PROJECT: ZOMATO cusinies analysis

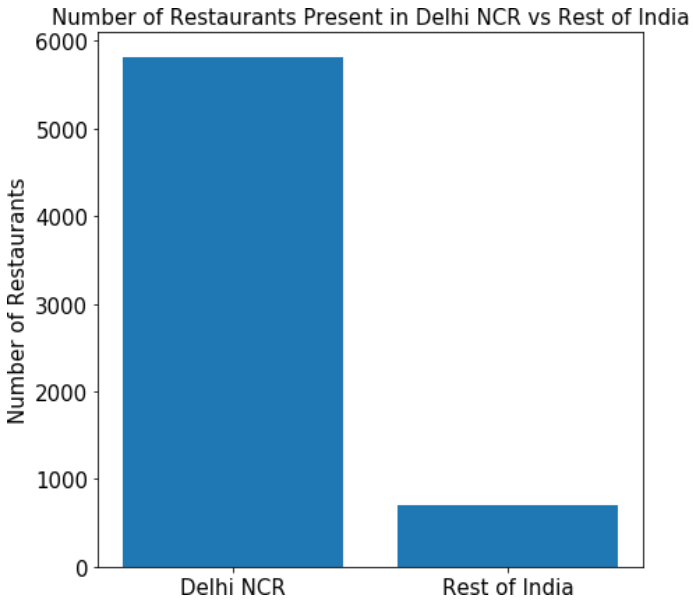
Note: As mentioned in the question I have considered only Indian restaurants in this analysis (except for 3.4)

1.1: Plot the bar graph of number of restaurants present in Delhi NCR vs Rest of India

Answer:

```
The number of restaurants in Delhi NCR is 5808
The number of restaurants in Rest of India is 705
```

Plot



Explanation:

Firstly, I extracted the city list for India from the given dataset. Then I checked for each city in the list, if the city was in Delhi NCR I added one to Delhi NCR count variable, if the city was not in Delhi NCR I added one to the Rest of India count variable.

1.2: Find the cuisines which are not present in restaurant of Delhi NCR but present in rest of India

Answer:

```
Cuisines which are not present in restaurant of Delhi NCR but present
In rest of India are:
Malwani
German
Cajun
BBQ
```

Explanation:

I made two sets variable one for Delhi-NCR and one for Rest of India. Then I checked for each row in the dataset and added the cuisines to these variables according to the city whether they belonged to Delhi-NCR or Rest of India. At last set(Rest of India)-set(Delhi-NCR) gave the desired result.

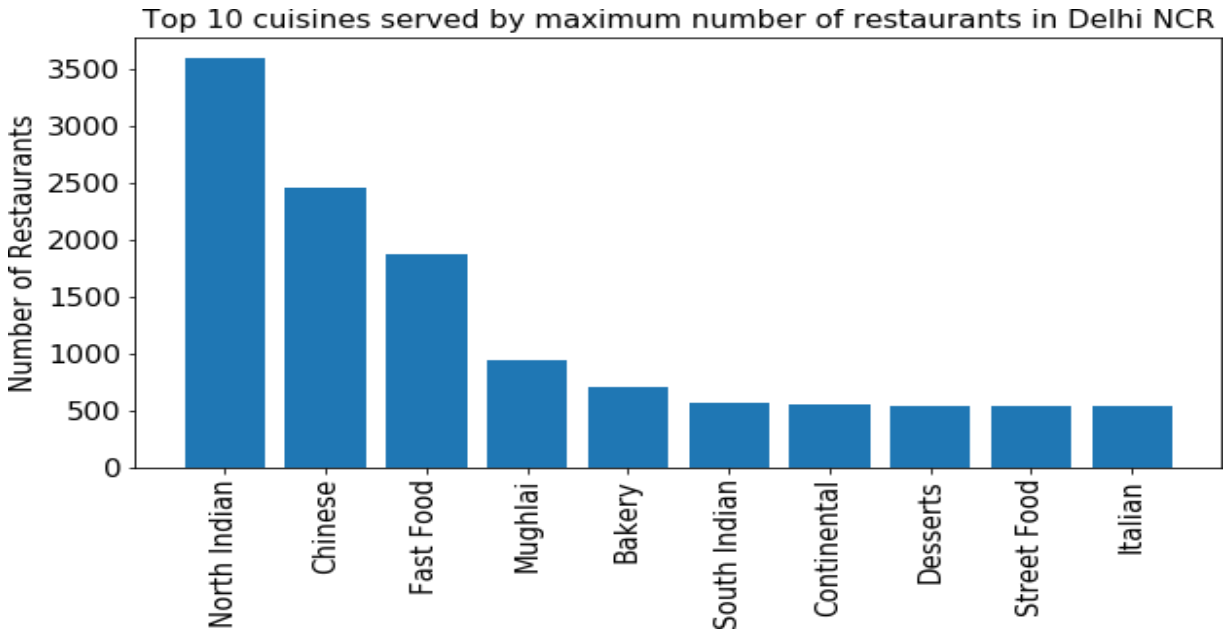
I checked for cuisines served in Delhi-NCR using Zomato API, Malwani and BBQ are available in Delhi-NCR but is not available in the dataset.

