# Project: ZOMATO API - 2

Question 1.1

In this question we have to plot the bar graph for restaurants present in Delhi NCR vs Rest of India. So for this we have to first have to use the country code for India that is 1 to get the cities for India only. Now after that we take two variable one for NCR region and other for Rest of India and iterate over cities. We find total value and NCR region value and then to get the restaurants for Rest of India I subtract the NCR with total.

The answer for this is:

NCR : 7947

Rest of India : 705
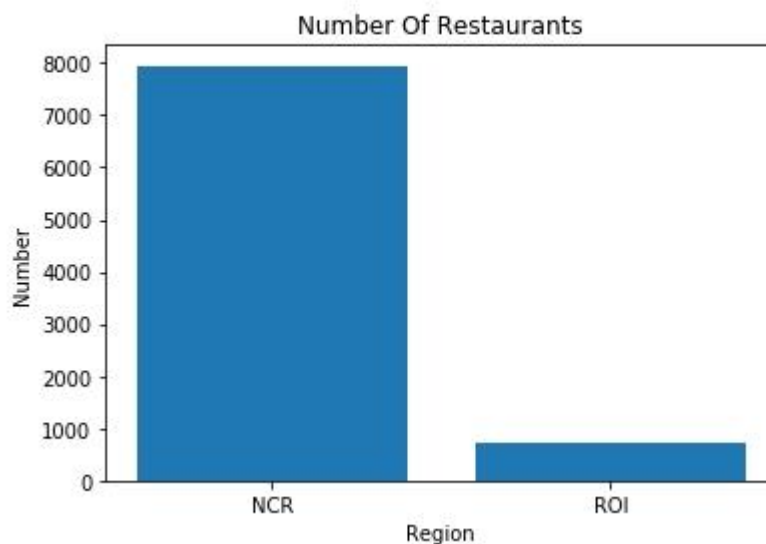
Question 1.2

In this question we have to find the cuisines which are not present in restaurants of Delhi NCR but present in Rest of India. So for this we created two dictionaries which hold the name of cuisines present in NCR and Rest of India . After that we check the cuisines which are present in Rest of India region but not in NCR. For confirming we use ZOMATO API to confirm it but after confirming we get one cuisines which is present in NCR region and there is no information of that in dataset. The cuisine name in BBQ.

Output:

German

Malwani

BBQ
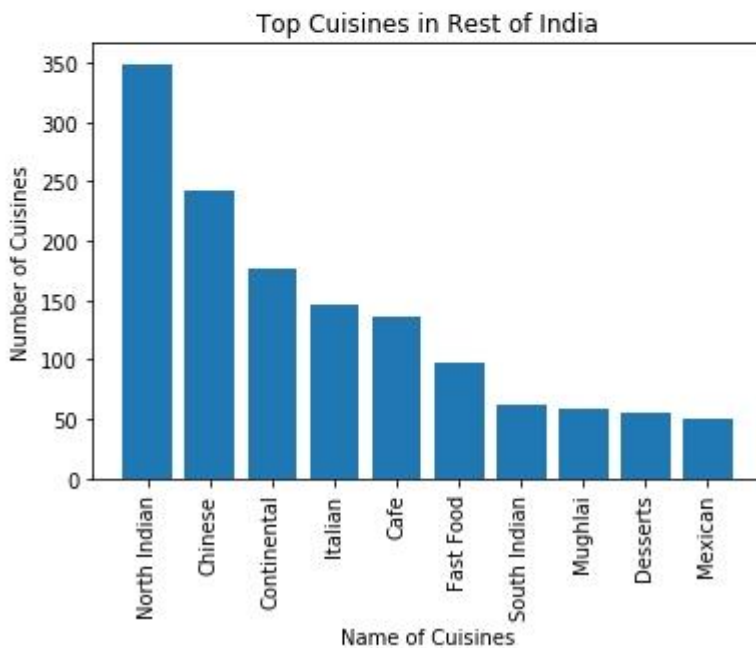
Cajun

BBQ is present and the dataset is incomplete

Question 1.3

In this question we have to find the top 10 cuisines which are served by maximum number of restaurants in Delhi NCR and Rest of India. For this I change the city names which are present in NCR region with NCR. After that I store the values for cuisines in two dictionaries and after find the top 10 cuisines for NCR and Rest of India.
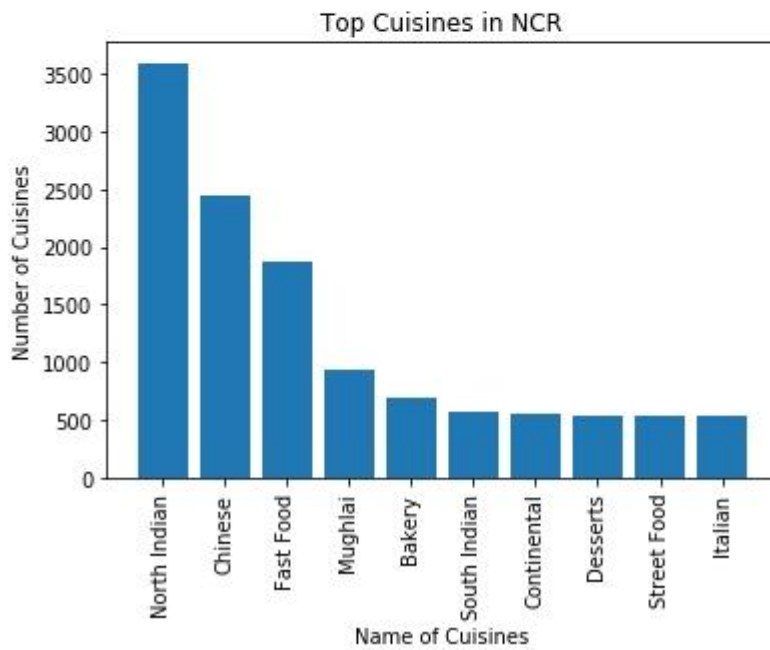
After finding the answer we plot graph for the same.

Output:

```
Rest Of India
North Indian 349
Chinese 242
Continental 177
Italian 147
Cafe 136
Fast Food 97
South Indian 62
Mughlai 59
Desserts 55
Mexican 50
```
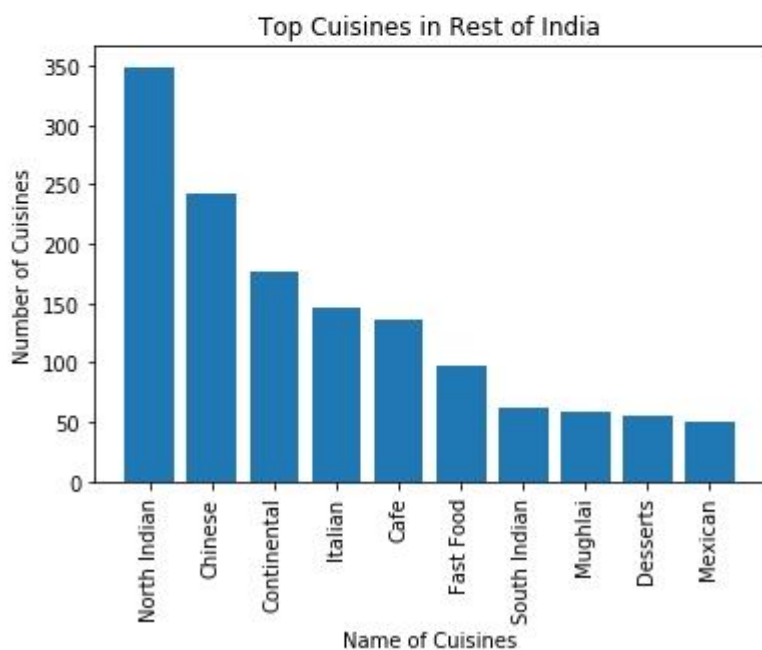

Top Cuisines in Rest of India

NCR
North Indian 3597
Chinese 2448
Fast Food 1866
Mughlai 933
Bakery 697
South Indian 569
Continental 547
Desserts 542
Street Food 538
Italian 535

