## Tech Saksham

## Case Study Report

# Data Analytics With Power BI

**“360-DEGREE BUSINESS ANALYSIS OF ONLINE DELIVERY APPS”**

“GOVERNMENT ARTS & SCIENCE COLLEGE”

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**ABSTRACT**

In the digital world, Online food ordering system is mainly designed primarily function for use in the food delivery industry. This system will allow hotels and restaurants to increase online food ordering such type of business. The customers can be selected food menu items just few minutes. In the modern food industries allows to quickly and easily delivery on customer place. Restaurant employees then use these orders through an easy to delivery on customer place easy find out navigate graphical interface for efficient processing.

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**CHAPTER 1**

* 1. **Problem statement :**

**Different food delivery applications often provide different offers or discounts. Users are also not satisfied with their delivery time and random cancellations.**

**The current food delivery applications provide different discounts on the same item but in different platform. It is also seen that delivery time of an item is not same in all the applications. Adding all the discounts and estimated delivery time of different food joints under a single interface will be economical and less time consuming.**

**1.2 Proposed solution :**

**The proposed solution is to develop a Power-BI dashboard that can analyze and visualize Business Analysis of food delivery App. It's time to create solutions for the problem. To understand their situation, I have to step into their shoes. Here are the ideas that I have thought of Bringing discounts and offers of different applications under a single interface. Comparing the delivery time of different apps together. Users will get an idea of the timings and they can choose accordingly. No cancellation guarantee should be provided before placing an order maybe in form of an icon which can be accessed by the restaurant manager and connected to their website**

**1.3 Feature:**

**Real-Time Order Tracking: The dashboard will provide real-time order tracking of Hungry customers want their meals delivered fast.**

**Customer Segmentation: It will segment customers based on perceptions about service quality, bargain hunter, impatient, interested in new innovations, etc.**

**Trend Analysis: The dashboard will identify and display trends in customer behavior.**

**Predictive Analysis: It will use historical data to predict future customer behavior.**

**1.4 Advantages:**

**Time saving: To save consumers' time by removing the need to go to restaurants in person or stand in queue for takeaway orders.**

**Promotions and Discounts: To provide exclusive offers, discounts, and loyalty awards to draw in new clients and keep existing ones coming back.**

**Revenue Generation: Bring money through delivery fees, commissions from affiliated eateries, and prospective advertising opportunities.**

**1.5 Scope:**

**Food delivery apps are third-party services that connect restaurants with customers, convenience stores, and more. In such a technological era, people find it difficult to visit restaurants. Most often, they are unable to manage time for picking up their order. Therefore, most of them like to use the food delivery app. Food delivery apps also help restaurants improve cust improvcustomer satisfaction by reducing wait times and helping employees connect with customer.**

**CHAPTER 2**

**SERVICES AND TOOLS REQUIRED**

**2.1 Services Used:**

There are numerous benefits of online food delivery service, such as

1.Audiences can make orders from anywhere else.

2.The online delivery service saves time from the customer side.

3.Restaurants can collect better customer data.

4.Most restaurants offer online food delivery 24 hours. That's why customers can make late night food delivery orders**.**