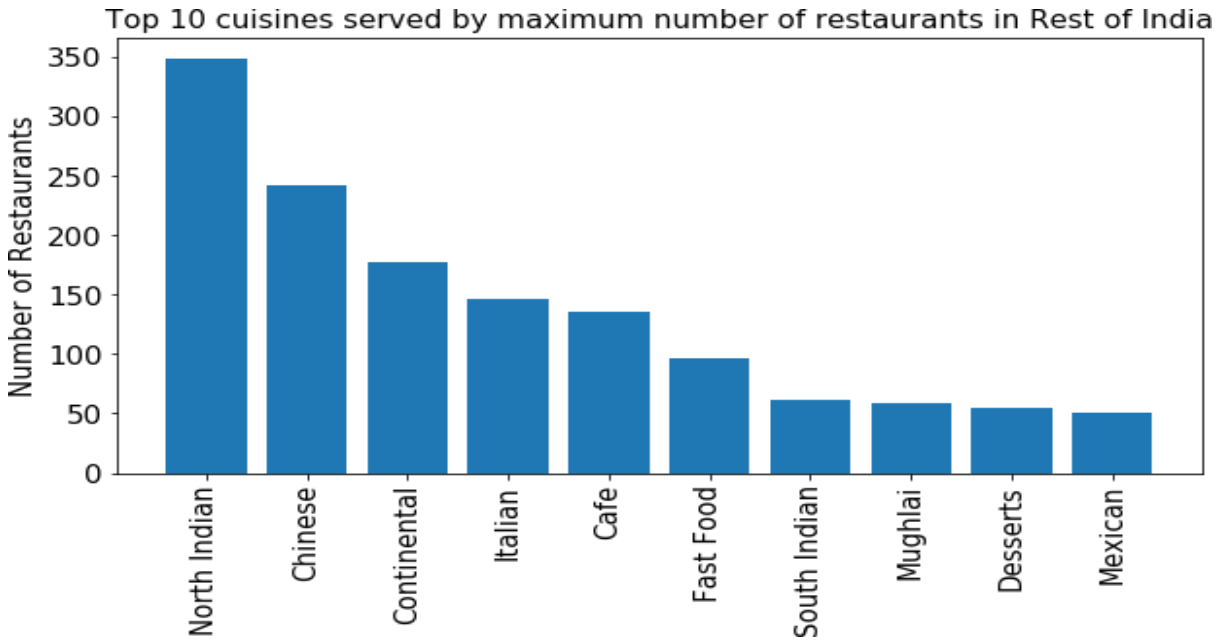
1.3: Find the top 10 cuisines served by maximum number of restaurants in Delhi-NCR and rest of India

Answer:

```
Top 10 cuisines served by maximum number of restaurants in Delhi NCR
are:
1 North Indian - 3597
2 Chinese - 2448
3 Fast Food - 1866
4 Mughlai - 933
5 Bakery - 697
6 South Indian - 569
7 Continental - 547
8 Desserts - 542
9 Street Food - 538
10 Italian - 535

Top 10 cuisines served by maximum number of restaurants in Rest of
India are:
1 North Indian - 349
2 Chinese - 242
3 Continental - 177
4 Italian - 147
5 Cafe - 136
6 Fast Food - 97
7 South Indian - 62
8 Mughlai - 59
9 Desserts - 55
10 Mexican - 50
```

