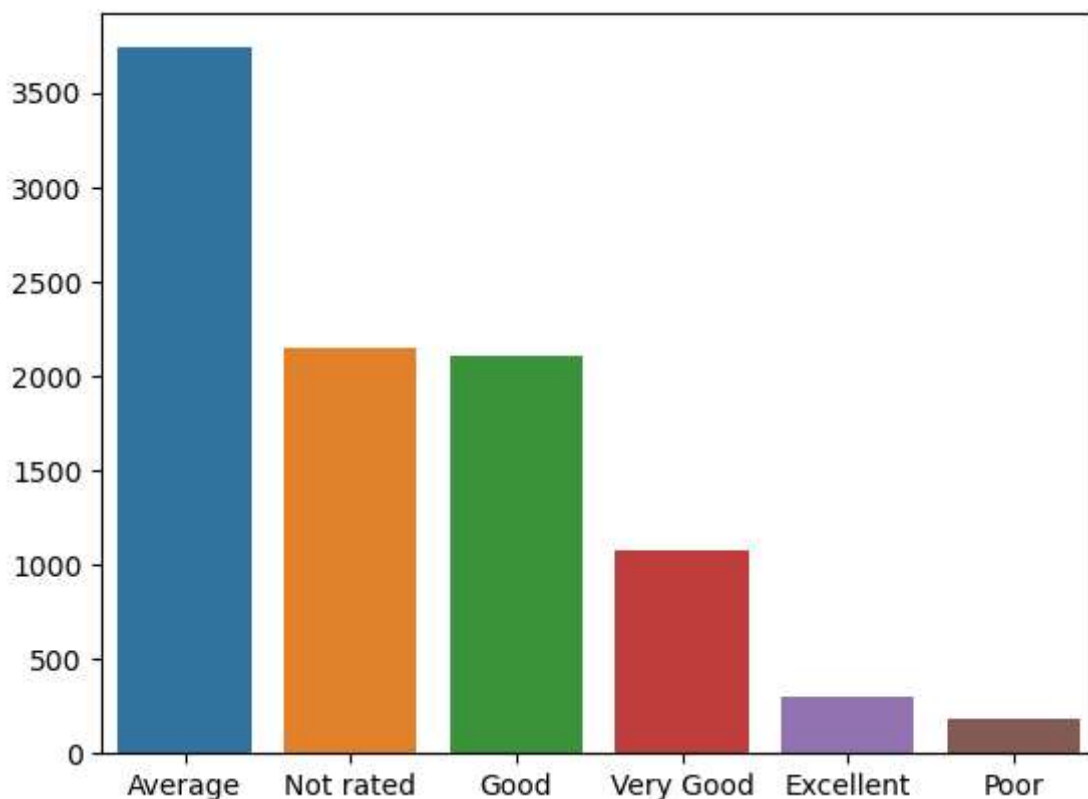
In [34]:
```
rating.unique()
```

Out[34]:
```
array(['Excellent', 'Very Good', 'Good', 'Average', 'Not rated', 'Poor'],
      dtype=object)
```

most commom rating test is Average

most positive is 'Good'

most negative is 'Poor'

In [38]:
```
sb.barplot(x=rating.value_counts().index, y=rating.value_counts().values)
plt.show()
```


In [55]:
```
rating.value_counts().index
```

Out[55]:
```
Index(['Average', 'Not rated', 'Good', 'Very Good', 'Excellent', 'Poor'], dtype='obje
ct')
```

In [ ]: