**Objective Questions**:

**1.The data consists of some inconsistent and missing values so ensure that the data used for further analysis is cleaned.**

Data validation is done by eliminating missing values and inconsistencies. Consequently, the dataset for analysis is now clean.

**2.Using the LookUp functions, fill up the countries in the original data using the country code.**

By employing the **VLOOKUP function** concerning the country description datasheet the country names in the raw data is populated.

**3. Create a table to represent the number of restaurants opened in each country.**

A pivot table is made which illustrates the number of restaurants in rows and countries in columns. From the table, it is explicit that India outnumbers all the other countries by having **8652** restaurants while Canada is the least with just **4.**

**4.Also, the management wants to look at the number of restaurants opened in each year, so provide them with something here.**

A pivot table is used for this analysis, with country names in rows, date keys/opening years in columns, and by counting the number of restaurants using COUNTA in the values section. With this, the management can look at the number of restaurants opened in each country for each year. An average of 1000-plus restaurants have been started every year and the graph suggests that the numbers gradually increase over the years.

**5.What is the total number of restaurants in India which are in the price range of 4?**

A total of **388** restaurants in India are constituted under price range 4, which is easily the most when compared to others. The **COUNTIFS formula** is used to calculate the total number of restaurants in India within the price range of 4.

**6. According to the data, what is the average number of voters for the restaurants in each country?**

A pivot table is used to tabulate the country vise restaurants and the average number of votes. From the table, it is understood that Indonesia has the highest average number of votes (772.0952381**)** with the overall average votes of all the countries put together being (156.7720604).

**Subjective Question:**

1. **Suggest a few countries where the team can open newer restaurants with lesser competition. Which visualization/technique will you use here in order to justify the suggestions?**

A pivot table is made by categorizing countries along with the count of restaurants and their average rating. A combo chart is created from the pivot table because this shows a better visualization when comparing two factors. Here multiple y-axis is used to compare the number of restaurants and their average ratings.

Countries with a lower restaurant count and a relatively low average rating indicate a market with potential for new restaurants. Based on the provided dataset, the countries mentioned below are considered:

(No. of restaurant) (Average ratings)

Australia : 24 3.7

Canada : 04 3.6

Qatar : 20 4.1

Singapore: 20 3.6

Srilanka : 20 3.9

**2.Come up with the names of States and cities in the suggested countries suitable for opening restaurants.**

There are nearly 30 states and cities in the five suggested countries suitable for opening restaurants. The below mentioned names are shortlisted based on their average ratings i.e. < 3.5 (for the countries Qatar, Singapore, and Sri Lanka only one state/ city is available) from the dataset.

AUSTRALIA : Armidale, Balingup, Flaxton, Macedon, Mayfield, Paynesville.

CANADA : Consort, Yorkton.

QATAR : Doha

SINGAPORE : Singapore

SRILANKA : Colombo

**3.Name the chart/spreadsheet function you will use for solving the problem.**

* A *clustered column and line with markers* chart are used since it show the best visualization for comparison between ratings and restaurant counts across various countries.
* A *Line with markers chart* is used to present the average ratings for suggested countries.
* For both charts pivot tables are used where *COUNTA* and *AVERAGE* functions are used.

**4.According to the countries you suggested, what is the current quality in terms of ratings for restaurants that are open there?**

The top five countries with lower average ratings are suggested because they will tend to have lesser competition as previously mentioned. The average rating of restaurants opened in the suggested countries is **3.8**.

**Top of Form**

**5. Come up with the names of restaurants from the recommended states that are our biggest competitors and also those that are rated in the lower brackets, i.e. 1-2 or 2-3.**

|  |  |
| --- | --- |
| **Restaurants** | **Ratings** |
| Mainland China Restaurant | 4.9 |
| Ministry of Crab | 4.9 |
| Al'frank Cookies | 4.2 |
| The Giggling Goat | 3.6 |
| Flaxton Gardens | 3.5 |
| Mr. | 3.5 |
| Whitebull Hotel | 3.5 |
| DiVine | 3.4 |
| Arigato Sushi | 3.3 |
| Consort Restaurant | 3 |
| Makansutra Gluttons Bay | 3 |
| Star Buffet | 2.9 |
| Pier 70 | 2.6 |
| Queen's Cafe | 2.5 |
| Poets Cafe | 2.4 |
| Elite Indian Restaurant | 2.4 |

The restaurants are arranged in the order of biggest competitors to lower in the above table.

**6. Which cuisines should we focus on in the newer restaurants to get better feedback? Does the choice of cuisines affect the restaurant ratings?**

|  |  |
| --- | --- |
| **CUISINE** | **RATING** |
| Seafood | 4.9 |
| Chinese | 4.9 |
| Pizza, Bar Food | 4.6 |
| Indian | 4.5 |
| Juices, Desserts | 4.5 |
| Mediterranean, Seafood | 4.4 |
| Modern Australian, Australian | 4.4 |
| International | 4.4 |
| Thai | 4.3 |
| Italian, Mediterranean, Pizza | 4.3 |
| Italian | 4.3 |
| Continental, American, Seafood | 4.2 |
| Bakery | 4.2 |
| Desserts, Bakery | 4.2 |
| Middle Eastern, Arabian | 4.2 |
| Pakistani | 4.2 |

|  |  |
| --- | --- |
| American, Fast Food, Steak, Beverages | 4.2 |
| Australian | 4.1 |
| Desserts, Ice Cream | 4.1 |
| Cafe | 4.1 |
| Fast Food | 4.1 |
| Breakfast, Modern Australian | 4.1 |
| Continental, American | 4.1 |
| Seafood, Italian | 4.0 |
| Steak, American | 4.0 |
| Sri Lankan | 4.0 |
| American, Steak | 4.0 |
| Cafe, Sri Lankan, Continental, American | 4.0 |
| Seafood, American | 4.0 |
| Kerala, Indian, Chinese, Bakery | 4.0 |

The cuisine mentioned above can be considered in the newer restaurants to get better feedback. The choice of cuisines does affect the restaurant ratings. It is evident from the data that some of the cuisines have poor rating and some has good ratings which affect the restaurant's rating significantly.

**7. According to our current data, should we go for online delivery and table booking? Does that affect the customer’s ratings?**

From the data it is observed that the ratings of food bought through online delivery and table booking are higher when compared to the others. So, online delivery and table booking have a direct impact on customers rating.

**8.Should the team keep the rate of cuisines higher? Will that affect the feedback? According to our data are the rates of cuisines and ratings, correlated?**

No, From the data there is no conclusive evidence to state that the rate of the cuisines affecting the feedback. Because restaurants with lower price range too have higher ratings than some of the restaurants with higher price range. So, it’s advisable not to keep the rate of cuisines higher.