Plots





Explanation

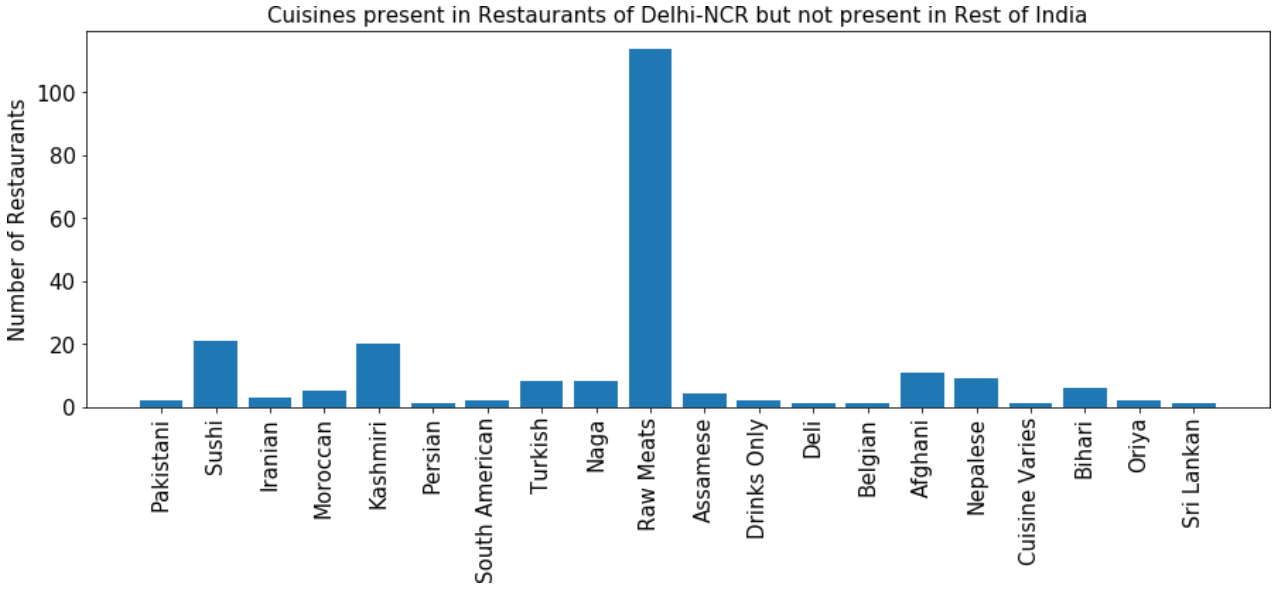
With the help of Dictionary, I calculated the number of restaurants serving different cuisines in Delhi-NCR and Rest of India. Then I used Numpy to find the Top 10 cuisines served by maximum number of restaurants.

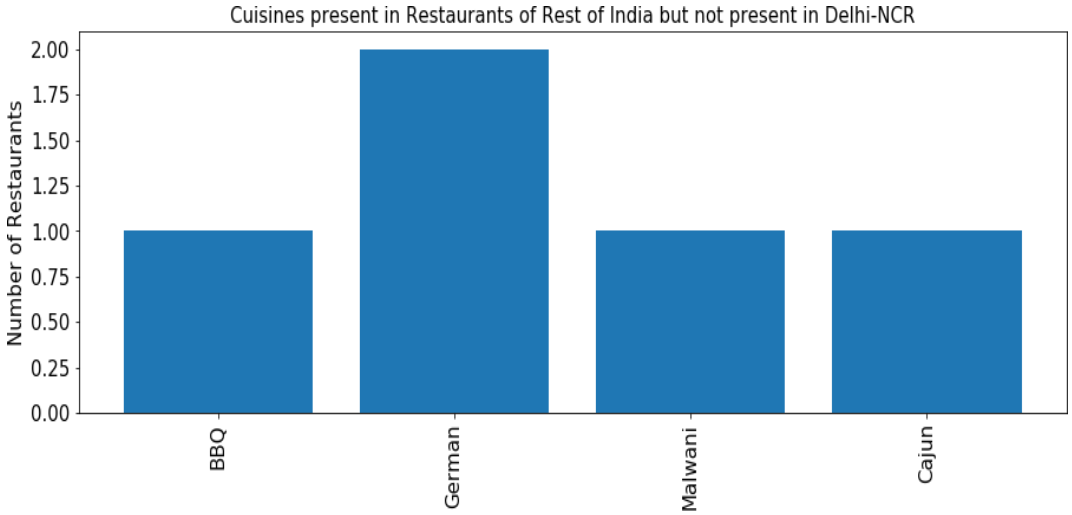
1.4: Analysis of how cuisine served is different from Delhi NCR to Rest of India