Top Cuisines in NCR

Question 1.4

In this question we have to analyze how cuisine served is different from NCR to Rest of India. For this we take help from the problem 1.3 where we find top 10 cuisines served in Delhi NCR and Rest of India. From that we can easily analyze that at both places North Indian Cuisine and Chinese Cuisine is most popular however the number of restaurants are more less than the number of restaurants present in Delhi NCR region. However at both the places North Indian and Chinese Cuisine is more popular. Continental and South Indian cuisines are more popular in Rest of India.

```
Rest Of India
North Indian 349
Chinese 242
Continental 177
Italian 147
Cafe 136
Fast Food 97
South Indian 62
Mughlai 59
Desserts 55
Mexican 50
```

```
NCR
North Indian 3597
Chinese 2448
Fast Food 1866
Mughlai 933
Bakery 697
South Indian 569
Continental 547
Desserts 542
Street Food 538
Italian 535
```


Top Cuisines in NCR
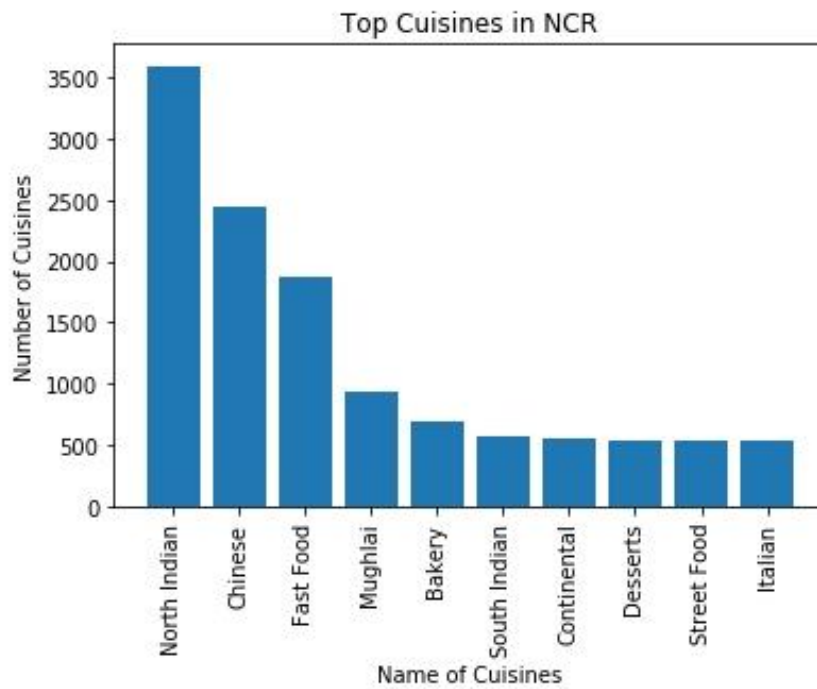
Question 2.1

2.1.1

In this problem we have to analyze how user rating is affected by restaurant due to the number of votes. For this we have to make a graph between Votes and aggregate rating of a restaurant. Each restaurant is taken in this to analyze how number of votes affect the rating of a restaurant.

After finding all the data the graph is created with the given value.

After analyzing the graph we can easily find that the restaurants with greater number of votes hold the high rating and lesser votes hold average rating. At the bottom side where there is dark area we can easily analyze that the restaurants with less than 2000 number of votes have the rating with 2-5 and dark area show that the restaurants with less than 2000 number of votes have different range of rating and maximum between 4-5. Restaurants with greater than 2000 number of votes usually have higher rating.

