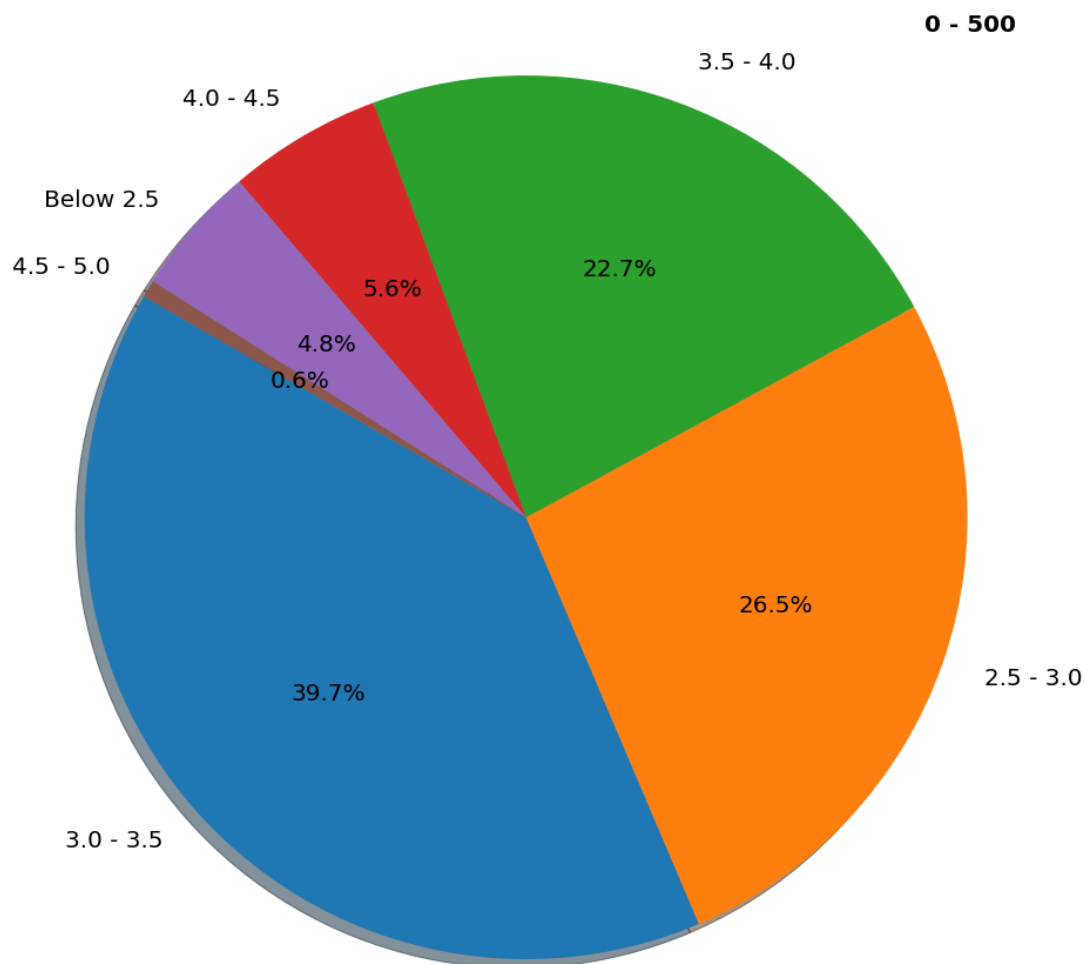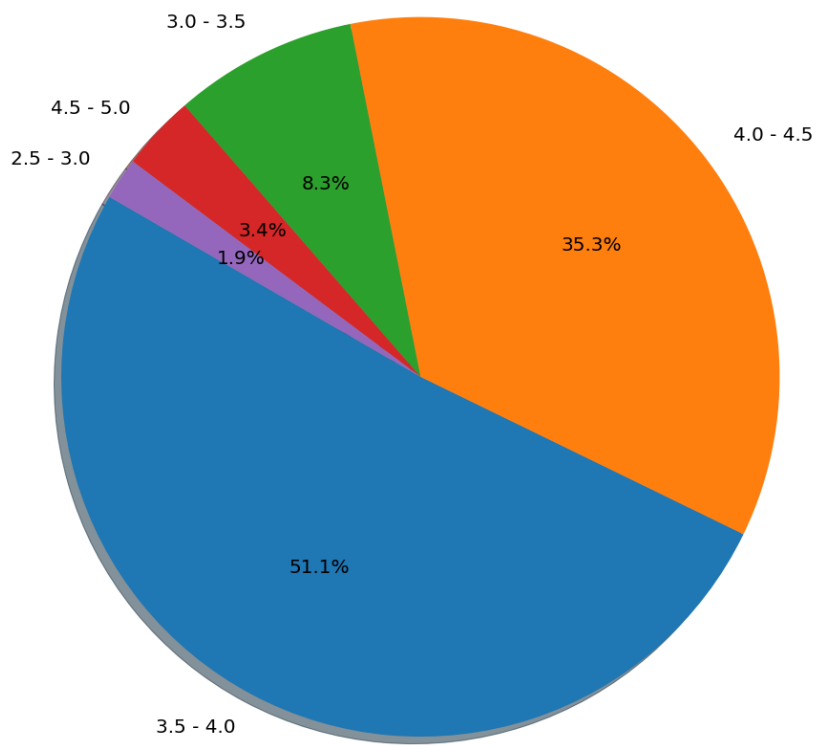Q2.) User Rating of a restaurant plays a crucial role in selecting a restaurant or ordering the food from the restaurant.
Write a short detail analysis of how the rating is