Answer:

```
Cuisines present in Restaurants of Delhi-NCR but not present in Rest of
India are:
Pakistani present in 2 restaurants
Sushi present in 21 restaurants
Iranian present in 3 restaurants
Moroccan present in 5 restaurants
Kashmiri present in 20 restaurants
Persian present in 1 restaurants
South American present in 2 restaurants
Turkish present in 8 restaurants
Naga present in 8 restaurants
Raw Meats present in 114 restaurants
Assamese present in 4 restaurants
Drinks Only present in 2 restaurants
Deli present in 1 restaurants
Belgian present in 1 restaurants
Afghani present in 11 restaurants
Nepalese present in 9 restaurants
Cuisine Varies present in 1 restaurants
Bihari present in 6 restaurants
Oriya present in 2 restaurants
Sri Lankan present in 1 restaurants

Cuisines present in Restaurants of Rest of India but not present in Del
hi-NCR are:
BBQ present in 1 restaurants
German present in 2 restaurants
Malwani present in 1 restaurants
Cajun present in 1 restaurants

Top 10 cuisines present in Restaurants of Delhi-NCR but not present in
Top 10 list of Rest of India are:
Bakery present in 697 restaurants
Street Food present in 538 restaurants

Top 10 cuisines present in Restaurants of Rest of India but not present
in Top 10 list of Delhi-NCR are:
Cafe present in 136 restaurants
Mexican present in 50 restaurants
```

Plots





It is clearly evident from the above plots that among the Cuisines present in Restaurants of Delhi-NCR but not present in Rest of India, Raw Meats is present in maximum number of restaurants in Delhi-NCR. While the Cuisines present in Restaurants of Rest of India but not present in Delhi-NCR, are only present in 1 or 2 restaurants in Rest of India.

From the answers above it can be inferred that 8 cuisines are common in the top 10 list of cuisine in Delhi-NCR and Rest of India.

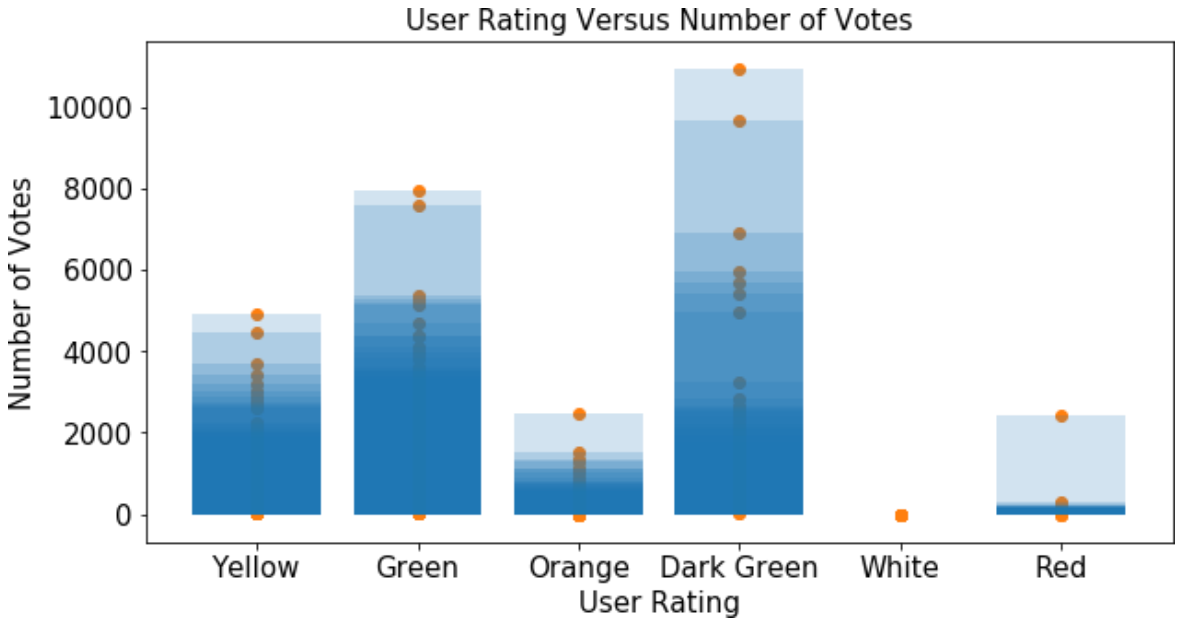
Explanation

With the help of Dictionary, I calculated the number of restaurants serving different cuisines in Delhi-NCR and Rest of India. Then I used Numpy to find the Top 10 cuisines served by maximum number of restaurants. In order to find the cuisines present in one region but not in another region I have used the properties of sets.

