# **Tasks**

**Learners have to develop a dashboard to support the answers to the following questions and suggestions for places for newer restaurants.**

**Objective Questions**:

1. What is the total no. of tables present in the data?

**Ans:** The data contains two tables, “restaurants information” and “country description”.

1. What is the total no. of attributes present in the data?

**Ans:** There are 20 attributions present in the data. There are two approve to find   
i) =column()   
ii) =counta()

1. How many categorical columns are there in the data? [Search about categorical and continuous data, and try to answer this question]  
   **Ans:** There are 14 categorical columns in the data: RestaurantID, RestaurantName, CountryCode, City, Address, Locality, LocalityVerbose, Cuisines, Currency, Has\_Table\_booking, Has\_Online\_delivery, Is\_delivering\_now, Switch\_to\_order\_menu, and Price\_range.
2. The data consists of some inconsistent and missing values so ensure that the data used for further analysis is cleaned.  
   **Ans:** There are 9 missing data in Cuisines, I’ll fill it by most selling cuisines in the respective country. In this case, I have updated as “American, Seafood, Steak”. I have fixed some inconsistent letter in the data as well like converting average cost of two in a standard currency such as INR, changed the datekey\_opening format such as “\_” to “-” using replace function(ctrl +H). Post this I have taken the year by using the for =year().
3. Using the LookUp functions, fill up the countries in the original data using the country code.  
   I have used =VLOOKUP(C2,'country description'!$A$1:$B$16,2,0) to get the country name from the country description sheet (Column V).
4. Create a table to represent the number of restaurants opened in each country.  
   **Ans:** I have created the table in the Pivot sheet as per country.

|  |  |
| --- | --- |
| **Country** | **Count of RestaurantID** |
| Australia | 24 |
| Brazil | 60 |
| Canada | 4 |
| India | 8652 |
| Indonesia | 21 |
| New Zealand | 40 |
| Philippines | 22 |
| Qatar | 20 |
| Singapore | 20 |
| South Africa | 60 |
| Sri Lanka | 20 |
| Turkey | 34 |
| United Arab Emirates | 60 |
| United Kingdom | 80 |
| United States of America | 434 |
| **Grand Total** | **9551** |

1. Also, the management wants to look at the number of restaurants opened each year, so provide them with something here.  
   I have created the table in the Pivot sheet as per year.

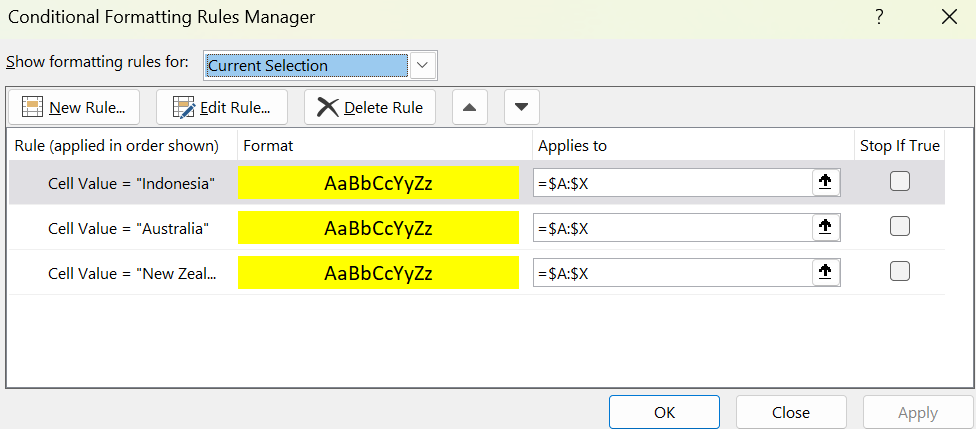
|  |  |
| --- | --- |
| **Years** | **Count of RestaurantID** |
| 2010 | 1080 |
| 2011 | 1098 |
| 2012 | 1022 |
| 2013 | 1061 |
| 2014 | 1051 |
| 2015 | 1024 |
| 2016 | 1027 |
| 2017 | 1086 |
| 2018 | 1102 |
| **Grand Total** | **9551** |

1. What is the total number of restaurants in India in the price range of 4?   
   There are 388 numbers of restaurants in India in the price range of 4. I have added the table with a filter for price range and country name as India in the pivot sheet.

|  |  |
| --- | --- |
| Price\_range | 4 |
|  |  |
| **Country** | **Count of RestaurantID** |
| India | 388 |
| **Grand Total** | **388** |

1. What is the average number of voters for the restaurants in each country according to the data?

|  |  |
| --- | --- |
| **Country** | **Average of Votes** |
| Australia | 111.42 |
| Brazil | 19.62 |
| Canada | 103.00 |
| India | 137.21 |
| Indonesia | 772.10 |
| New Zealand | 243.03 |
| Philippines | 407.41 |
| Qatar | 163.80 |
| Singapore | 31.90 |
| South Africa | 315.17 |
| Sri Lanka | 146.45 |
| Turkey | 431.47 |
| United Arab Emirates | 493.52 |
| United Kingdom | 205.49 |
| United States of America | 428.22 |
| **Grand Total** | **156.91** |