affected by restaurant due following features: Plot a suitable graph to explain your inference.
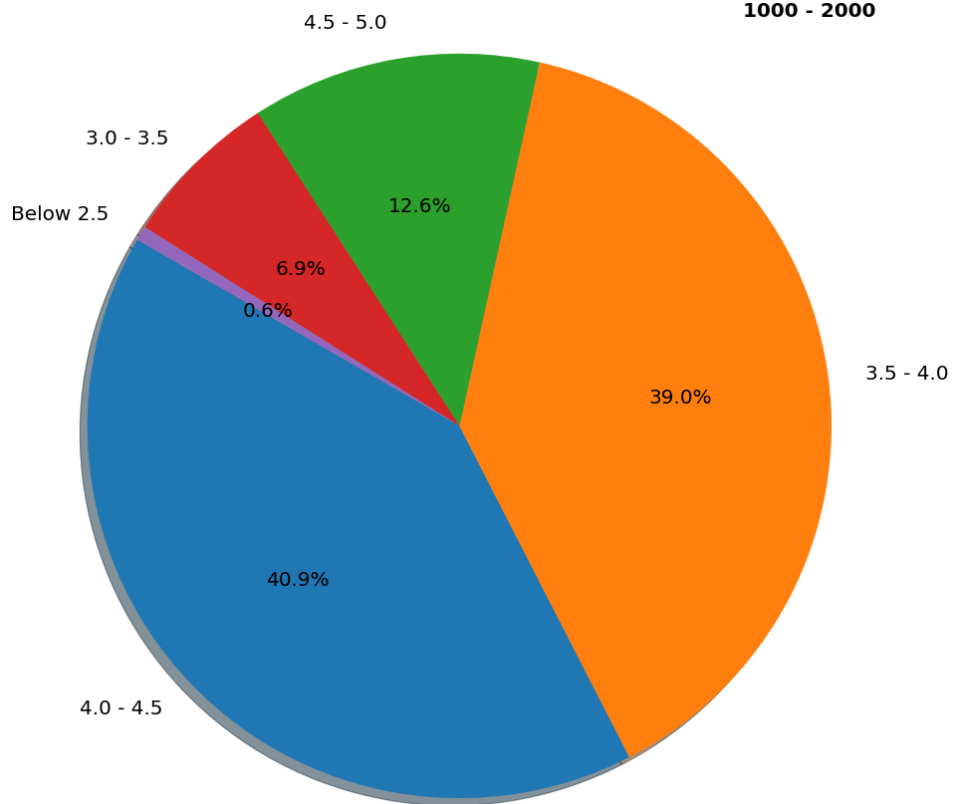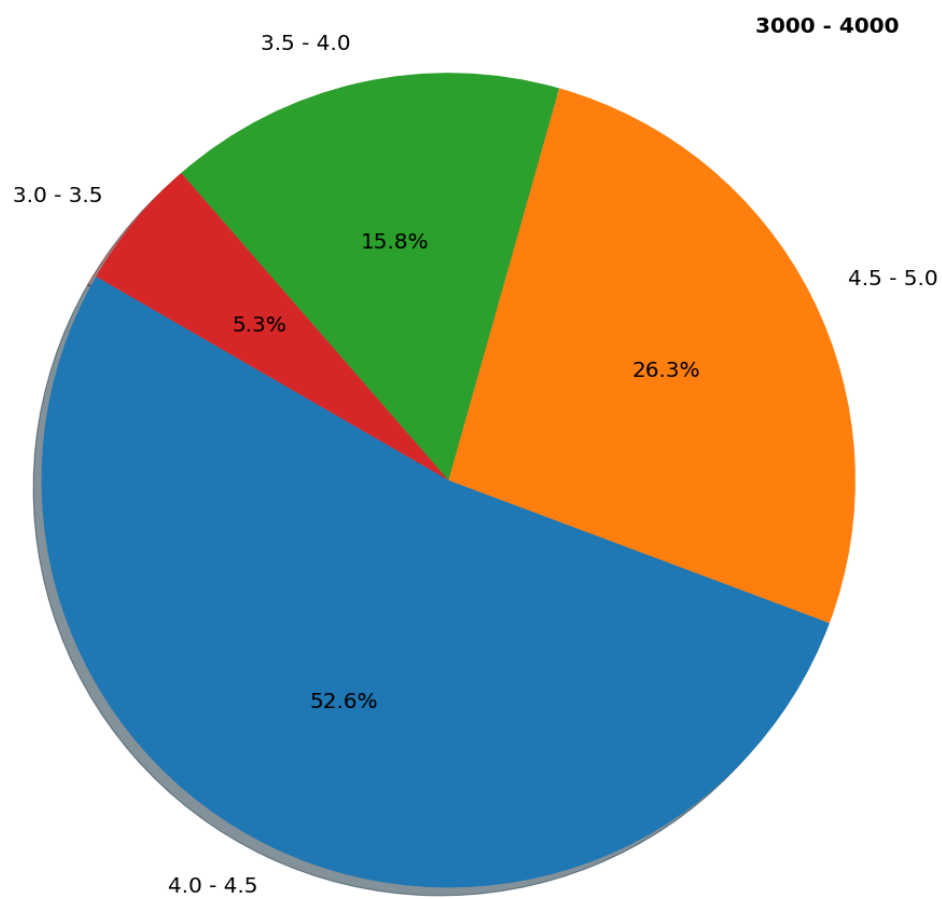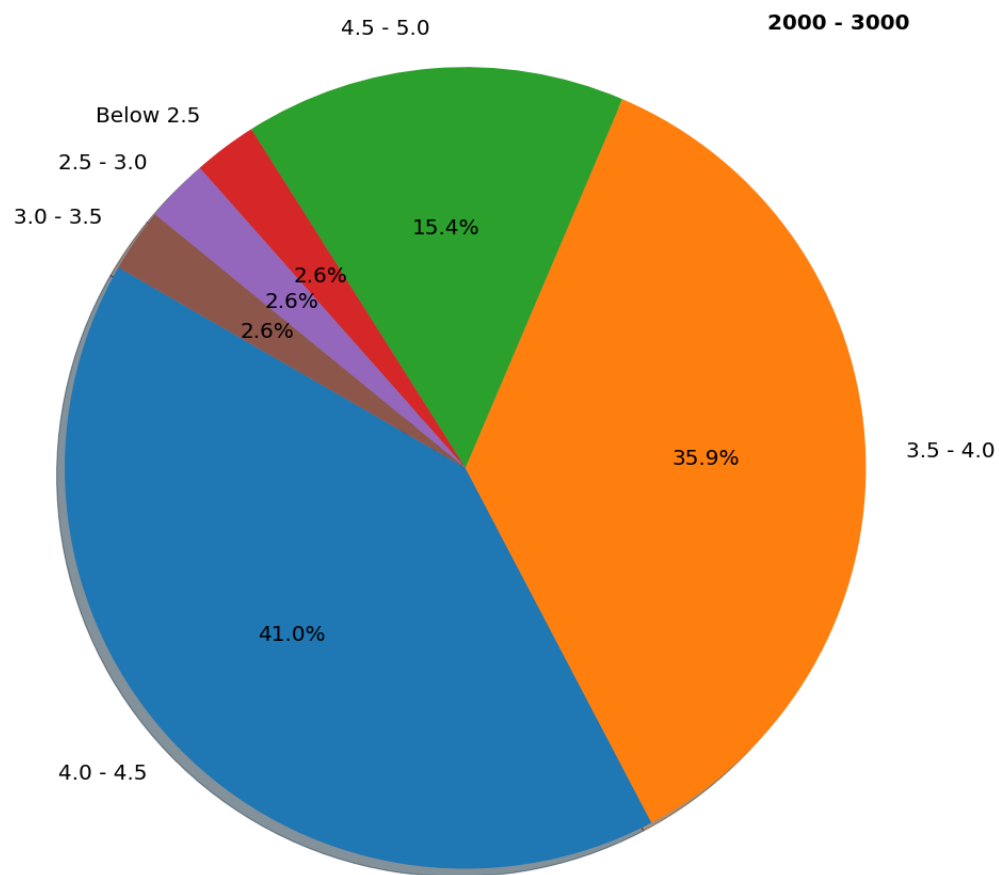
a.) Number of Votes given Restaurant

