Tech Saksham

Case Study Report

Data Analytics with Power BI

“ 360-degree Business Analysis of Online Delivery Apps using Power BI”

“ Ambai arts college”

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ABSTRACT

“”””””Food Delivery Mobile Application Market”” report aims to provide a comprehensive presentation of the global market Food Delivery Mobile Application , with Data proliferation to assist readers in formulating business growth strategies , evaluating market competitiveness of **ICT Industry** with industry dynamics , analyse their position in the current market place , demand for data- driven insights , and make informed business decisions pertaining Food Delivery Mobile Application.

INDEX

Microsoft

edunet foundation

SAP

CHAPTER 1

INTRODUCTION

1.1 Problem Statement

There are some major challenges faced in food delivery business such as volatile princing model, difficult to engage and retain customers, inability to handle order fulfillment and logistics operations, identifying and partnering with the right experts in the online Food Delivery Market, meeting customer's expectations over food quality , finding the appropriate advertising methods .

1.2 Proposed Solution

The proposed solution is to develop a Power BI dashboard that can analyse and visualize the online delivery restaurants and the customers ratings data. The dashboard will integrate data from various sources. It will provide a comprehensive view of restaurants business, preferences, and trends enabling online delivery restaurants entrepreneurs to make informed decisions. The dashboard will be interactive, user-friendly and customizable. The business analysis capability of the dashboard will enable online delivery restaurants to respond promptly to changes in customer behavior or preferences and tailor their products and services to meet customer needs.

1.3 Feature

- Business Analysis: The dashboard will provide business analysis of restaurants data.
- Restaurant Segmentation: It will segment restaurant based on various parameters like country code, address, longitude, latitude, etc.
- Trend Analysis: The dashboard will identify and display trends in restaurants business
- Predictive Analysis: It will use current data to predict future restaurants business .

1.4 Advantages

- **Data-Driven Decisions:** Restaurents entrepreneurs can make informed decisions based on the current data analysis.
- **Improved Restaurants Engagement:** Understanding restaurants business and trends can help restaurants entrepreneur with their restaurants more effectively.
- **Increased Revenue:** By identifying opportunities for delivery and services , restaurants entrepreneurs can increase their revenue .

1.5 Scope

This report provides a comprehensive exploration of the sector, categorizing the market by type, application, and geographic distribution. This document offers a comprehensive view of the Global Online Food Delivery Services Market, equipping stakeholders with the necessary tools to identify the areas for industry expansion. This guide empowers stakeholders to leverage market opportunities and make informed decisions.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- **Data Collection and Storage Services:** Restaurants entrepreneurs need to collect and store restaurants data in real -time. This could be achieved through services like Azure Data Factory, Azure Event Hubs, or AWS Kinesis for real -time data collection, and Azure SQL Database or AWS RDS for data storage.
- **Data Processing Services:** Services like Azure Stream Analytics or AWS Kinesis Data Analytics can be used to process the real-time data.
- **Machine Learning Services:** Azure Machine Learning or AWS SageMaker can be used to build predictive models based on historical data.

2.2 Tools and Software used

Tools:

- **Power BI:** The main tool for this project is Power BI, which will be used to create interactive dashboards for real-time data visualization.
- **Power Query:** This is a data connection technology that enables you to discover, connect combine , and refine data across a wide variety of sources .