1. Calculate the average rating for all the restaurants that have price\_range < 4 and provide online delivery. Use only the “IF” function, Logical Operators, and Aggregation functions to solve this problem. **[Note: Don’t use Conditional aggregation in this question.]  
   Ans:** I have used =AVERAGE(IF((price\_range<4)\*(Has\_Online\_delivery="Yes"), Rating)) to calculate average rating for all the restaurants that have price\_range < 4 and provide online delivery. I have copy and pasted the restaurant's name and removed the duplicate to get the unique restaurants. i.e., 3.13
2. Using Conditional formatting highlight the rows of restaurants that are located in the countries or cities that you’ve suggested to the management for opening new restaurants.   
   **Ans: **
3. Create a new customized price column that consists of the abbreviation/symbol of the currency along with the Average\_cost\_for\_two value. [Use string operations to do this task]  
   **Ans:** I have used =CONCAT(REPLACE(MID(K2,FIND("(",K2)+1,FIND(")",K2)-1),FIND(")",MID(K2,FIND("(",K2)+1,FIND(")",K2)-1)),1, " "),R2) to get the new customized price.
4. How can you create an array formula in Excel or Google Sheets to count the number of restaurants listed that do not offer online delivery, are in the lowest price range, and have an average cost for two people less than or equal to 250 Indian Rupees?  
   **Ans:** I have used countifs() to find the result.   
   =COUNTIFS(M:M,"No",P:P, 1,X:X, "<=250")   
   where,  
   M:M – The Range for the "Has\_Online\_delivery”.  
   “No" – The condition to check for restaurants that do not offer online delivery.  
   P:P – The range for the "Price\_range"  
   “1” – The condition to check for restaurants in the lowest price range.  
   X:X – The range for the "Average\_Cost\_for\_two".  
   "<=250" – The condition to check if the average cost for two people is less than or equal to 250 INR.  
   So, the result is **1694**

**Subjective Question:**

1. Suggest a few countries where the team can open newer restaurants with lesser competition. Which visualization/technique will you use here to justify the suggestions?  
   **Ans:**
   * Approach: Analyse the competition level (number of restaurants), customer satisfaction (ratings), and market demand (cuisine preferences) to identify countries with high potential and low competition for new restaurant openings.
   * Insights:
     + Australia offers low competition and high ratings, particularly in emerging cities.
     + Philippines has a growing market with fewer competitors outside metro areas.
     + Indonesia has room for new restaurants, especially in non-urban regions
   * Recommendation:
     + Consider Australia and Canada for large cities and emerging suburbs.
     + Focus on second-tier cities in the Philippines and Indonesia.
     + Explore non-urban areas in Sri Lanka for less competition.

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| --- | --- | --- |
| **Country** | **Count of RestaurantID** | **Average of Rating** |
| Australia | 19 | 3.86 |
| Brazil | 47 | 4.26 |
| Canada | 2 | 4.00 |
| India | 2655 | 3.84 |
| Indonesia | 20 | 4.34 |
| New Zealand | 39 | 4.31 |
| Philippines | 22 | 4.47 |
| Qatar | 18 | 4.13 |
| Singapore | 11 | 3.90 |
| South Africa | 59 | 4.22 |
| Sri Lanka | 17 | 4.06 |
| Turkey | 33 | 4.33 |
| United Arab Emirates | 58 | 4.28 |
| United Kingdom | 74 | 4.20 |
| United States of America | 406 | 4.08 |
| **Grand Total** | **3480** | **3.92** |

1. Come up with the names of States and cities in the suggested countries suitable for opening restaurants.  
   **Ans:** 
   * Approach: Identify smaller cities or emerging regions within the suggested countries that have fewer existing restaurants, but are seeing growing demand and population growth. Focus on areas with untapped potential and minimal competition for new restaurant ventures.
   * Insights:
     + Australia: Cities like Armidale and Beechworth have fewer restaurants, yet demand is growing, especially in regional areas.
     + Philippines: Davao and Iloilo are less saturated than Metro Manila but have an increasing middle class with disposable income.
     + Indonesia: Cities like Yogyakarta and Denpasar offer potential due to cultural diversity and growing tourism.
   * Recommendation:
     + Open restaurants in regional Australia (e.g., Armidale, Beechworth) where there’s less competition.
     + Explore emerging cities in the Philippines and Indonesia (e.g., Davao, Yogyakarta) for growth.
     + Focus on tourism-driven locations in Sri Lanka and Bali for greater customer variety.

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| --- | --- | --- | --- |
| **CountryName** | **City** | **Count of RestaurantID** | **Average of Rating** |
| **Australia** | Armidale | 1 | 3.50 |
| **Australia** | Beechworth | 1 | 4.60 |
| **Australia** | Dicky Beach | 1 | 3.60 |
| **Australia** | East Ballina | 1 | 4.10 |
| **Australia** | Flaxton | 1 | 3.50 |
| **Australia** | Forrest | 1 | 3.70 |
| **Australia** | Hepburn Springs | 2 | 3.80 |
| **Australia** | Huskisson | 1 | 4.10 |
| **Australia** | Inverloch | 1 | 3.70 |
| **Australia** | Lakes Entrance | 1 | 3.80 |
| **Australia** | Lorn | 1 | 3.60 |
| **Australia** | Macedon | 1 | 3.50 |
| **Australia** | Middleton Beach | 1 | 3.80 |
| **Australia** | Palm Cove | 1 | 4.40 |
| **Australia** | Phillip Island | 1 | 3.70 |
| **Australia** | Tanunda | 1 | 4.40 |
| **Australia** | Trentham East | 1 | 4.10 |
| **Australia** | Victor Harbor | 1 | 3.60 |
| **Australia Total** |  | **19** | **3.86** |
| **Brazil** | Brasilia | 13 | 3.92 |
| **Brazil** | Rio de Janeiro | 19 | 4.49 |
| **Brazil** | Sao Paulo | 15 | 4.27 |
| **Brazil Total** |  | **47** | **4.26** |
| **Canada** | Chatham-Kent | 1 | 3.70 |
| **Canada** | Vineland Station | 1 | 4.30 |
| **Canada Total** |  | **2** | **4.00** |
| **India** | Agra | 19 | 3.99 |
| **India** | Ahmedabad | 21 | 4.16 |
| **India** | Allahabad | 5 | 3.58 |
| **India** | Amritsar | 16 | 3.78 |
| **India** | Aurangabad | 4 | 3.60 |
| **India** | Bangalore | 20 | 4.38 |
| **India** | Bhopal | 18 | 4.02 |
| **India** | Bhubaneshwar | 21 | 3.98 |
| **India** | Chandigarh | 16 | 4.14 |
| **India** | Chennai | 20 | 4.32 |
| **India** | Coimbatore | 20 | 4.14 |
| **India** | Dehradun | 20 | 4.05 |
| **India** | Faridabad | 26 | 3.69 |
| **India** | Ghaziabad | 4 | 3.68 |
| **India** | Goa | 20 | 4.25 |
| **India** | Gurgaon | 352 | 3.82 |
| **India** | Guwahati | 21 | 4.19 |
| **India** | Hyderabad | 18 | 4.34 |
| **India** | Indore | 19 | 4.02 |
| **India** | Jaipur | 19 | 4.21 |
| **India** | Kanpur | 17 | 3.90 |
| **India** | Kochi | 20 | 4.08 |
| **India** | Kolkata | 20 | 4.26 |
| **India** | Lucknow | 21 | 4.20 |
| **India** | Ludhiana | 20 | 3.98 |
| **India** | Mangalore | 20 | 3.75 |
| **India** | Mohali | 1 | 4.30 |
| **India** | Mumbai | 19 | 4.12 |
| **India** | Mysore | 18 | 3.73 |
| **India** | Nagpur | 18 | 4.10 |
| **India** | Nashik | 12 | 3.65 |
| **India** | New Delhi | 1456 | 3.79 |
| **India** | Noida | 202 | 3.72 |
| **India** | Panchkula | 1 | 4.20 |
| **India** | Patna | 11 | 3.55 |
| **India** | Puducherry | 18 | 3.78 |
| **India** | Pune | 20 | 4.22 |
| **India** | Ranchi | 9 | 3.64 |
| **India** | Secunderabad | 2 | 4.50 |
| **India** | Surat | 19 | 3.96 |
| **India** | Vadodara | 20 | 4.03 |
| **India** | Varanasi | 12 | 3.64 |
| **India** | Vizag | 20 | 4.01 |
| **India Total** |  | **2655** | **3.84** |
| **Indonesia** | Bandung | 1 | 4.20 |
| **Indonesia** | Bogor | 2 | 3.85 |
| **Indonesia** | Jakarta | 15 | 4.42 |
| **Indonesia** | Tangerang | 2 | 4.30 |
| **Indonesia Total** |  | **20** | **4.34** |
| **New Zealand** | Auckland | 19 | 4.38 |
| **New Zealand** | Wellington City | 20 | 4.25 |
| **New Zealand Total** |  | **39** | **4.31** |
| **Philippines** | Makati City | 2 | 4.65 |