500 - 1000

3.0 - 3.5

4.5 - 5.0

2.5 - 3.0

8.3%

3.4%

1.9%

4.0 - 4.5

35.3%

51.1%

3.5 - 4.0

1000 - 2000

4.5 - 5.0

3.0 - 3.5

Below 2.5

12.6%

6.9%

0.6%

3.5 - 4.0

39.0%

40.9%

4.0 - 4.5

2000 - 3000

- 4.5 - 5.0 — 15.4%
- Below 2.5 — 2.6%
- 2.5 - 3.0 — 2.6%
- 3.0 - 3.5 — 2.6%
- 3.5 - 4.0 — 35.9%
- 4.0 - 4.5 — 41.0%

3000 - 4000

- 3.5 - 4.0 — 15.8%
- 3.0 - 3.5 — 5.3%
- 4.5 - 5.0 — 26.3%
- 4.0 - 4.5 — 52.6%

4000 and above

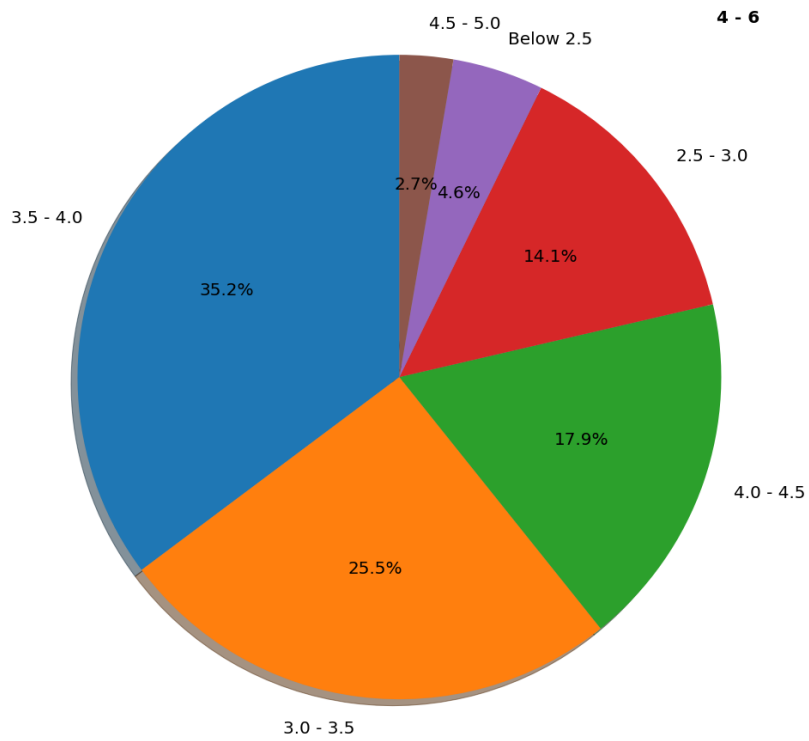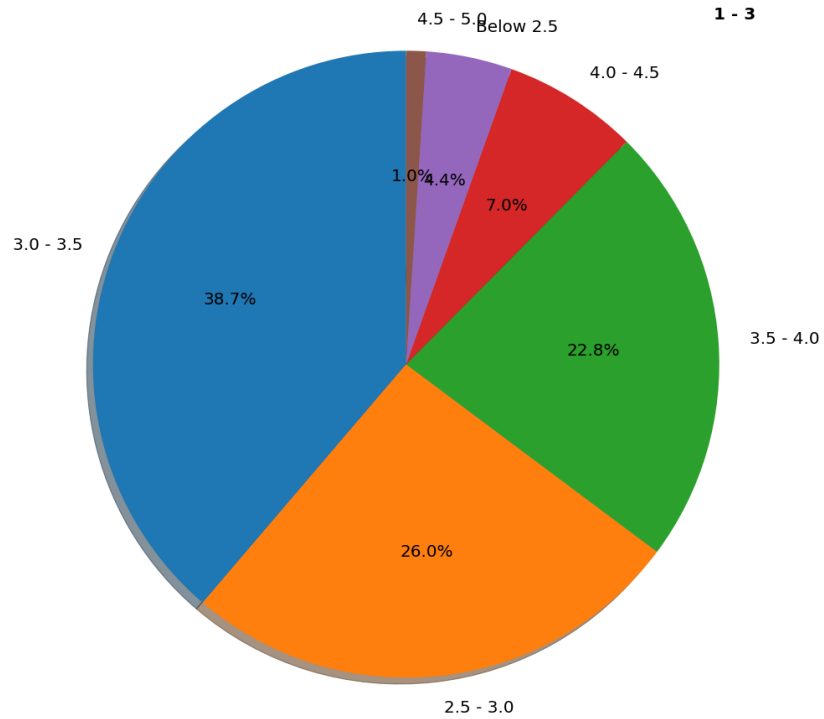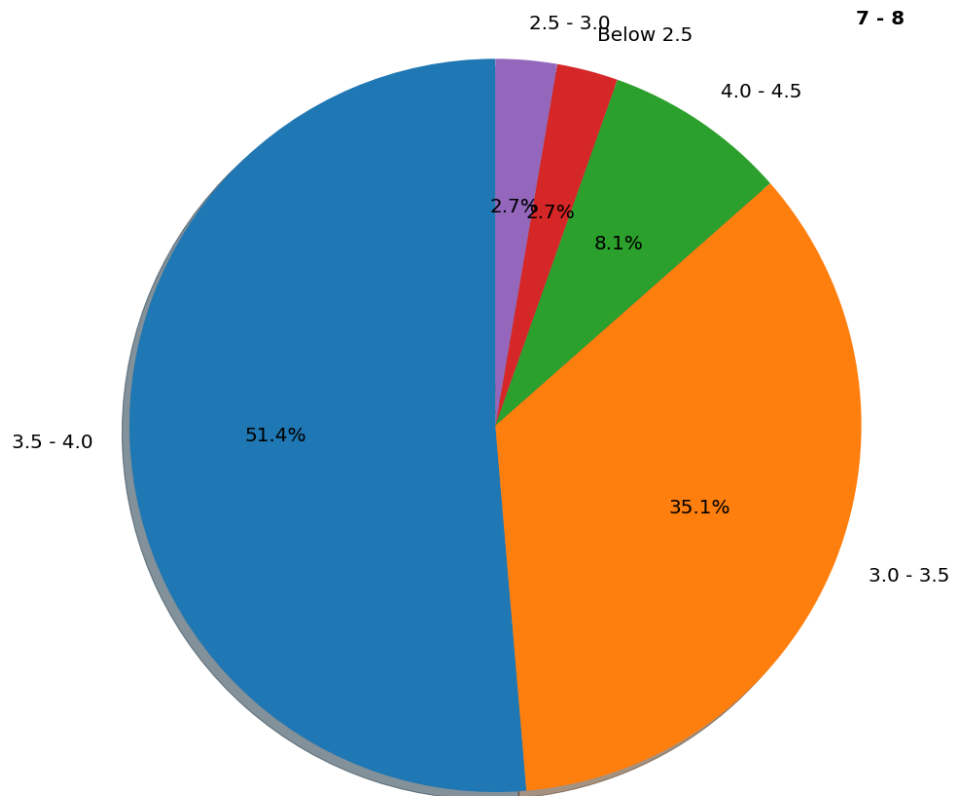3.5 - 4.0