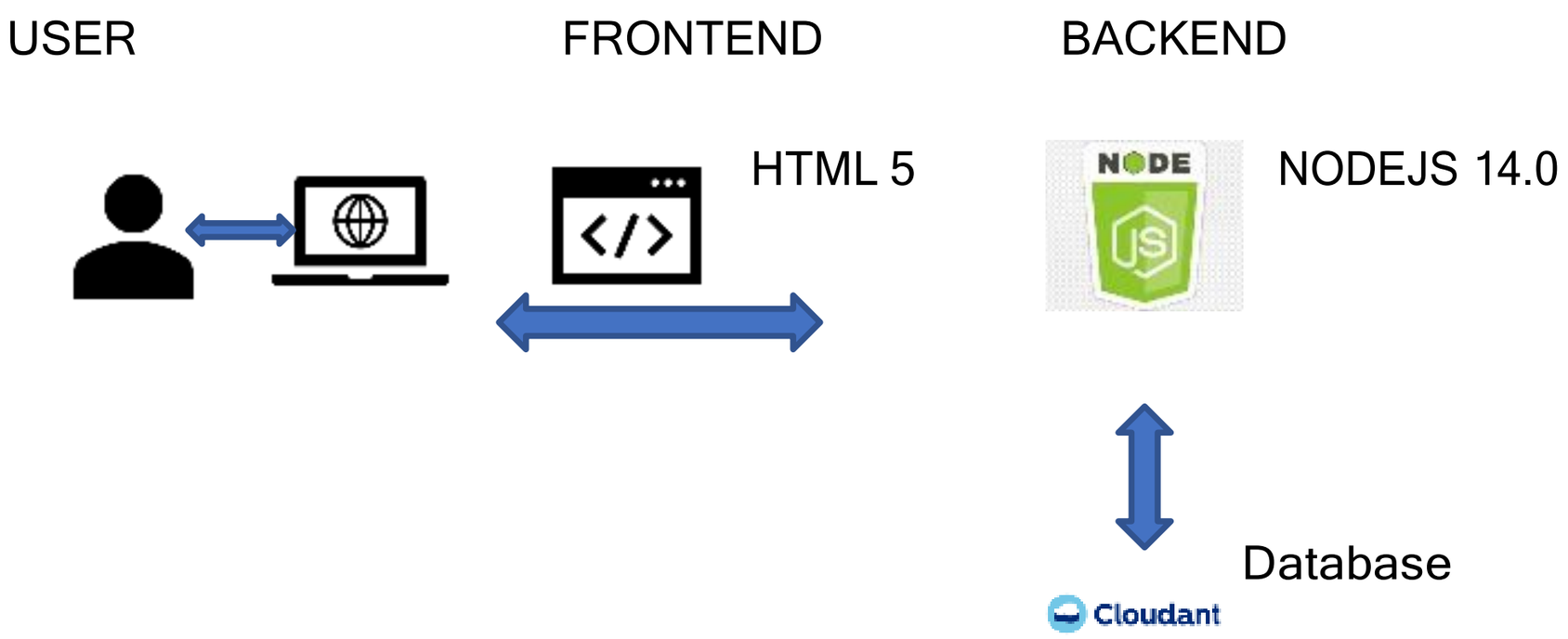
Software Requirements:

- **Power BI Desktop:** This is a Windows application that you can use to create reports and publish them to Power BI.
- **Power BI Service:** This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.
- **Power BI Mobile:** This is a mobile application that you can use to access your reports and dashboards on the go.

CHAPTER 3

PROJECT ARCHITECTURE

3.1 Architecture



Here’ s a high-level architecture for the project:

1. **Data Collection:** Real-time restaurants data is collected from various sources. This could be achieved using services like Azure Event Hubs or AWS Kinesis.
2. **Data Storage:** The collected data is stored in a database for processing. Azure SQL Database or AWS RDS can be used for this purpose.
3. **Data Processing:** The stored data is processed in real-time using services like Azure Stream Analytics or AWS Kinesis Data Analytics.
4. **Machine Learning:** Predictive models are built based on processed data using Azure Machine Learning or AWS SageMaker . These models can help in predicting restaurant business, ratings, etc.
5. **Data Visualization:** The processed data and the results from the predictive models are visualized in real-time using Power BI. PowerBI

Allows you to create interactive dashboards that can provide valuable insights into the data.

6. **Data Access:** The dashboards created in Power BI can be accessed through Power BI Desktop, Power BI Service (online), and Power BI Mobile.