2.1 : Analysis of how the rating is affected

2.1.1 : User Rating Versus Number of Votes

Plot

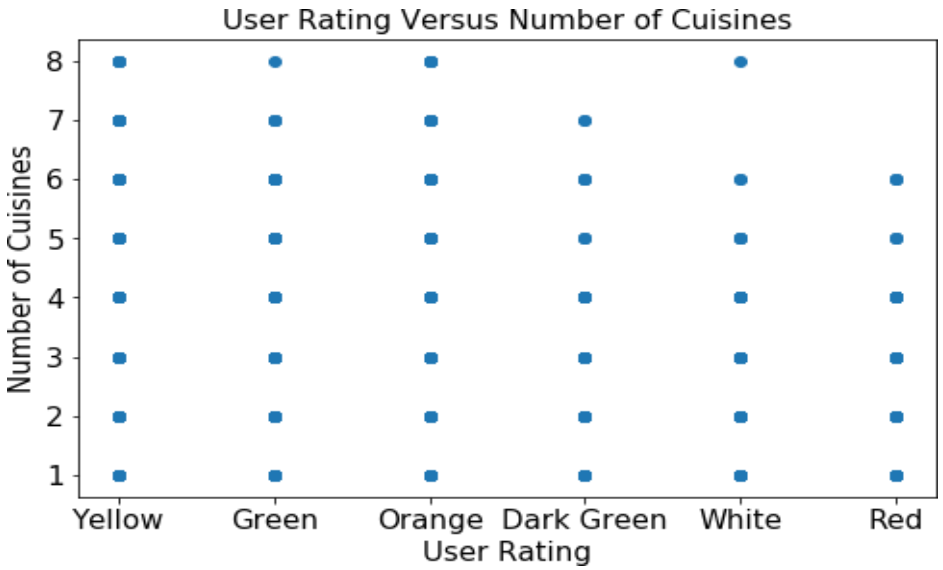


It can be easily inferred from the plot above that maximum number of votes has been given to the Dark Green User Rating Category followed by Green and then Yellow. White Category has received minimum number of votes

2.1.2 : User Rating Versus Number of Cuisines

A.

Plots



From the above plot it can be observed that restaurants serving 1-6 number of cuisines have received user rating in all category. Restaurants serving 7 cuisines have no rating in White and Red category while Restaurants serving 8 cuisines have no rating in Dark Green and Red category.

Explanation

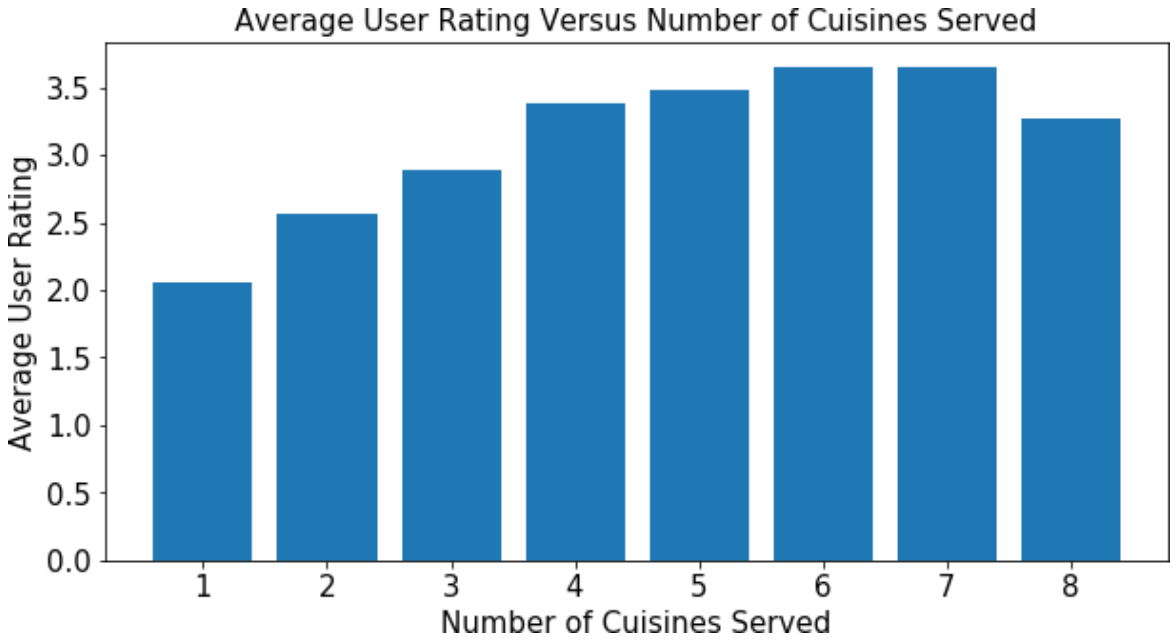
To obtain the number of cuisines served by each restaurants I have calculated the length of the list obtained after applying split() function to the cuisine value in the given dataset.