4.5 - 5.0

27.8%

5.6%

66.7%

4.0 - 4.5
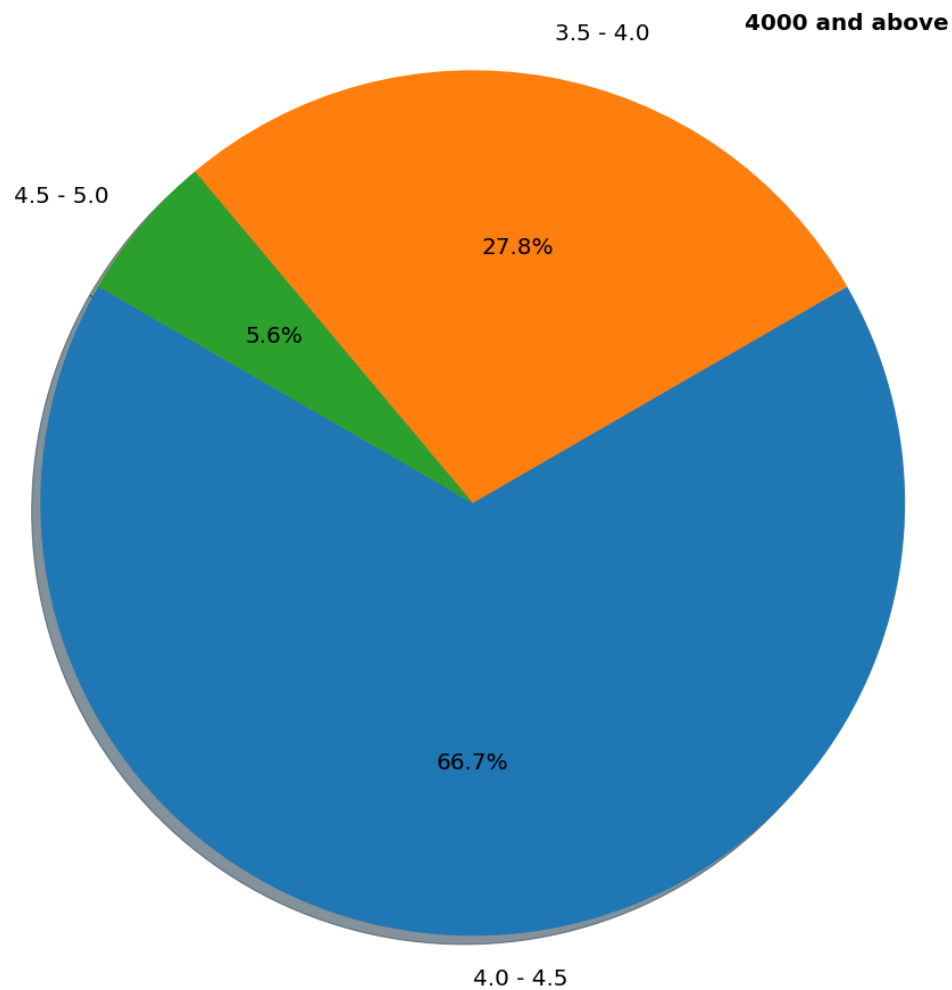
To visualize the data, I've created six pie charts by dividing the data into six sections on the basis of number of votes and plotting their corresponding distribution based on the rating. Following are the observations

- The more the number of votes a restaurant has, the higher is it's chance to get an aggregate rating of more than 4.0
- The more the votes , lesser is the chance of an aggregate rating below 2.5

b.) Restaurant serving more number of cuisines.

1 - 3

4.5 - 5.0
Below 2.5
4.0 - 4.5
1.0% 4.4%
7.0%
3.0 - 3.5
38.7%
3.5 - 4.0
22.8%
26.0%
2.5 - 3.0