| **Philippines** | Mandaluyong City | 4 | 4.63 |
| **Philippines** | Pasay City | 3 | 4.37 |
| **Philippines** | Pasig City | 3 | 4.63 |
| **Philippines** | Quezon City | 1 | 4.80 |
| **Philippines** | San Juan City | 2 | 4.25 |
| **Philippines** | Santa Rosa | 2 | 3.80 |
| **Philippines** | Tagaytay City | 1 | 4.50 |
| **Philippines** | Taguig City | 4 | 4.53 |
| **Philippines Total** |  | **22** | **4.47** |
| **Qatar** | Doha | 18 | 4.13 |
| **Qatar Total** |  | **18** | **4.13** |
| **Singapore** | Singapore | 11 | 3.90 |
| **Singapore Total** |  | **11** | **3.90** |
| **South Africa** | Cape Town | 20 | 4.11 |
| **South Africa** | Inner City | 2 | 4.90 |
| **South Africa** | Johannesburg | 6 | 4.20 |
| **South Africa** | Pretoria | 19 | 4.23 |
| **South Africa** | Randburg | 1 | 4.30 |
| **South Africa** | Sandton | 11 | 4.30 |
| **South Africa Total** |  | **59** | **4.22** |
| **Sri Lanka** | Colombo | 17 | 4.06 |
| **Sri Lanka Total** |  | **17** | **4.06** |
| **Turkey** | Ankara | 19 | 4.35 |
| **Turkey** | Istanbul | 14 | 4.29 |
| **Turkey Total** |  | **33** | **4.33** |
| **United Arab Emirates** | Abu Dhabi | 20 | 4.30 |
| **United Arab Emirates** | Dubai | 19 | 4.43 |
| **United Arab Emirates** | Sharjah | 19 | 4.12 |
| **United Arab Emirates Total** |  | **58** | **4.28** |
| **United Kingdom** | Birmingham | 17 | 3.98 |
| **United Kingdom** | Edinburgh | 20 | 4.09 |
| **United Kingdom** | London | 20 | 4.54 |
| **United Kingdom** | Manchester | 17 | 4.17 |
| **United Kingdom Total** |  | **74** | **4.20** |
| **United States of America** | Albany | 13 | 3.65 |
| **United States of America** | Athens | 20 | 4.20 |
| **United States of America** | Augusta | 20 | 4.13 |
| **United States of America** | Boise | 20 | 4.26 |
| **United States of America** | Cedar Rapids/Iowa City | 20 | 4.17 |
| **United States of America** | Clatskanie | 1 | 4.30 |
| **United States of America** | Columbus | 19 | 4.07 |
| **United States of America** | Dalton | 20 | 4.11 |
| **United States of America** | Davenport | 17 | 4.17 |
| **United States of America** | Des Moines | 19 | 4.29 |
| **United States of America** | Dubuque | 15 | 3.59 |
| **United States of America** | Fernley | 1 | 3.70 |
| **United States of America** | Gainesville | 19 | 4.13 |
| **United States of America** | Lakeview | 1 | 3.60 |
| **United States of America** | Lincoln | 1 | 4.50 |
| **United States of America** | Macon | 20 | 4.12 |
| **United States of America** | Monroe | 1 | 3.60 |
| **United States of America** | Ojo Caliente | 1 | 3.60 |
| **United States of America** | Orlando | 20 | 4.48 |
| **United States of America** | Pensacola | 20 | 4.20 |
| **United States of America** | Pocatello | 19 | 3.67 |
| **United States of America** | Princeton | 1 | 4.00 |
| **United States of America** | Rest of Hawaii | 20 | 4.41 |
| **United States of America** | Savannah | 19 | 4.20 |
| **United States of America** | Sioux City | 20 | 3.77 |
| **United States of America** | Tampa Bay | 20 | 4.41 |
| **United States of America** | Valdosta | 18 | 3.77 |
| **United States of America** | Vernonia | 1 | 4.30 |
| **United States of America** | Waterloo | 19 | 3.67 |
| **United States of America** | Weirton | 1 | 3.90 |
| **United States of America Total** | | **406** | **4.08** |