B.

Answer:

```
Average User Rating of Restuarants serving 2 Cuisines is 2.56
Average User Rating of Restuarants serving 1 Cuisines is 2.06
Average User Rating of Restuarants serving 3 Cuisines is 2.89
Average User Rating of Restuarants serving 4 Cuisines is 3.38
Average User Rating of Restuarants serving 5 Cuisines is 3.48
Average User Rating of Restuarants serving 6 Cuisines is 3.65
Average User Rating of Restuarants serving 7 Cuisines is 3.65
Average User Rating of Restuarants serving 8 Cuisines is 3.27
```

Plot



It can be observed that Restaurants serving 6 and 7 cuisines have maximum user rating followed by Restaurants serving 4 and 5 dishes.

Explanation

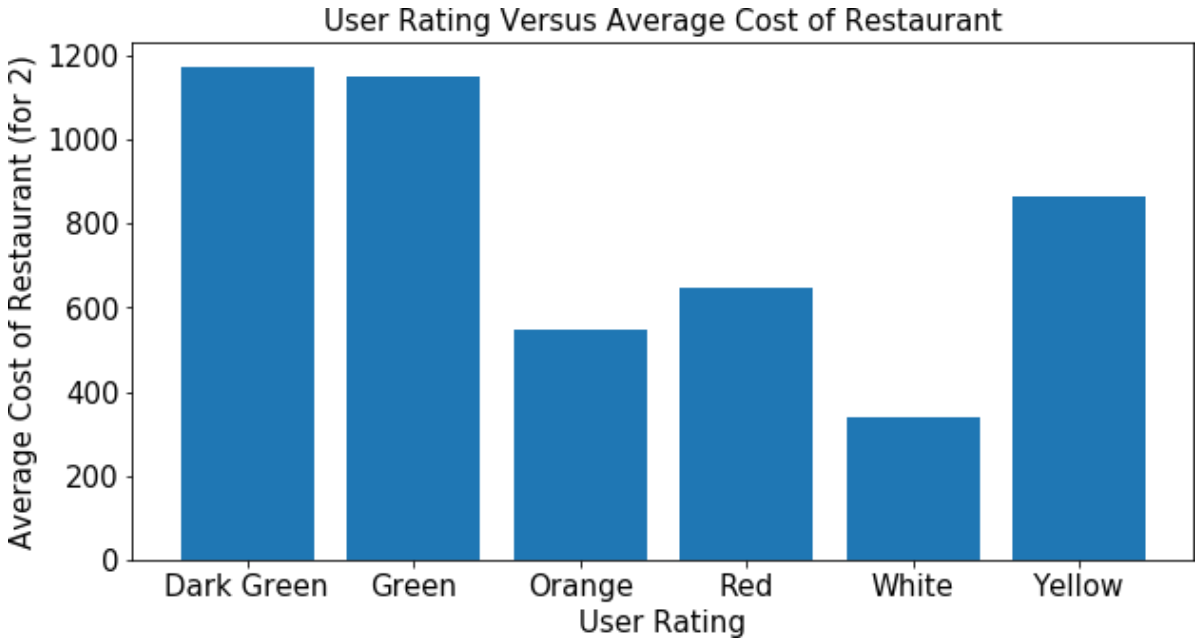
With the help of Dictionary, I have calculated the average user rating for each different number of cuisines served by Restaurants.