4 - 6

4.5 - 5.0
Below 2.5
2.5 - 3.0
3.5 - 4.0
2.7% 4.6%
14.1%
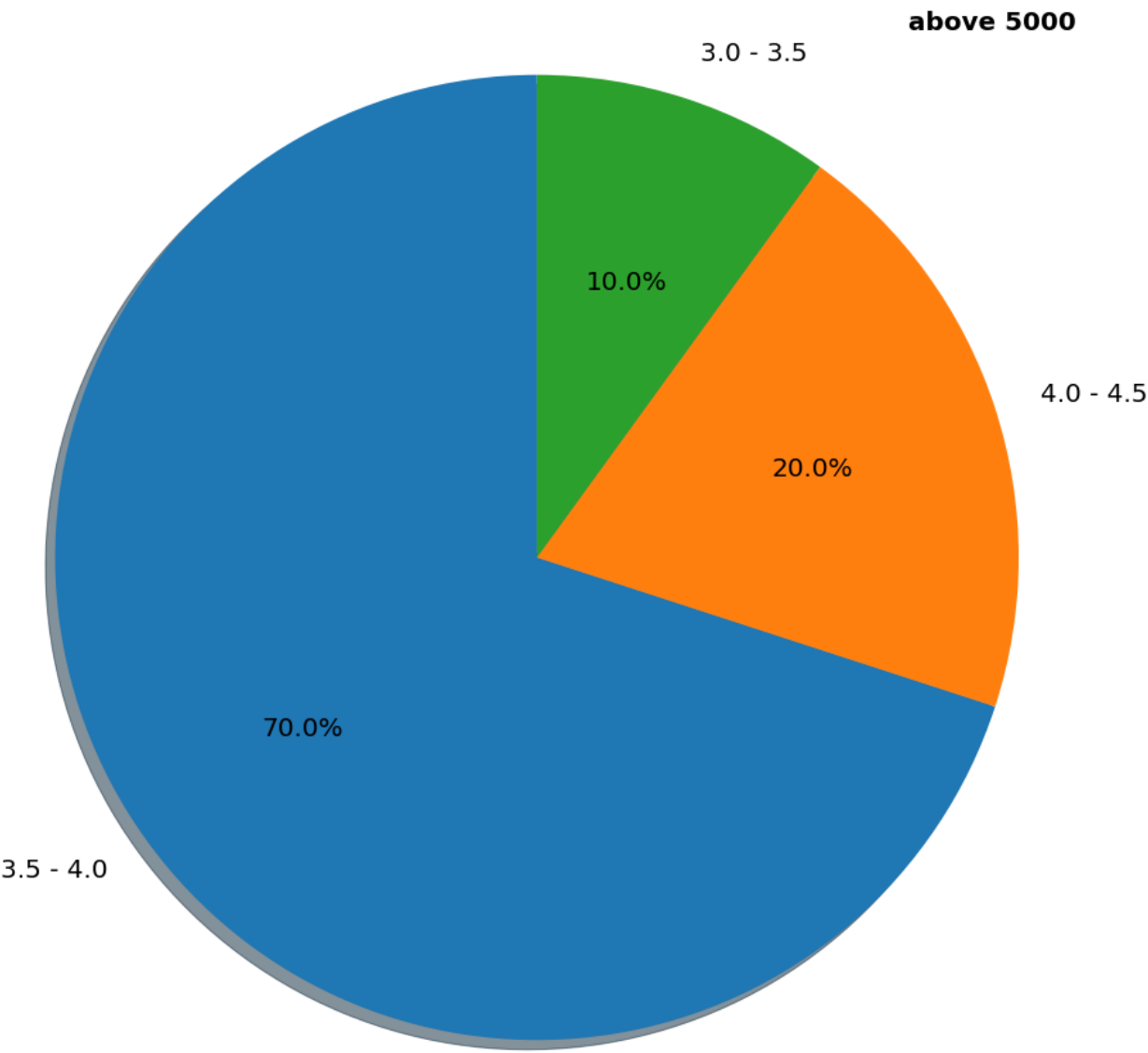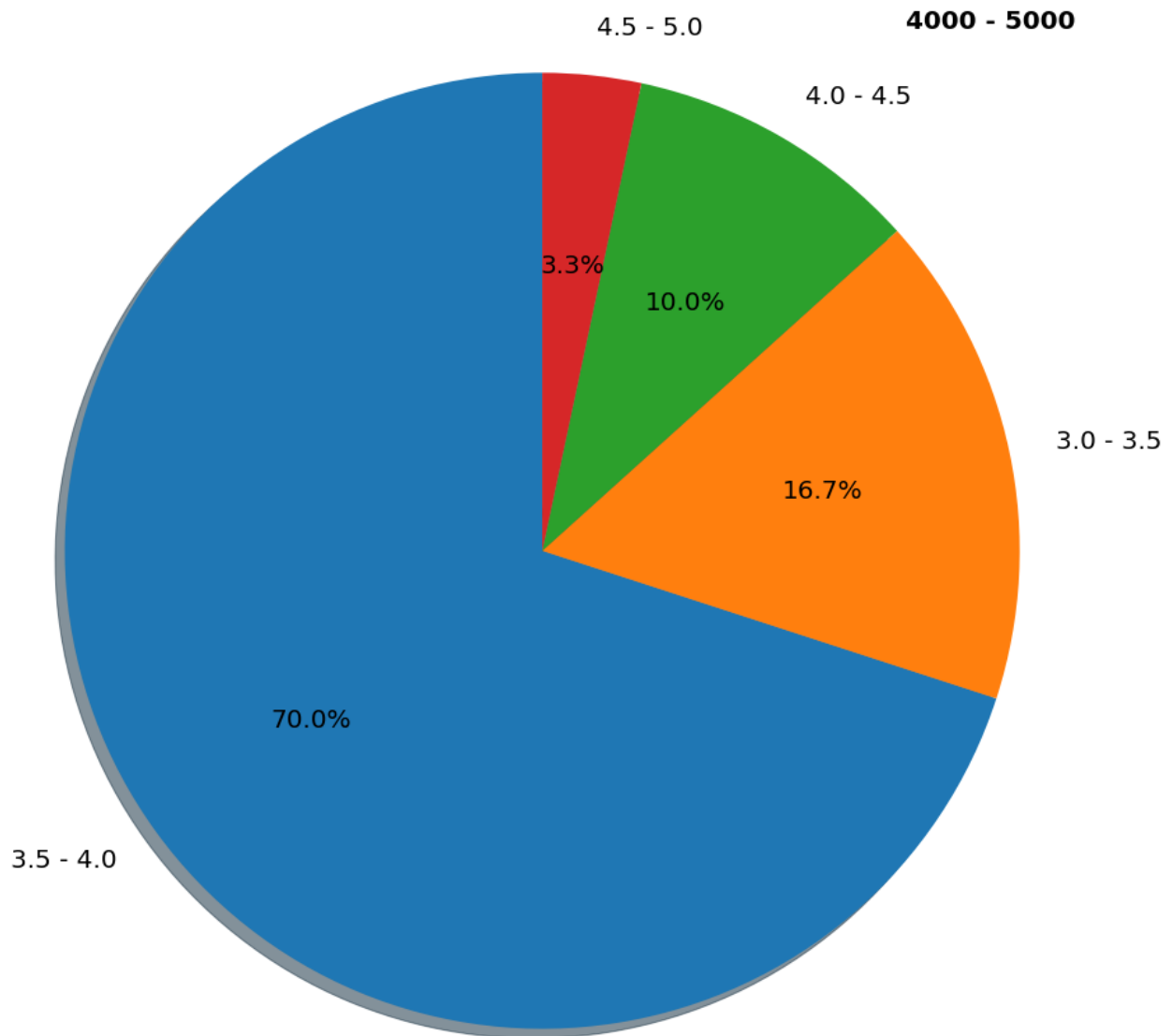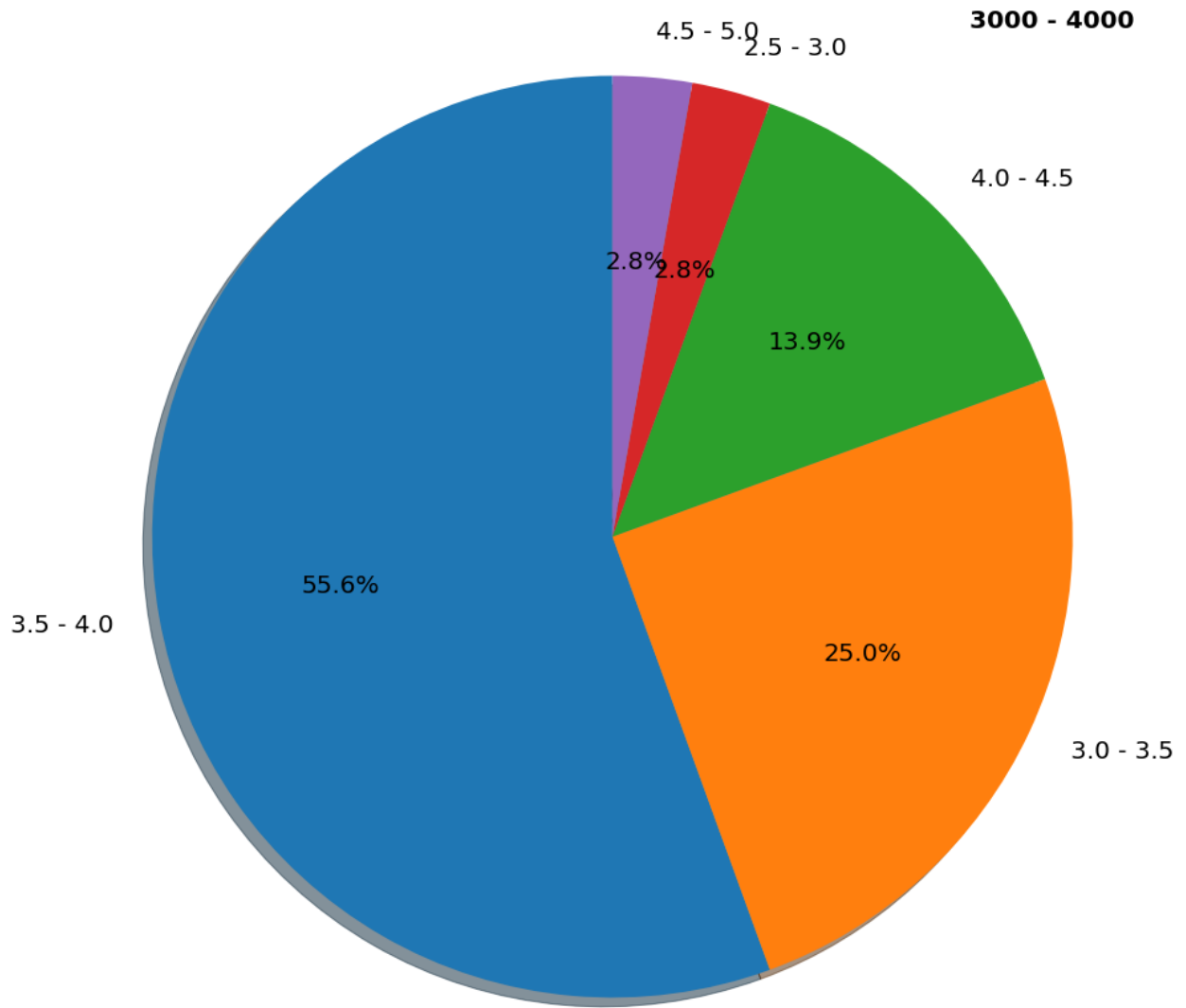35.2%
17.9%
4.0 - 4.5
25.5%
3.0 - 3.5