1. According to the countries you suggested, what is the current quality regarding ratings for restaurants that are open there?  
   **Ans:** 
   * Approach: Evaluate the restaurant ratings in the suggested countries to understand the current customer satisfaction level, identify opportunities for improvement, and assess potential profitability based on customer feedback and preferences.
   * Insight:
     + Australia: Restaurant ratings typically range from 3.5 to 4.5, indicating a healthy demand for dining out, especially in regions with fewer competitors.
     + Philippines: Many restaurants have ratings between 3.5 and 5, showing customer satisfaction but room for differentiation in the market.
     + Indonesia, Sri Lanka, Qatar, and Canada: Similar trends are observed, with ratings hovering around 3.5 to 4.5, indicating potential profitability, especially in less competitive cities.
   * Recommendations:
     + Focus on maintaining high-quality customer service to meet and exceed the 3.5-4.5 rating range in these countries.
     + Target regions with lesser competition but higher ratings to tap into markets with proven demand.
     + Use customer feedback and ratings to refine the restaurant concept, ensuring it meets local preferences and provides a better experience than existing competitors.

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| **Country** | **Average of Rating** |
| Philippines | 4.47 |
| Turkey | 4.30 |
| Indonesia | 4.30 |
| New Zealand | 4.26 |
| United Arab Emirates | 4.23 |
| South Africa | 4.21 |
| United Kingdom | 4.10 |
| Qatar | 4.06 |
| United States of America | 4.01 |
| Sri Lanka | 3.87 |
| Brazil | 3.85 |
| Australia | 3.66 |
| Singapore | 3.58 |
| Canada | 3.58 |
| India | 2.77 |
| **Grand Total** | **2.89** |

1. Also, what is the current expenditure on food in the suggested countries, so we can keep our financial expenditure in control?  
   **Ans:** 
   * Approach: Analyse the current expenditure on food in the suggested countries to gauge the affordability of running a restaurant while maintaining profitability. This includes looking at local food prices, consumer spending habits, and economic conditions to ensure a sustainable cost structure for the business.
   * Insights:
     + Philippines and Indonesia: Both countries offer low food costs while maintaining high customer ratings, making them attractive for businesses looking to manage financial expenditure effectively.
     + Australia: While food costs are higher, the potential for premium pricing and customer spending power allows for a higher margin, makisuitable for quality-focused restaurants.
     + Sri Lanka, Qatar, and Canada: These countries have moderate food costs with varying customer spending power, meaning expenditure needs careful balance based on location and market type.
   * Recommendations:
     + Focus on Philippines and Indonesia for cost-effective operations, where food prices are lower, and profit margins can be controlled.
     + In Australia, aim for premium concepts where the higher cost can be offset by targeting middle to high-income customers.
     + In Sri Lanka, Qatar, and Canada, tailor the menu and pricing to local food expenditure trends, optimizing for both affordability and profitability.

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1. 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.  
   **Ans:** 
   * Approach: Identify the top competitors by reviewing restaurant ratings and their customer feedback in the recommended states. Highlight both highly rated establishments, which present strong competition, and those with lower ratings, which may indicate opportunities for improvement or differentiation.
   * Insights:
     + Highly Rated Competitors: In the recommended areas, Bridge Road Brewers and 1918 Bistro & Grill stand out with ratings above 4, representing strong competition with a proven customer base.
     + Lower Rated Competitors: Star Buffet, Pier 70, and Poets Cafe have ratings below 3.0, indicating potential gaps in customer satisfaction that could be leveraged for new restaurant concepts.
     + Competitor Landscape: The highly rated competitors are already well-established, but the lower-rated ones may struggle to maintain customer loyalty, presenting an opportunity to attract dissatisfied customers with better dining experiences.
   * Recommendations:
     + Differentiate your offering by focusing on a unique concept or experience to outperform the established competitors like Bridge Road Brewers and 1918 Bistro & Grill.
     + Target customers who are dissatisfied with lower-rated restaurants (e.g., Star Buffet, Pier 70) by focusing on better service and a higher quality of food.
     + Monitor customer feedback from lower-rated competitors to identify gaps in service or quality that you can capitalize on and create a more appealing dining experience.