2.1.3 : User Rating Versus Average Cost of Restaurant

Answer:

```
The Average Cost of Restaurant (for 2) with User Rating Dark Green is 1
173
The Average Cost of Restaurant (for 2) with User Rating Green is 1148
The Average Cost of Restaurant (for 2) with User Rating Orange is 548
The Average Cost of Restaurant (for 2) with User Rating Red is 647
The Average Cost of Restaurant (for 2) with User Rating White is 341
The Average Cost of Restaurant (for 2) with User Rating Yellow is 865
```

Plot



It was clearly visible that maximum The Average Cost of Restaurant (for 2) is for those Restaurants to which the users have rated as Dark Green and Green Category. White category restaurants have minimum Average Cost for 2.

Explanation

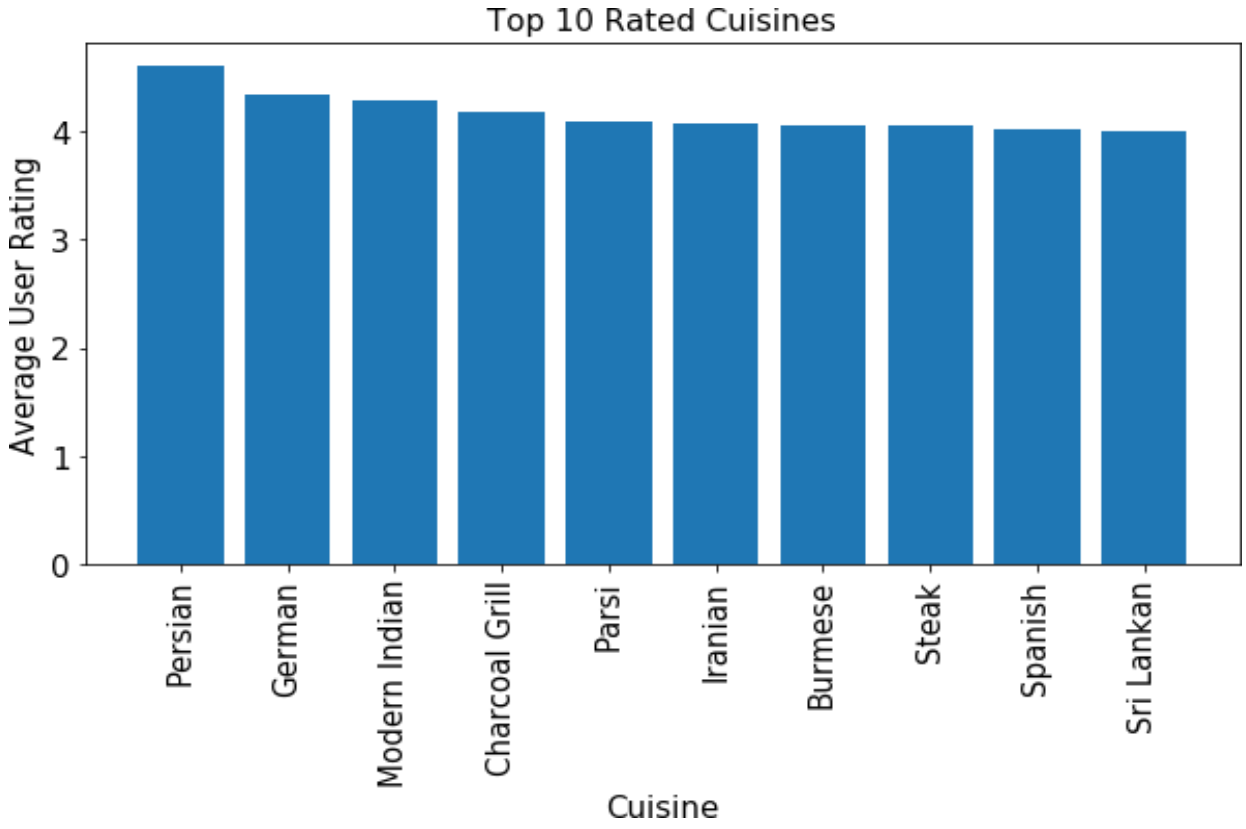
I have used the groupby() function to calculate the Average Cost for 2 for each User rating colour.