Following a similar approach, I've divided the data into three sections on the basis of number of cuisines being offered, namely, 1-3, 4-6 and 7-8. On the basis of that , we have the following observations.
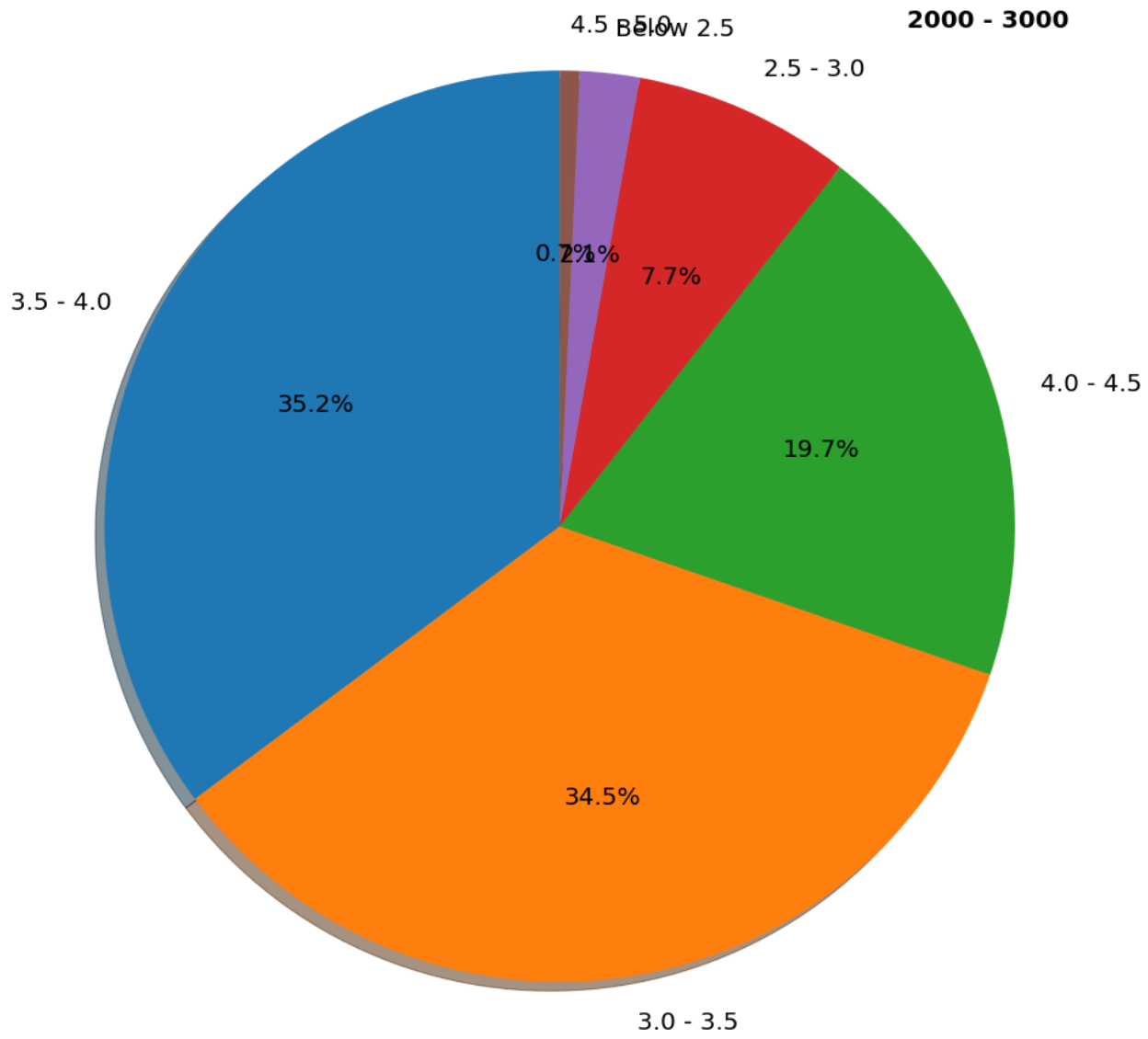
- There is no direct relationship between higher ratings and more number of cuisines
- As the number of cuisines increase, the percentage of restaurants with ratings 3.5-4.0 increase
- Around 50% of all restaurants offering 7-8 cuisines are rated between 3.5-4.0
- High rated restaurants i.e, 4.5 – 5.0 offer lesser number of cuisines