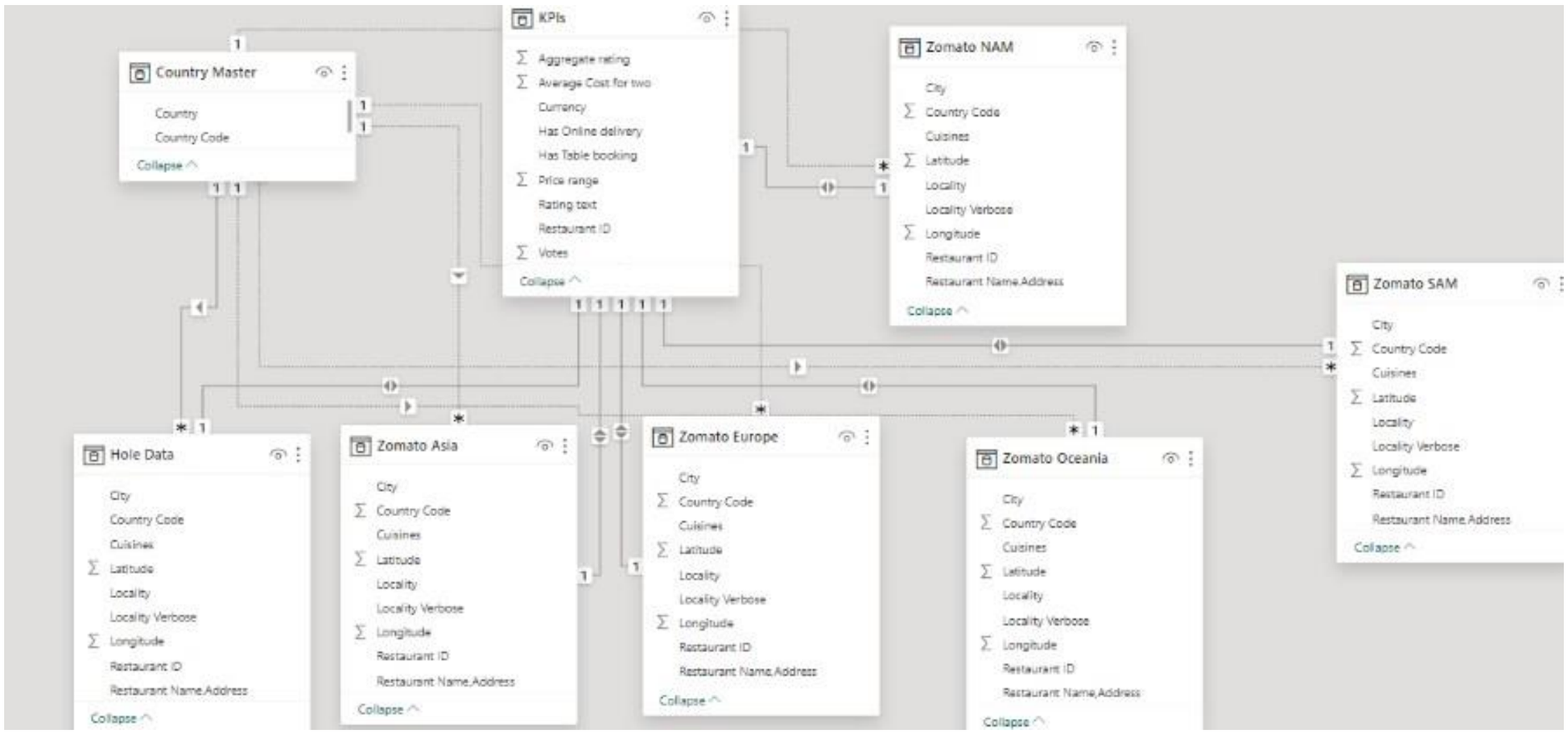
This architecture provides a comprehensive solution for business analysis of online food delivery apps.

