**Research Plan – Zomato (Restaurants Analysis)**

**Research Objectives:**

* Identify the most popular restaurants & cuisines on Zomato. (number of reviews in 12 months)
* Analyze which restaurants generate the highest revenue.
* Understand the factors influencing restaurant popularity and revenue generation.

**Data Exploration:**

* **Data Source:** We will primarily use the following tables from the provided dataset:
  + **restaurant:** This table contains information about restaurants registered on Zomato, including restaurant ID, name, cuisine type, location, etc.
  + orders: This table contains details about customer orders, including order date, user ID, restaurant ID, order value, currency etc.
  + menu: the table contains data on menu ID, Restaurant ID, Cuisine and price which would be helpful to understand if specific menu items/cuisines are driving popularity.
* **Data Analysis Techniques:**
  + We will calculate various metrics to analyze restaurant performance:
    - **Popularity:** We can measure popularity by the number of orders placed, number of unique customers ordering, or average order value per restaurant.
    - **Revenue:** Total order value for each restaurant will indicate revenue generation.
  + We segment restaurants based on cuisine type and compare their popularity metrics.
  + Data visualization tools used to create charts and graphs to present the findings effectively.

**Dashboard Design:**

The dashboard will consist of multiple sections to showcase key insights:

* **Restaurant Popularity:**
  + A Bar Chart displaying names of the most popular restaurants based on top ratings (4.5 – 5 stars). Results in the Bar Chart are sorted for the top 10 in descending order.
  + A Pie Chart displaying the most popular cuisines based on top ratings (4.5 – 5 stars). Results in the Pie Chart are sorted for the top 10 in descending order.
* **Restaurant Revenue:**
  + A Bar chart showing the top 10 Avg sales/revenue-generating restaurants sorted in descending order.
  + A Bar chart showing the top 10 Sum sales/revenue-generating restaurants sorted in descending order.
* **Impact on Popularity & Revenue:**
  + A Bar chart showing the top 10 restaurants with the highest number of orders. The results are sorted in descending order. This is important to understand why restaurants with poor ratings (such as Domino’s and other fast food chains) still make large numbers of orders and generate more revenue.
  + A Line Chart of sales made on Zomato to understand Zomato’s business model between Oct 2017 – June 2018 and why revenues dropped in March 2020.
  + Scatterplot to understand the correlation between prices and sales/revenue.

**Conclusions**

* Popular Restaurants that received the highest top ratings on Zomato are not the most revenue-making ones.
* Ice cream, deserts and bakeries seem to be the most popular (top rated) on Zomato. This is probably because of the younger population that uses Zomato and the chap prices of these items.
* Fast food chains (e.g. Domino’s, KFC, etc.) generate more revenue than smaller restaurants. Longer hours of operations, cheaper prices of those fast food chains and the spread of their locations all over augment their revenue.
* In February 2018 Zomato witnessed the highest sales amount.
* Sales made on Zomato plumed starting February 2020 with a deep decline in May. It seems the COVID-19 pandemic had a severe effect on Zomato's business.
* There is strong correlation between lower prices and higher amount of sales and sales quantities. Meaning cheaper-priced items bring more revenue and sales quantities to restaurants than highly-priced items.

**Recommendations**

* Zomato needs to expand and bring more to top-rated (most popular) restaurants to its platform in other cuisines beyond bakeries, ice creams and desserts.
* Zomato must give exposure to smaller restaurants and minimize the exposure of big chain fast food spots, either by promoting their products.
* Zomato can make agreements with smaller (top-rated) restaurants to give promotions and discounted prices to their customers. This will help their exposure and increase number of orders made at those smaller restaurants.

Below are screenshots from Power BI including filters and data selected to show all the details of the work.

**Research Methodology:**

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**Dashboard:**

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**Popular Restaurants: Rating**

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**Most Popular Cuisines:**

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**Revenues Rest: Avg Sales**

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**Revenues Rest: Sum Sales**

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**Popular Rest: Orders (influence)**

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**Zomato Revenue: Sales per month (Influence)**

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**Scatter plot: Prices vs Sales**

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