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| **CountryName** | **RestaurantName** | **Total** |
| **Australia** | Bridge Road Brewers | 4.6 |
| **Australia** | 1918 Bistro & Grill | 4.4 |
| **Australia** | Vivo Bar and Grill | 4.4 |
| **Australia** | Pig and Whistle | 4.1 |
| **Australia** | The Belle General | 4.1 |
| **Australia** | 5 Little Pigs | 4.1 |
| **Australia** | Blue Bean Love Cafe | 3.8 |
| **Australia** | La Trattoria of Lavandula | 3.8 |
| **Australia** | Three Anchors | 3.8 |
| **Australia** | Funkey Monkey | 3.8 |
| **Australia** | Bespoke Harvest | 3.7 |
| **Australia** | Beach Box Cafe | 3.7 |
| **Australia** | Mad Cowes Cafe | 3.7 |
| **Australia** | Anchorage Cafe Restaurant Wine Bar | 3.6 |
| **Australia** | The Giggling Goat | 3.6 |
| **Australia** | Stillwater on Belmore | 3.6 |
| **Australia** | Whitebull Hotel | 3.5 |
| **Australia** | Flaxton Gardens | 3.5 |
| **Australia** | Mr. | 3.5 |
| **Australia** | DiVine | 3.4 |
| **Australia** | Taste of Balingup | 3.2 |
| **Australia** | Star Buffet | 2.9 |
| **Australia** | Pier 70 | 2.6 |
| **Australia** | Poets Cafe | 2.4 |
| **Australia Total** |  | **3.658333333** |
| **Indonesia** | Sushi Masa | 4.9 |
| **Indonesia** | Talaga Sampireun | 4.9 |
| **Indonesia** | Satoo - Hotel Shangri-La | 4.6 |
| **Indonesia** | Toodz House | 4.6 |
| **Indonesia** | Union Deli | 4.6 |
| **Indonesia** | Zenbu | 4.4 |
| **Indonesia** | Flip Burger | 4.4 |
| **Indonesia** | Avec Moi Restaurant and Bar | 4.3 |
| **Indonesia** | Lucky Cat Coffee & Kitchen | 4.3 |
| **Indonesia** | MONKS | 4.2 |
| **Indonesia** | 3 Wise Monkeys | 4.2 |
| **Indonesia** | Noah's Barn Coffeenery | 4.2 |
| **Indonesia** | Skye | 4.1 |
| **Indonesia** | Lemongrass | 4 |
| **Indonesia** | OJJU | 3.9 |
| **Indonesia** | Onokabe | 3.7 |
| **Indonesia** | Momo Milk | 3.7 |
| **Indonesia** | Fish Streat | 3.7 |
| **Indonesia Total** |  | **4.295238095** |
| **Philippines** | Spiral - Sofitel Philippine Plaza Manila | 4.9 |
| **Philippines** | Ooma | 4.9 |
| **Philippines** | Silantro Fil-Mex | 4.85 |
| **Philippines** | Le Petit Souffle | 4.8 |
| **Philippines** | Sambo Kojin | 4.8 |
| **Philippines** | Locavore | 4.8 |
| **Philippines** | NIU by Vikings | 4.7 |
| **Philippines** | The Food Hall by Todd English | 4.5 |
| **Philippines** | Izakaya Kikufuji | 4.5 |
| **Philippines** | Hobing Korean Dessert Cafe | 4.5 |
| **Philippines** | Balay Dako | 4.5 |
| **Philippines** | Heat - Edsa Shangri-La | 4.4 |
| **Philippines** | Din Tai Fung | 4.4 |
| **Philippines** | Wildflour Cafe + Bakery | 4.4 |
| **Philippines** | Sodam Korean Restaurant | 4.3 |
| **Philippines** | Vikings | 4.2 |
| **Philippines** | Guevarra's | 4.2 |
| **Philippines** | Mad Mark's Creamery & Good Eats | 4.2 |
| **Philippines** | Nonna's Pasta & Pizzeria | 4 |
| **Philippines** | Buffet 101 | 4 |
| **Philippines** | Cafe Arabelle | 3.6 |
| **Philippines Total** |  | **4.468181818** |
| **Grand Total** |  | **4.123880597** |

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

**Ans:**

* + Approach: Identify the top-rated cuisines in the recommended countries based on customer feedback and dining trends. This helps ensure that the restaurant offers popular and in-demand dishes, leading to higher customer satisfaction and better ratings.
  + Insights:
    - Popular Cuisines: In many regions, Italian, Japanese, American (burgers, BBQ), and local specialties are consistently highly rated and in demand, contributing to better customer feedback.
    - Customer Preferences: The choice of cuisine greatly impacts ratings, as people tend to give higher feedback for cuisines they enjoy or are familiar with.
    - Cultural Relevance: Cuisines that align with local preferences or offer unique twists (fusion or regional specialties) often stand out and receive better ratings.
  + Recommendations:
    - Focus on internationally popular cuisines like Italian and Japanese, which have broad appeal and tend to get higher ratings.
    - Incorporate local flavors or fusion concepts to cater to the cultural tastes of each country while also providing something new and exciting.
    - Keep an eye on emerging food trends (e.g., plant-based or healthy options) to align with changing customer preferences and boost ratings.