Rating Vs Votes of Restaurants
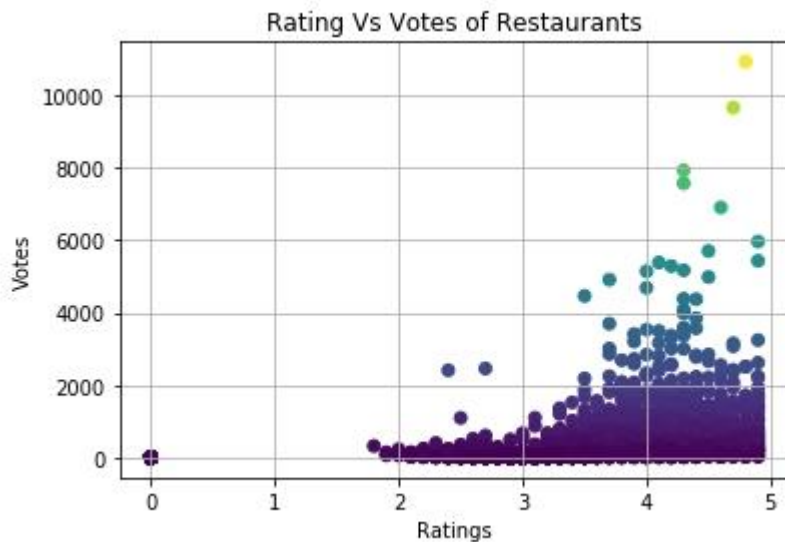
2.1.2

In this problem we have to analyze how Number of cuisines served at a restaurant affect the rating of a restaurant. For this we have to find the rating for restaurant where different number of cuisines are served.

After checking the output we can easily analyze that the restaurants which serve more number of cuisines get more user rating and the restaurants which serve less number of cuisines or single cuisine gets less rating . As we keep increasing from1 to 7 the rating is increasing by which we can easily say that the restaurants with more number of cuisines get more rating.
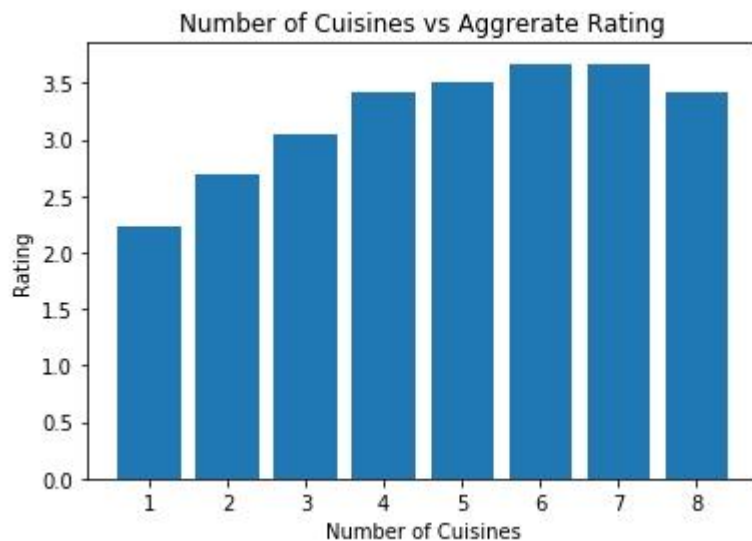
2.1.3

In this problem we have to analyze how average cost at a restaurant affect the rating of a restaurant. For this we have to make a graph between the aggregate rating and Average cost of the restaurant. In this I take restaurants present in India only to make graph look better.

After analyzing the output we can easily say that the restaurants where the Average cost is less than 1000 have the rating usually between 2-5 and there a dark portion where the cost is very less the rating is between 3-4. If we keep increasing the cost value we can see that the rating is usually greater than 3 by which we can say that the whether the cost of restaurant is less or high the rating does not depend on that. It usually depend on the quality and service of restaurant.