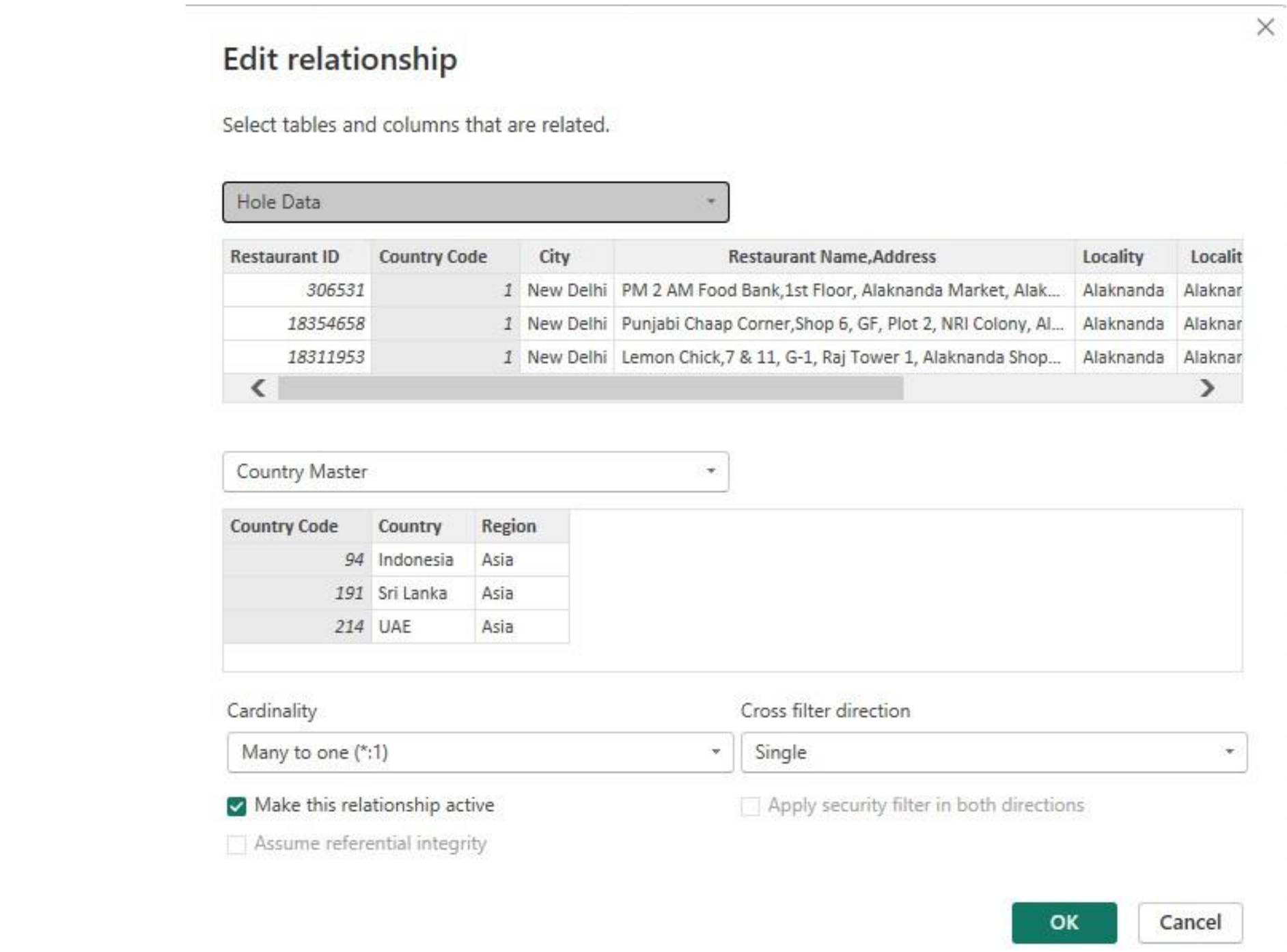
CHAPTER 4

MODELING AND RESULT

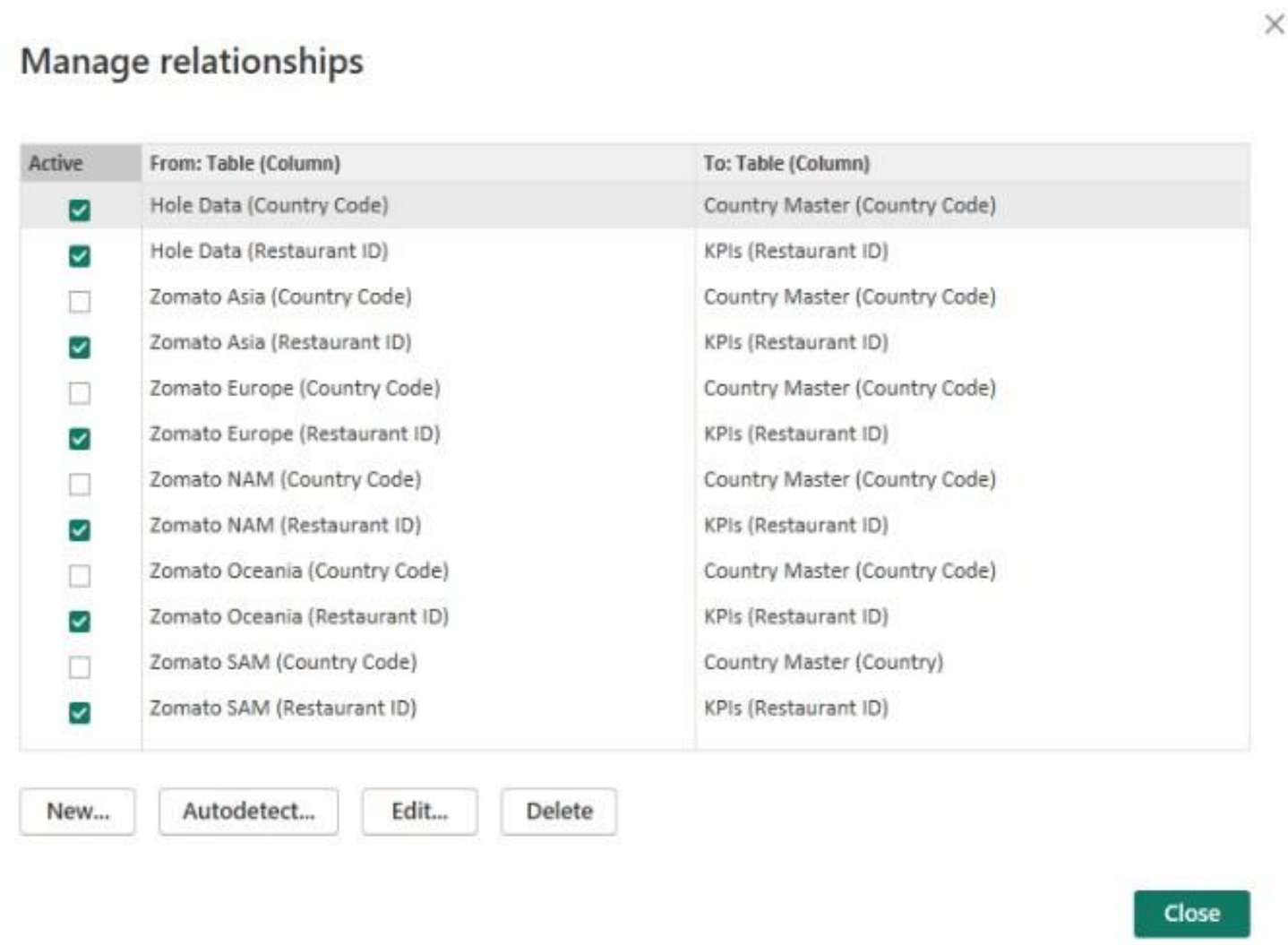
Manage relationship

The “ file will be used as the main connector as it contains most identifier (Country , Country code) which can be use to relates the 6 data together. The “ file is use to link the client profile geographically district ”