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| **Cuisine** | **Average of Rating** | **Count of RestaurantID** |
| American, Asian, Italian, Seafood | 4.50 | 1.00 |
| American, Ice Cream, Desserts | 4.20 | 1.00 |
| Asian | 2.90 | 1.00 |
| Asian, European | 4.00 | 1.00 |
| Asian, Indonesian, Western | 4.60 | 1.00 |
| Australian | 4.10 | 1.00 |
| Bar Food, Modern Australian | 3.80 | 1.00 |
| Bar Food, Steak | 3.50 | 1.00 |
| Breakfast, Coffee and Tea | 3.70 | 2.00 |
| Breakfast, Coffee and Tea, Modern Australian | 3.70 | 1.00 |
| Breakfast, Modern Australian | 4.10 | 1.00 |
| Burger | 4.40 | 1.00 |
| Burger, Coffee and Tea, Modern Australian | 3.70 | 1.00 |
| Cafe | 3.80 | 2.00 |
| Cafe, American, Italian, Filipino | 3.60 | 1.00 |
| Cafe, Australian | 3.70 | 1.00 |
| Cafe, Bakery, American, Italian | 4.40 | 1.00 |
| Cafe, Coffee and Tea, Modern Australian | 3.80 | 1.00 |
| Cafe, Coffee and Tea, Sandwich | 3.40 | 1.00 |
| Cafe, Coffee and Tea, Western | 4.20 | 1.00 |
| Cafe, Desserts, Beverages | 3.70 | 1.00 |
| Cafe, Italian, Coffee and Tea, Western, Indonesian | 4.60 | 1.00 |
| Cafe, Korean, Desserts | 4.50 | 1.00 |
| Cafe, Western | 4.30 | 1.00 |
| Chinese | 4.40 | 1.00 |
| Coffee and Tea, Modern Australian | 2.40 | 1.00 |
| Coffee and Tea, Tapas, Australian | 3.60 | 1.00 |
| Coffee and Tea, Tea, Modern Australian | 3.60 | 1.00 |
| Desserts, Bakery, Western | 4.60 | 1.00 |
| European, Asian, Indian | 4.90 | 1.00 |
| Filipino | 4.50 | 3.00 |
| Filipino, Mexican | 4.85 | 2.00 |
| French, Japanese, Desserts | 4.80 | 1.00 |
| French, Western | 4.30 | 1.00 |
| Indonesian | 3.70 | 1.00 |
| Italian, Continental | 4.10 | 1.00 |
| Italian, Fusion, Cafe | 3.80 | 1.00 |
| Italian, Pizza | 4.00 | 1.00 |
| Japanese | 4.35 | 2.00 |
| Japanese, Korean | 4.80 | 1.00 |
| Japanese, Sushi | 4.90 | 1.00 |
| Japanese, Sushi, Ramen | 4.40 | 1.00 |
| Korean | 4.10 | 2.00 |
| Mediterranean, Seafood | 4.40 | 1.00 |
| Modern Australian | 2.90 | 2.00 |
| Modern Australian, Australian | 4.40 | 1.00 |
| Peranakan, Indonesian | 4.00 | 1.00 |
| Pizza, Bar Food | 4.60 | 1.00 |
| Seafood, American, Mediterranean, Japanese | 4.70 | 1.00 |
| Seafood, Asian, Filipino, Indian | 4.40 | 1.00 |
| Seafood, Filipino, Asian, European | 4.20 | 1.00 |
| Seafood, Western | 3.70 | 2.00 |
| Sunda, Indonesian | 4.90 | 3.00 |
| Sushi, Japanese | 4.90 | 1.00 |
| Tea, Modern Australian | 3.50 | 1.00 |
| Western, Asian, Cafe | 4.20 | 1.00 |
| **Grand Total** | **4.12** | **67.00** |

1. According to our current data, should we go for online delivery and table booking? Does that affect the customer’s ratings?  
   **Ans:** 
   * Approach: Analyse the customer ratings for online delivery and table booking to determine if these services should be integrated into the restaurant business model. Assess how these services influence customer satisfaction and whether improving accessibility can enhance ratings.
   * Insights:
     + Online Delivery: The average rating of 3.29 suggests that online delivery is not as well-received as dining out, indicating possible challenges in food quality, delivery time, or customer service.
     + Table Booking: With an average rating of 3.48, table booking is somewhat better but still below ideal, suggesting customers appreciate it, but there is room for improvement in ease of use or availability.
     + Dining Out Preference: Customers prefer dining in the restaurant (which usually has higher ratings), but offering smooth online delivery and easy table reservation systems could enhance satisfaction and overall ratings.
   * Recommendations:
     + Implement a user-friendly online delivery system that ensures fast, reliable service and high-quality food to improve customer ratings for delivery services.
     + Introduce an efficient and accessible table booking system (e.g., app-based, website integration) to ensure customers can easily secure reservations, thus improving convenience and customer satisfaction.

FYR:

1. Online delivery
2. Table Booking
3. 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?  
   **Ans:**

According to our data, high rate cuisines will affect sales. So, we have to maintain the mid-pricing range to balance the quality of the food and customer demand.

* + Approach: Examine the correlation between cuisine pricing and customer ratings to understand how price influences customer satisfaction and sales. Evaluate whether higher-priced dishes lead to better or worse feedback and identify the optimal price point that balances quality, demand, and customer satisfaction.
  + Insights:
    - High-Rate Cuisines: Higher-priced dishes often lead to decreased sales if they don't meet customer expectations in terms of quality, which can result in lower ratings.
    - Mid-Pricing Advantage: Offering a mid-range pricing strategy helps balance food quality and customer expectations, leading to improved satisfaction without pricing out customers.
    - Customer Perception: Ratings tend to correlate positively with perceived value for money, suggesting that overpricing can negatively impact feedback.
  + Recommendations:
    - Maintain a mid-price range for dishes to ensure that customers feel they are receiving good value for the quality of food.
    - Offer premium options selectively, but ensure the pricing is justified by quality and customer experience.
    - Monitor customer feedback on pricing to find a sweet spot that maximizes both sales and satisfaction, adjusting pricing as needed based on demand and perception.