Rating Vs Average Cost of Restaurants
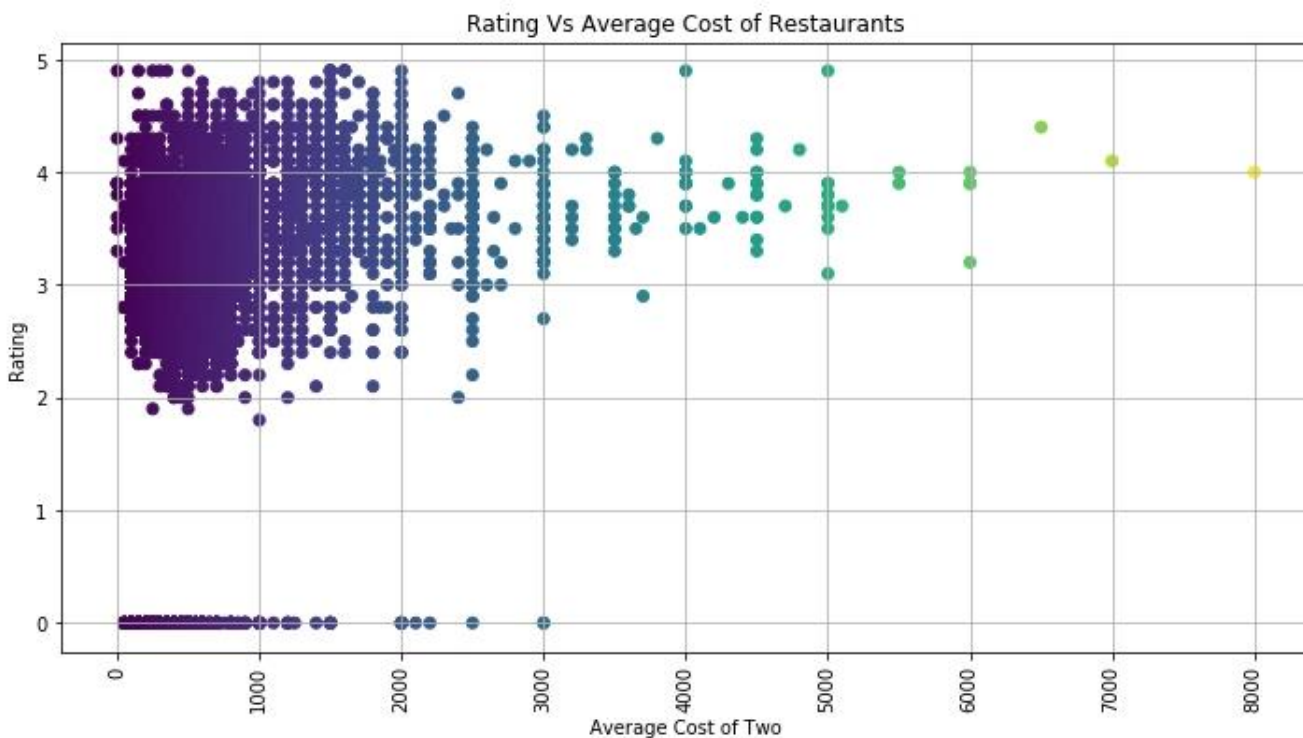
2.1.4

In this problem we have to analyze how rating of any restaurant affected by the Restaurants serving some specific cuisines. For this we have to find the Cuisines which are served by the restaurants and the rating. By calculating all the data we have to make a graph for that.

After analyzing the graph we can say that the restaurants which serve Continental and Italian get high rating from the customers. Café and American cuisine are also quite popular. Fast food cuisine also get the high rating from the customers.