_{c.)} Average Cost of Restaurant

4000 - 5000

4.5 - 5.0

4.0 - 4.5

3.3%

10.0%

3.0 - 3.5

16.7%

70.0%

3.5 - 4.0

3000 - 4000

4.5 - 5.0   2.5 - 3.0

4.0 - 4.5

2.8%   2.8%

13.9%

3.5 - 4.0

55.6%

25.0%

3.0 - 3.5

2000 - 3000

4.5 Below 2.5
2.5 - 3.0
3.5 - 4.0
4.0 - 4.5
0.7% 2.1%
7.7%
35.2%
19.7%
34.5%
3.0 - 3.5

1000 - 2000
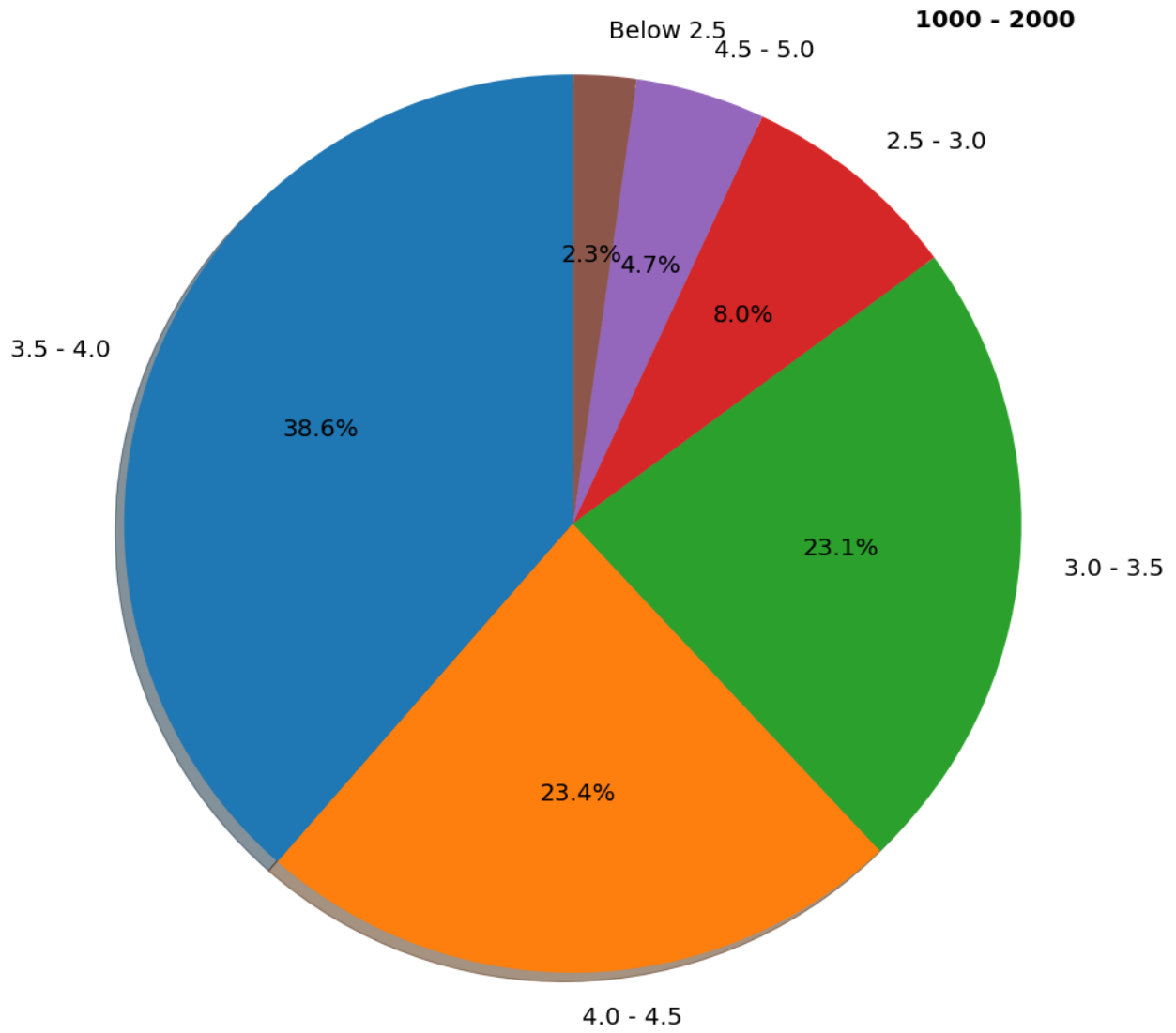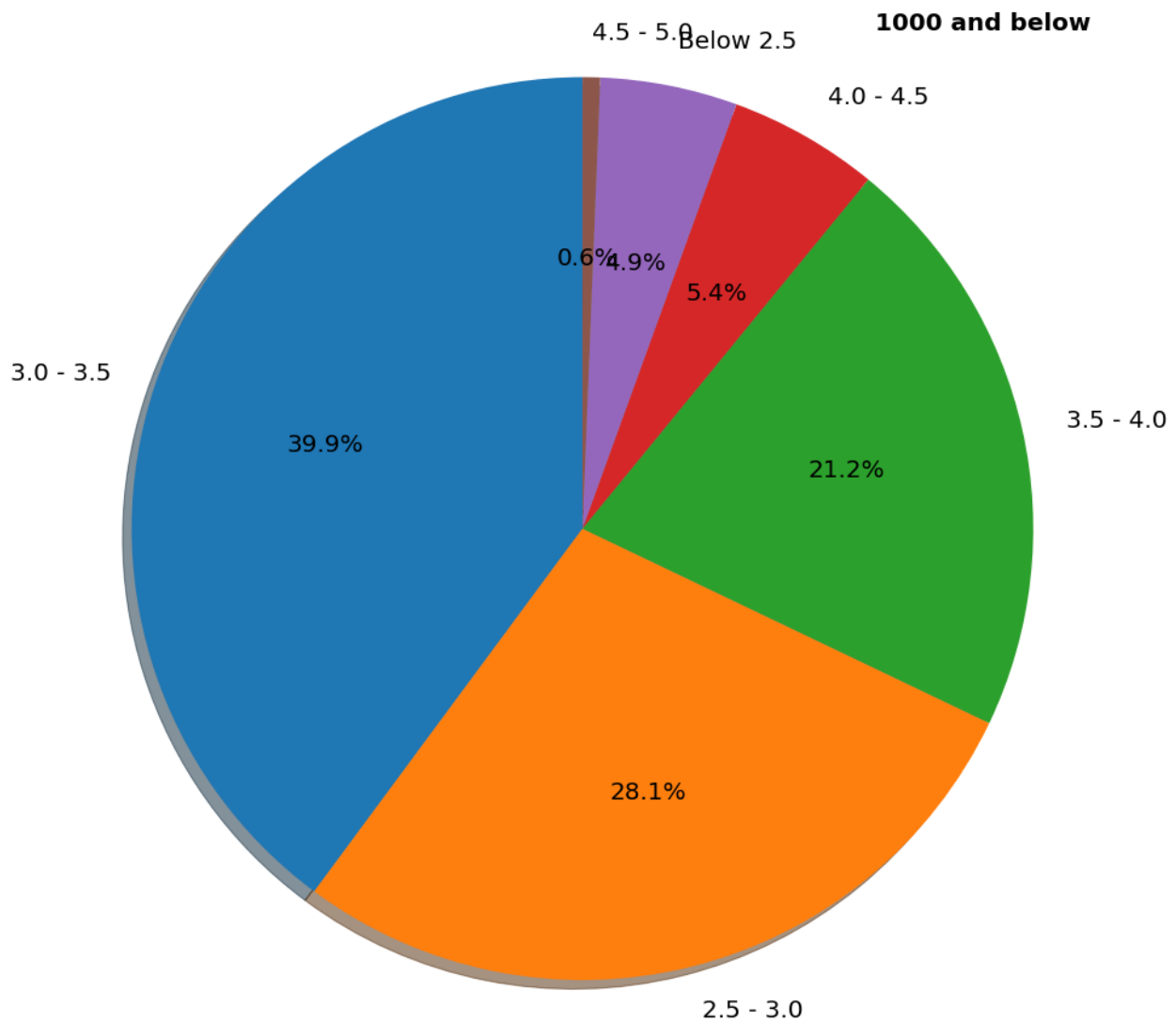
Here also I've divided the data on the basis of price range into 6 categories. The observations are as follows-