FYR:  
I have used =CORREL(P2:P9552,S2:S9552), which give is result of 0.462939294.  
Where:  
P2:P9552 – Numerical number of price range.  
S2:S9552 – Is the range of pricing value.  
As the result(0.5) close to 1, which means strong positive correlation.

1. What is the distribution of the number of restaurants of different price ranges in all the countries?

**Ans:**

* + Approach: Analyse the distribution of restaurants by price range across the suggested countries, comparing the number of lower, mid, and higher-priced restaurants with their corresponding customer ratings. This will help determine which price range offers the best balance between customer satisfaction and demand.
  + Insights:
    - Lower Price Range: Restaurants in the lower price range tend to have average ratings between 2.5 to 4.9, with an overall average of 2.6. This suggests that while some customers may be satisfied, others may feel that the food or experience does not meet expectations.
    - Higher Price Range: Restaurants in the higher price range have average ratings between 3.52 to 4.47, with an overall average of 3.75, indicating better customer satisfaction, but possibly limited demand due to higher prices.
    - Mid-Price Range: The mid-priced restaurants offer the best balance between customer satisfaction and affordability, which results in higher demand and better overall customer feedback.
  + Recommendations:
    - Focus on the mid-priced range for restaurants to ensure that customers perceive value while maintaining good quality, which will drive demand and higher ratings.
    - Keep pricing competitive within the mid-range to capture a larger customer base without sacrificing quality, aiming for customer satisfaction.
    - Continuously monitor customer feedback to fine-tune the balance of quality and pricing to ensure continued success in the mid-price segment.

FYR:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CountryName** | **1** | **2** | **3** | **4** | **Grand Total** |
| Australia | 4 | 14 | 5 | 1 | 24 |
| Brazil | 2 | 7 | 16 | 35 | 60 |
| Canada |  | 3 |  | 1 | 4 |
| India | 4295 | 2858 | 1111 | 388 | 8652 |
| Indonesia |  | 1 | 20 |  | 21 |
| New Zealand | 3 | 4 | 17 | 16 | 40 |
| Philippines |  | 1 | 12 | 9 | 22 |
| Qatar |  | 1 | 5 | 14 | 20 |
| Singapore |  | 1 | 5 | 14 | 20 |
| South Africa |  | 4 | 17 | 39 | 60 |
| Sri Lanka |  | 6 | 11 | 3 | 20 |
| Turkey |  | 11 | 18 | 5 | 34 |
| United Arab Emirates |  | 9 | 29 | 22 | 60 |
| United Kingdom | 4 | 28 | 32 | 16 | 80 |
| United States of America | 136 | 165 | 110 | 23 | 434 |
| **Grand Total** | **4444** | **3113** | **1408** | **586** | **9551** |

1. Explain your approach in brief for suggesting countries/cities in order to open new restaurants, if the objective and subjective questions would have not been given to assist you. **[you have to give bullet pointers in order to answer this question]**

Ans:

* + Approach:
    - Identify Countries with Fewer Restaurants: Research and select countries or cities with lower restaurant density to target areas with less competition.
    - Analyze Customer Ratings: Evaluate customer ratings for existing restaurants to understand satisfaction levels and identify markets with room for improvement.
    - Assess Online Delivery and Table Booking Systems: Examine customer feedback on online ordering and table booking systems to ensure ease of access and better customer experience.
    - Analyze Competitors and Popular Cuisines: Study local competitors and their top-selling cuisines to understand the market demand and find niches where demand is high but competition is low.
    - Check Price vs Rating Correlation: Review pricing strategies of restaurants and correlate them with customer ratings to identify the optimal price point for maximum satisfaction and profitability.
  + Insights:
    - Low Competition Areas: Identifying countries/cities with fewer restaurants ensures less competition, making it easier to capture the market.
    - Customer Satisfaction: Analyzing ratings helps understand the preferences and expectations of local customers.
    - Service Quality: The ease of online ordering and reservation systems is directly related to customer satisfaction and ratings.
    - Competitive Landscape: By studying competitors, you can find gaps in the market and areas where you can stand out with unique offerings.
    - Optimal Pricing: A balanced pricing strategy correlates with higher customer satisfaction, ensuring profitability without alienating customers.
  + Recommendations:
    - Focus on countries and cities with fewer restaurants to target underserved markets.
    - Invest in enhancing customer service through easy online delivery and table booking to boost ratings.
    - Monitor competitor offerings to identify opportunities for differentiation and cater to popular or emerging cuisines.
    - Use a mid-price strategy to ensure the best balance between customer satisfaction and profitability.

If the objective and subjective questions would have not been given to assist me. I will approach in the following:

* I’ll be identifying the country-wise fewer restaurants.
* Next, I’ll analyse ratings in those countries/cities.
* Then, I’ll check the online and table booking with the ratings.
* Later, I’ll check the competitors and their high sales of cuisines.
* Finally, I’ll check the price and the rating of the cuisines as per the cities.

**The dashboard must consist of Year-wise and country slicers.**