Rating Vs Top 15 Cuisines
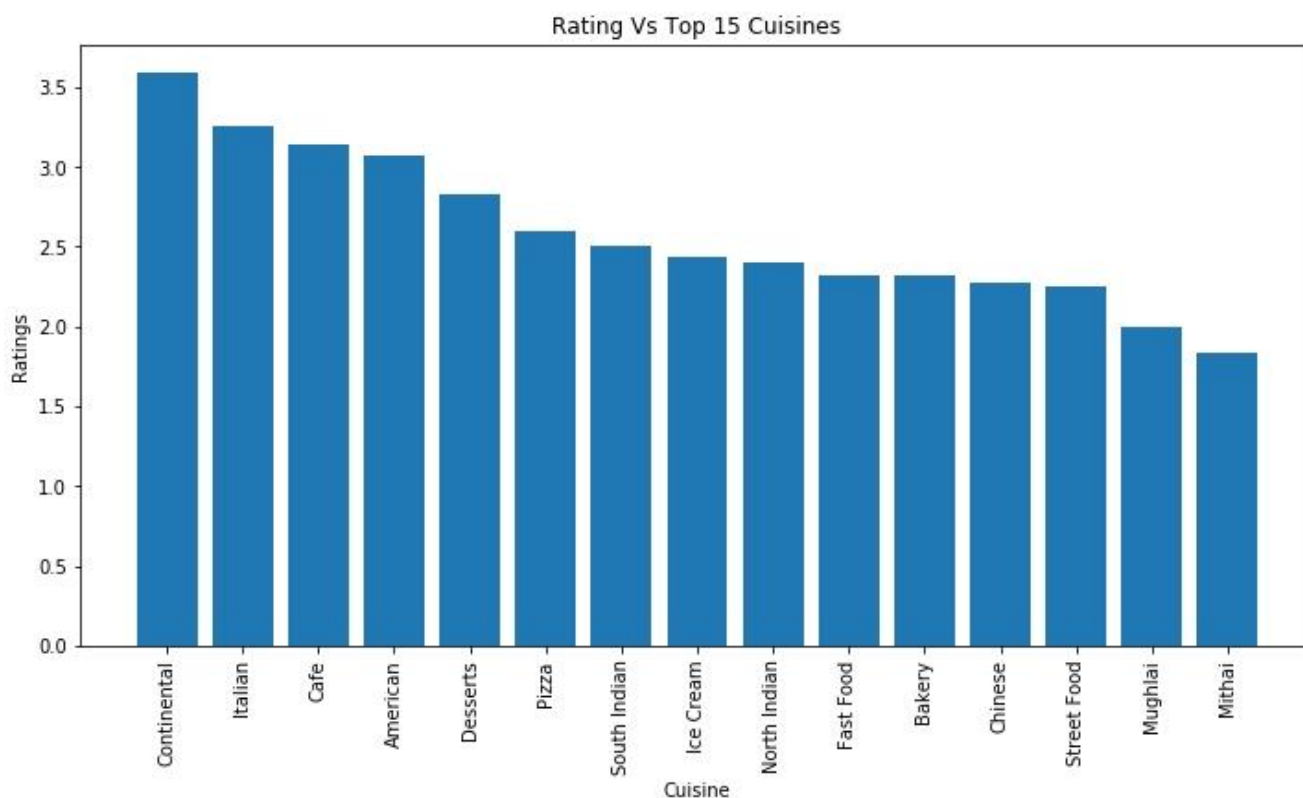
2.2

In this problem we have to find the weighted restaurant rating of each locality and find the top 10 localities with more weighted restaurant rating. For this first we create I create the different column which is weighted which holds the value as (number of votes * rating) and after for Country India we find the top 10 localities using group by function. The weighted restaurant rating can be calculated as:

Sum of (number of votes*rating)/sum of (number of votes)

```
locality
Aminabad                             4.900000
Hotel Clarks Amer, Malviya Nagar     4.900000
Friends Colony                       4.886916
Powai                                4.841869
Kirlampudi Layout                    4.820161
Express Avenue Mall,  Royapettah     4.800000
Deccan Gymkhana                      4.800000
Banjara Hills                        4.718762
Sector 5, Salt Lake                  4.707023
Riverside Mall, Gomti Nagar          4.700000
```
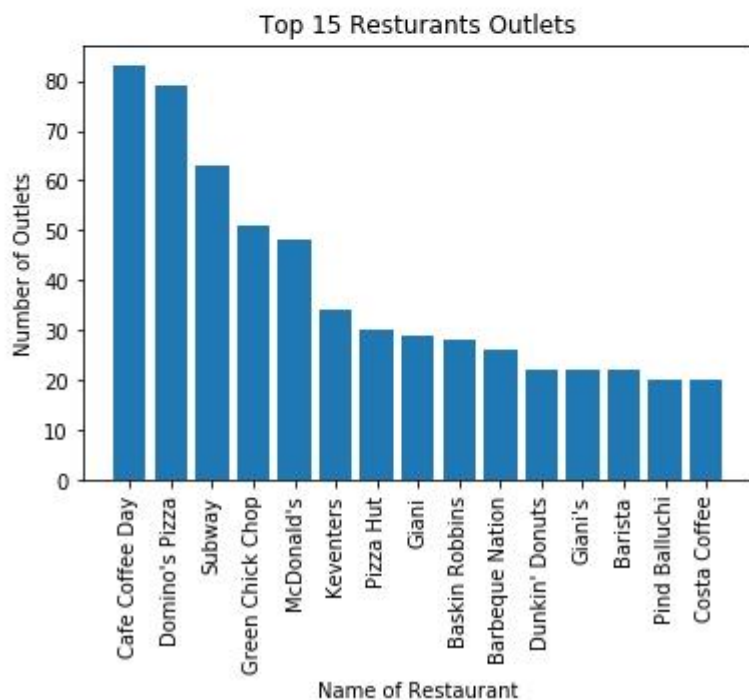