**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.

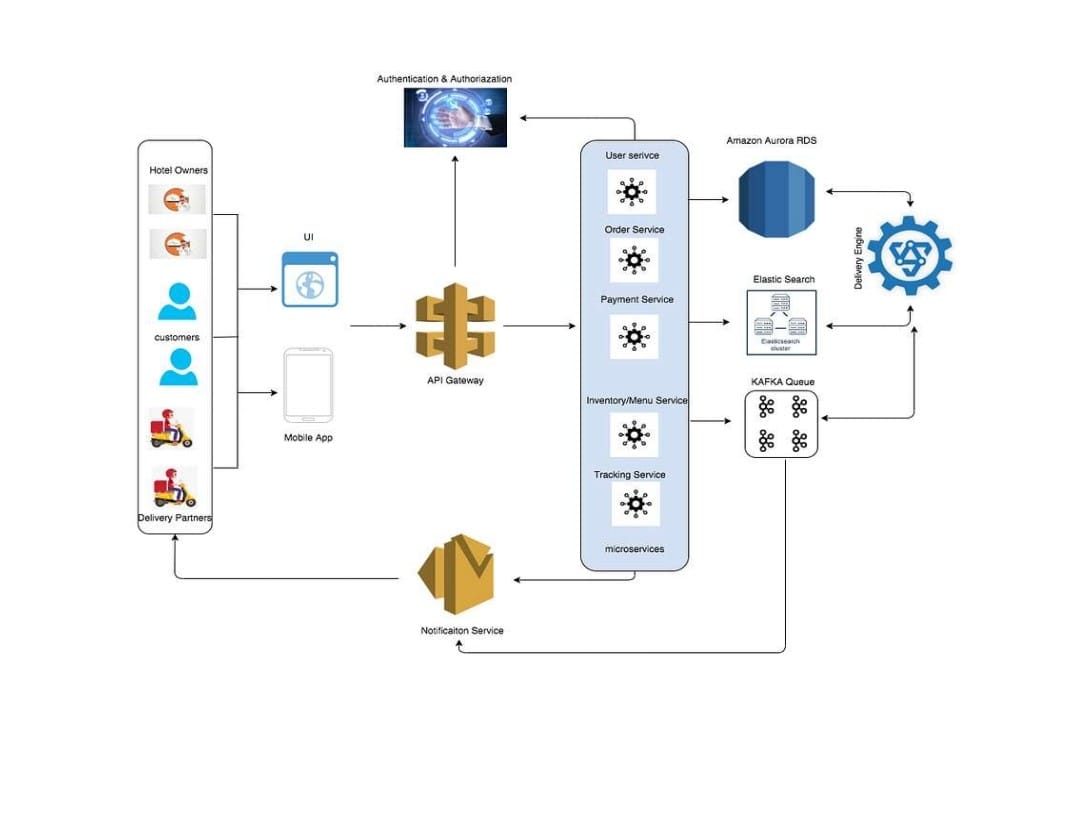
**Power BI Service**: This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.

**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 Storage: Food delivery apps use databases to store data about

users, restaurants, orders, and more.

2. Data Processing: Food delivery apps can use data to help improve

customer satisfaction, build brand image, and increase sales.

3. Machine Learning: Food delivery apps use machine learning to

improve their algorithms, which can help users get a more

personalized experience. For example, Zomato uses machine

learning to automate menu digitization, create personalized

restaurant listings, and predict food preparation times.

4. Data Visualization: The processed data and the results from the

predictive models are visualized in real-time using Power BI.

Power BI allows you to create interactive dashboards that can

provide valuable insights into the data.

5. 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 real-time

analysis of food delivery apps. However, it’s important to note that the

specific architecture may vary depending on the food delivery

connection, specific requirements, and budget. It’s also important to

ensure that all tools and services comply with relevant data privacy and

security regulations.