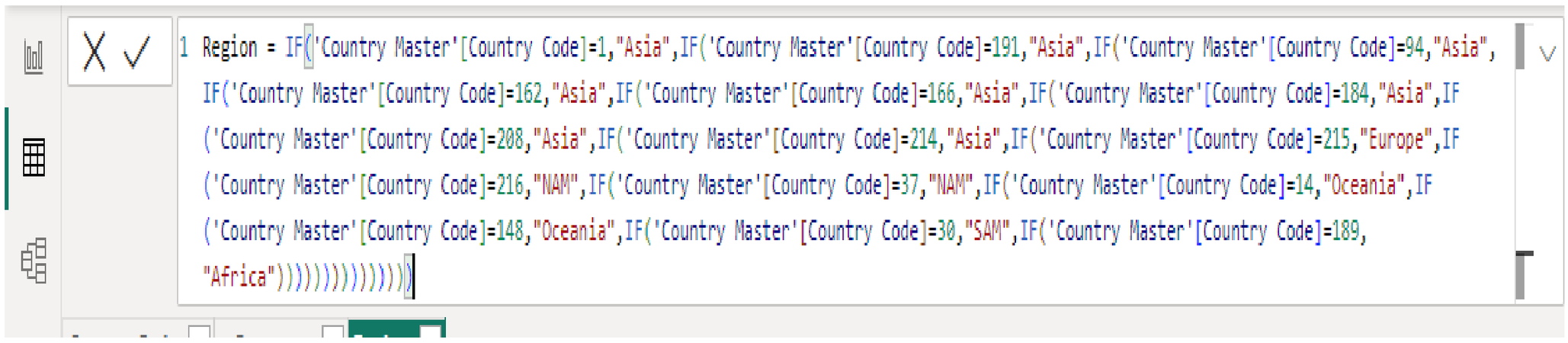




In Power BI, editing relationships allows users to adjust how tables are linked together, which is crucial for accurate data analysis. This feature enables usersto establish or modify connections between tables based on common fields, ensuring data integrity and enabling seamless querying across multiple tables. By editing relationships, users can define relationships as one-to-one, one-to-many, or many-to-many, depending on the nature of the data. This flexibility empowers users to refine their data models, resolve data inconsistencies, and optimize performance. Overall, editing relationships in Power BI is a fundamental aspect of data modeling, enabling users to create robust and efficient data structures that support their analytical needs.



Condition Column:



```
1 Region = IF('Country Master'[Country Code]=1,"Asia",IF('Country Master'[Country Code]=191,"Asia",IF('Country Master'[Country Code]=94,"Asia",
  IF('Country Master'[Country Code]=162,"Asia",IF('Country Master'[Country Code]=166,"Asia",IF('Country Master'[Country Code]=184,"Asia",IF
  ('Country Master'[Country Code]=208,"Asia",IF('Country Master'[Country Code]=214,"Asia",IF('Country Master'[Country Code]=215,"Europe",IF
  ('Country Master'[Country Code]=216,"NAM",IF('Country Master'[Country Code]=37,"NAM",IF('Country Master'[Country Code]=14,"Oceania",IF
  ('Country Master'[Country Code]=148,"Oceania",IF('Country Master'[Country Code]=30,"SAM",IF('Country Master'[Country Code]=189,
  "Africa"))))))))))))))
```

This query is used to connect the another coloums.use this query to split the region from the exiting data.then the data visualization is much better. In Power BI, conditions are utilized extensively to manipulate, filter, and format data. These

conditions can be applied in various aspects of Power BI development, such as filtering data displayed in visuals, creating calculated columns based on specific criteria, applying conditional formatting to visuals, defining measures with dynamic logic, transforming data in the Power Query Editor, implementing hierarchical filtering, and parameterizing queries for interactive filtering. Essentially, conditions in Power BI empower users to tailor their data analysis, visualization, and transformation processes to suit their specific needs, enabling them to derive valuable insights and make informed decisions effectively.

Country Code	Country	Region
94	Indonesia	Asia
191	Sri Lanka	Asia
214	UAE	Asia
1	India	Asia
30	Brazil	SAM
14	Australia	Oceania
208	Turkey	Asia
189	South Africa	Africa
216	United States	NAM
215	United Kingdom	Europe
162	Phillipines	Asia
166	Qatar	Asia
37	Canada	NAM
148	New Zealand	Oceania
184	Singapore	Asia

In this data the new column added named Region to identify the country with thehelp of country code.every contry code have a uniqu region so easy to access the slicer.