Top Weighted Restaurant
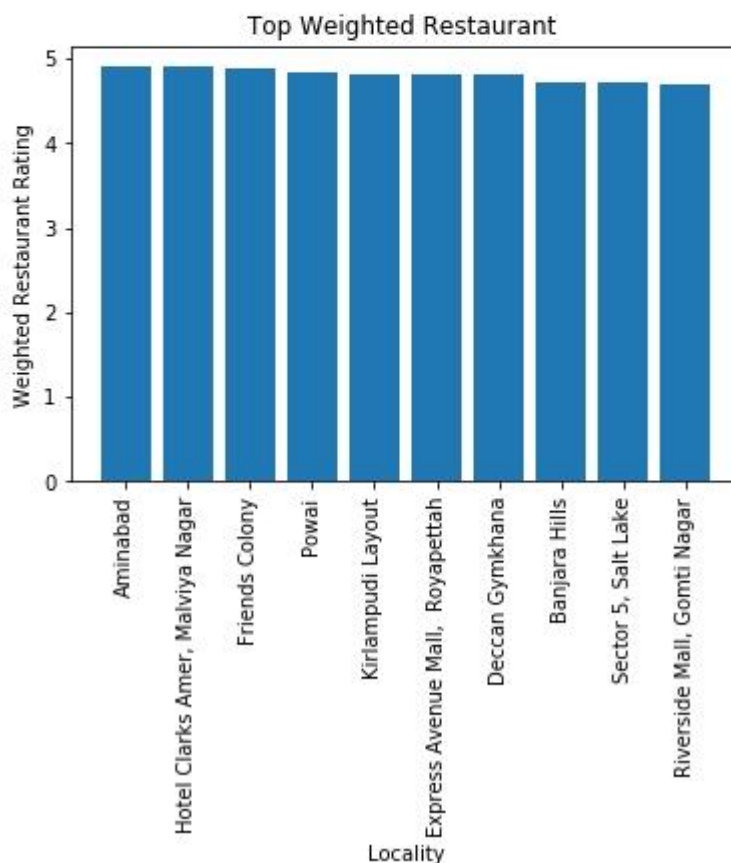
Question 3

3.1

In this problem we have to plot the bar graph for the top 15 restaurants which have a maximum number of outlets . For this we have to find the restaurants which have maximum number of outlets . For this we use the dictionary to hold the values of restaurants present in a different city and different place.

```
Cafe Coffee Day 83
Domino's Pizza 79
Subway 63
Green Chick Chop 51
McDonald's 48
Keventers 34
Pizza Hut 30
Giani 29
Baskin Robbins 28
Barbeque Nation 26
Dunkin' Donuts 22
Giani's 22
Barista 22
Pind Balluchi 20
Costa Coffee 20
```


Top 15 Resturants Outlets

3.2

In this problem we have to plot the histogram of aggregate rating of restaurant by dropping the unrated restaurant. So in this we have to first drop the restaurants which are unrated and then we plot the histogram by taking the aggregate rating . As we analyze the graph we can say that the maximum number of restaurants have rating between 3-4.

Output:
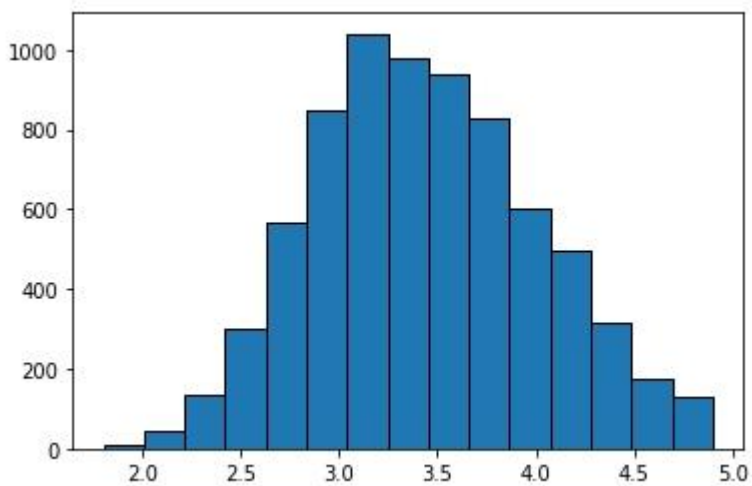
3.3

In this problem we have to plot the bar graph for top 10 restaurants in the data with the highest number of votes. So for this we first find the top 10 restaurants with the highest number of votes in total and then we plot the graph for the same.