- The expensive restaurants(above 3000) do not have a rating below 2.5. This could be possibly because such restaurants are mostly fine dining and high quality restaurants and hence are rarely ever rated below 2.5.
- Very expensive restaurants(above 5000) are majorly rated above 3.5.
- The average priced restaurants(2000-3000) are mostly rated between 3-4
- There are quite a few restaurants in the affordable range(below 2000) which are rated above 4.5

Restaurant serving some specific cuisines.
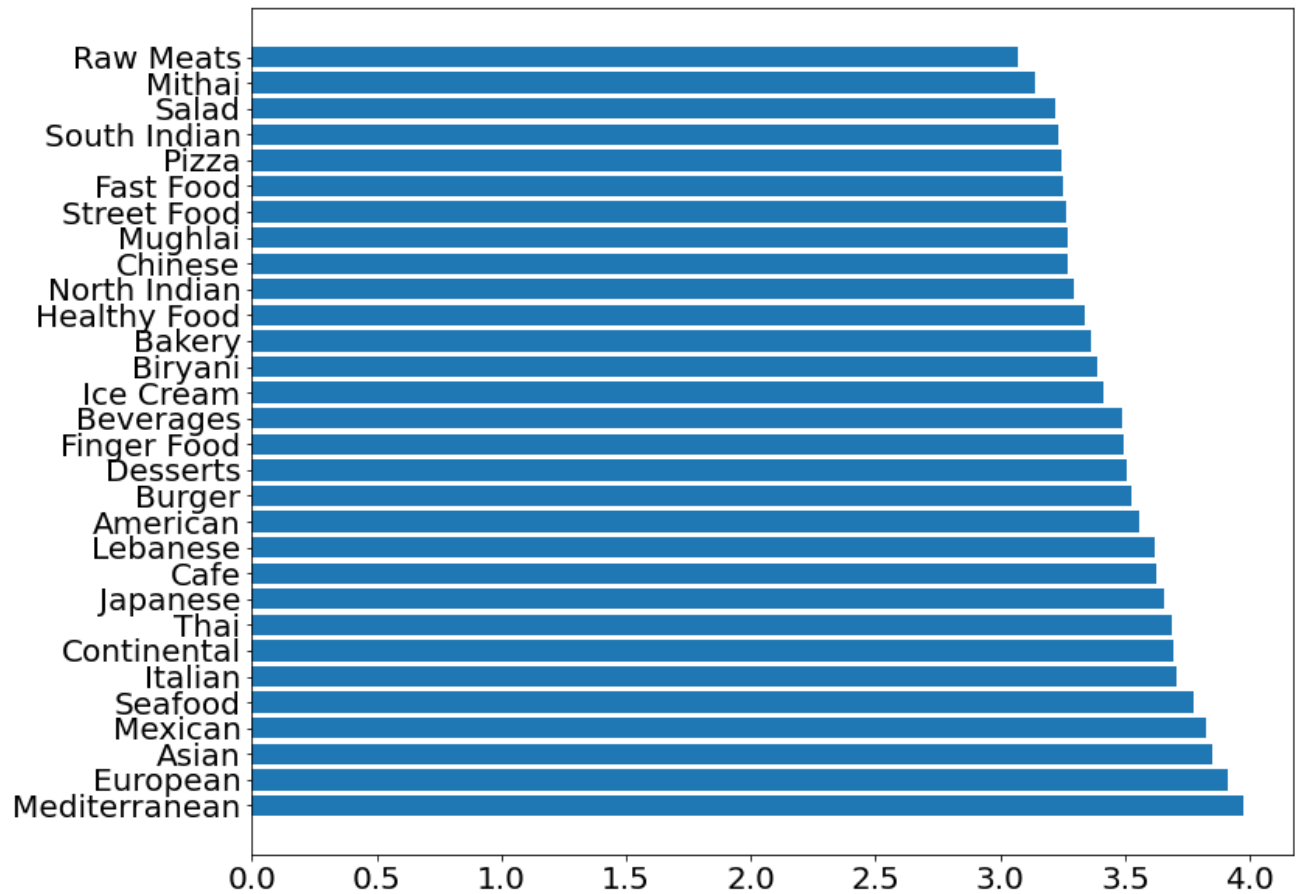
To visualize this data, I've plotted a horizontal bar graph representing the average rating of all restaurants offering specific types of cuisines arranged in order. A sis evident from the graph, Mediterranean cuisine has the highest aggregate rating followed by European and Asian.

Overall, restaurants offering foreign cuisines have a higher aggregate rating as compared to Indian.

2.)
Find the weighted restaurant rating of each locality and find out the top 10 localities with more weighted restaurant rating?

Weighted Restaurant Rating=Σ (number of votes * rating) / Σ (number of votes) .

Following are the localities in order which have the highest weighted rating

1. Hotel Clarks Amer, Malviya Nagar
2. Aminabad
3. Friends Colony
4. Powai
5. Kirlampudi Layout
6. Express Avenue Mall, Royapettah
7. Deccan Gymkhana
8. Banjara Hills
9. Sector 5, Salt Lake
10. Riverside Mall, Gomti Nagar