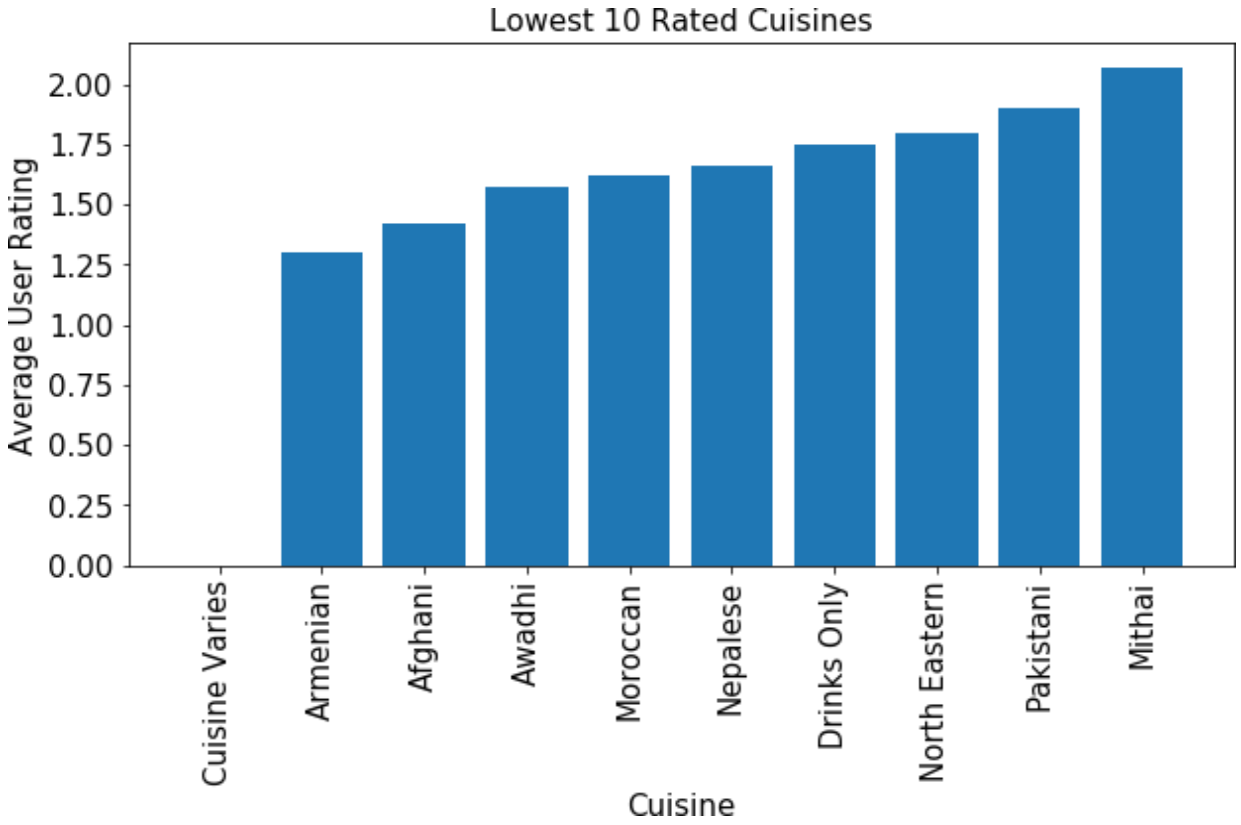
2.1.4 : User Rating Versus Restaurant serving some specific cuisines

Answers:

```
Top 10 Rated Cuisines are:
Persian - 4.6
German  -  4.35
Modern Indian - 4.28
Charcoal Grill - 4.18
Parsi - 4.1
Iranian - 4.07
Burmese - 4.05
Steak - 4.05
Spanish - 4.03
Sri Lankan - 4.0

Lowest 10 Rated Cuisines are:
Cuisine Varies  -  0.0
Armenian - 1.3
Afghani - 1.42
Awadhi - 1.57
Moroccan - 1.62
Nepalese - 1.66
Drinks Only - 1.75
North Eastern - 1.8
Pakistani - 1.9
Mithai - 2.07
```

Plots


Top 10 Rated Cuisines
Average User Rating
0
1
2
3
4
Persian
German
Modern Indian
Charcoal Grill
Parsi
Iranian
Burmese
Steak
Spanish
Sri Lankan
Cuisine


Lowest 10 Rated Cuisines
Average User Rating
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
Cuisine Varies
Armenian
Afghani
Awadhi
Moroccan
Nepalese
Drinks Only
North Eastern
Pakistani
Mithai
Cuisine

From the above plots it is clearly evident that Persian, German, Modern Indian are some of the Highest Rated Cuisine while Cuisine Varies, Armenian, Afghani are some of the Lowest Rated Cuisines.

Explanation

With the help of Dictionary, I have calculated the average user rating for each cuisine served by Restaurants. Then I used Numpy to find the top 10 and lowest 10 rated cuisines.