Output:

```
Toit 10934
Hauz Khas Social 7931
Peter Cat 7574
Big Brewsky 5705
The Black Pearl 5385
BarBQ 5288
Warehouse Cafe 4914
Truffles 4841
Mocambo 4464
Gulati 4373
```
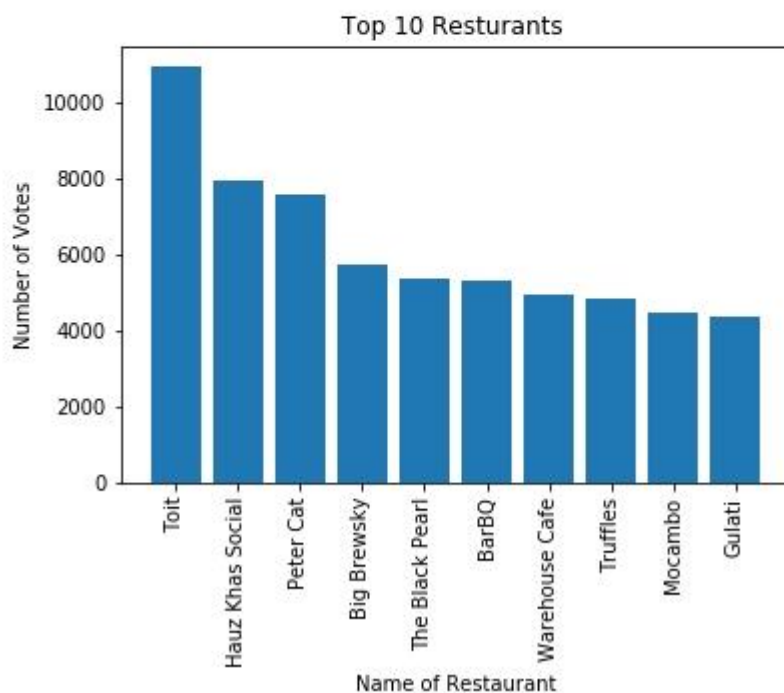
3.4

In this problem we have to plot the pie graph of top 10 cuisines present in restaurants in the USA. So in order to get it we have to take the country code as 216 for USA and then we have to find top 10 cuisines present there. We get the American cuisine the top cuisine which is served in the restaurants of the USA. The Cuisines such as Burger, Seafood and Pizza is usually popular in America and also the Italian and Steak.

Output:

```
American 112
Seafood 59
Burger 49
Sandwich 49
Pizza 49
Steak 42
Italian 38
Breakfast 37
Mexican 36
Sushi 34
```
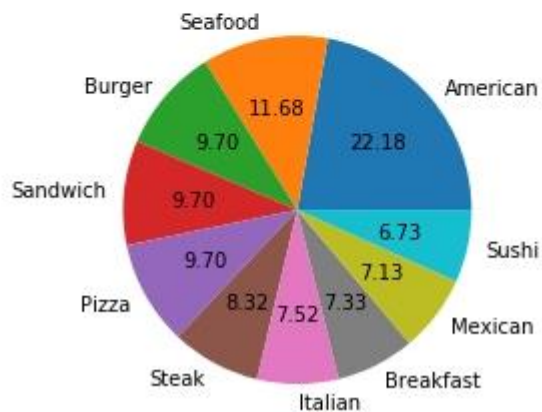
3.5

In this problem we have to plot the bubble graph of a number of Restaurants present in a city of India and keeping the weighted restaurant rating of city in a bubble. So for this first we have to solve the weighted restaurant for each restaurant present in India. After that we have to make two group first for city and weighted rating and other for city and votes. After that we have to find the number of restaurants present in a particular city. And we store all the values. And on the basis of that we have to draw the graph.

Bubble Graph of Weighted Rating of Restaurants