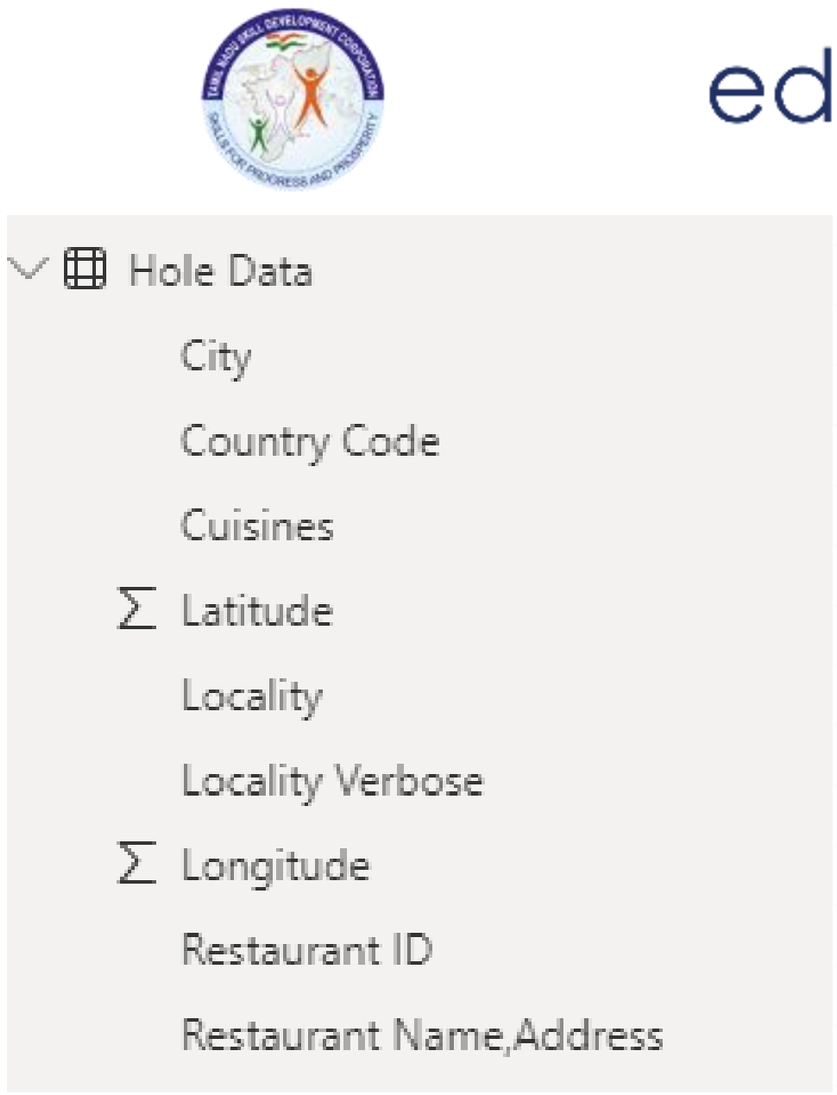
Changing the order of Region name at Power Query

Duplicat th “ /region the spli colum usin spac a delimiter.Then merge column by Region and direction. Refer to applied steps for

	Country Code	Country
1	94	Indonesia
2	191	Sri Lanka
3	214	UAE
4	1	India
5	30	Brazil
6	14	Australia
7	208	Turkey
8	189	South Africa
9	216	United States
10	215	United Kingdom
11	162	Phillipines
12	166	Qatar
13	37	Canada
14	148	New Zealand
15	184	Singapore

Edit the columns:

In “ country master” dataset there are so many duplicate columns. Use the condition columns to remove the duplicate columns and null values



Combine data set using power query:

Create a new dataset named “ Whole data” and combine all the existing datasetinto

One single dataset.it is used to access the visual more effectively .The main datasetNamed as Wholedata .it consist 6 type of dataset named as “ Zomato Africa”,

“ Zomato asia” ,” Zomato europe”,” Zomato oceania”,” zomato NAM” ,”Zomato sa”

,

Dashboard:

CONCLUSION

The project " Real-Time Analysis of Zomato Customers" using PowerBI has successfully demonstrated the potential of data analytics in the Food sector. The real-time analysis of customer data has provided valuable insights into customer behavior, preferences, and trends, thereby facilitating informed decision-making. The interactive dashboards and reports have offered a comprehensive view of customer data, enabling the identification of patterns and correlations. This has not only improved the efficiency of data analysis but also enhanced the zomato ability to provide personalized services to its customers. The project has also highlighted the importance of data visualization in making complex data more understandable and accessible. The use of PowerBI has made it possible to present data in a visually appealing and easy-to-understand format, thereby aiding in better decision-making.

FUTURE SCOPE

In the coming years, Zomato is poised to expand its scope beyond its current driven by a combination of technological innovation, evolving consumer demands. While continuing to strengthen its core food restaurant discovery services, Zomato is likely to explore new avenues for including vertical integration into food production and supply chain International expansion remains a presenting untapped potential for the company. Diversification into adjacent such as grocery delivery and alcohol delivery, along with a heightened sustainability and health-conscious options, could further broaden Zomato's Continued investment in technology,including artificial intelligence and learning, will enable Zomato to enhance its platform's capabilities and personalized experiences to users. Strategic partnerships and collaborations with industry players may unlock synergies and create new revenue streams. data monetization efforts leveraging Zomato's rich dataset could provide insights to businesses and advertisers. As Zomato navigates these challenges, its ability to innovate and adapt will be pivotal in shaping its future in the dynamic landscape of food delivery and hospitality

REFERENCES

https://youtu.be/ZgzGqoq3Xuc?si=ClRHlJTMjVwfV3VT

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