CHAPTER 4

MODELING AND RESULT

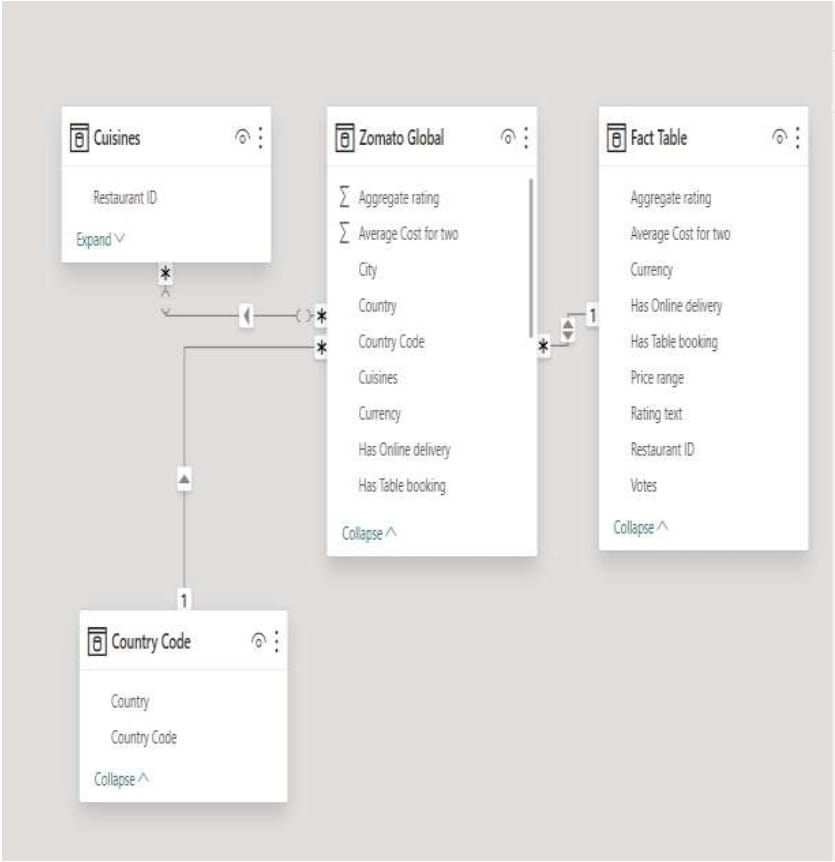
**Manage relationship**

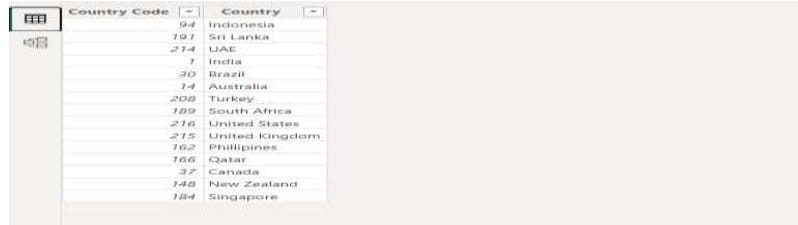
The “cuisines” file will be used as the main connector as it contains most key

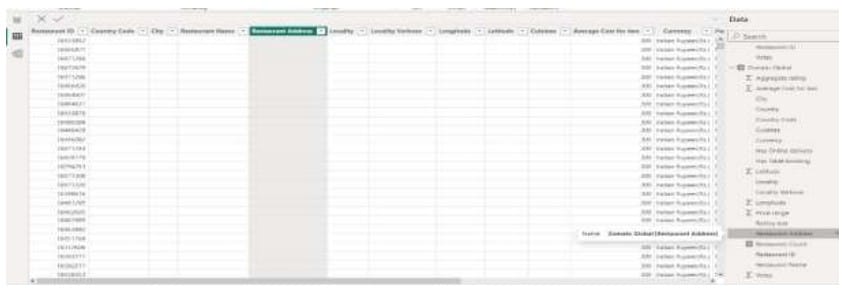
identifier (Restaurant ID, Fact table and Zomato global) which can be uses to

relates the 4 data files together. The “country code” file is use to link the client

profile geographically with “Zomato global









**Modelling for Gender and Age data**

Notice that the Gender and age of the client are missing from the data. These

can be formulated from the birth number YYMMDD where at months (the 3rd

and 4th digits) greater than 50 means that client is a Female. We can create a

column for Gender



For birthday, we need to reduce the birth month of the female by 50 and then

change the date format to DD/MM/YYYY adding 1900 to the year.

For Age, we shall assume it is year 1999 as explain previously and use it to

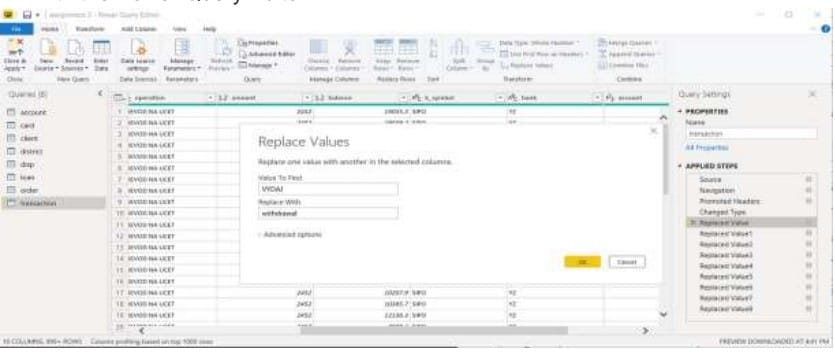
minus from the birth year.



Replacing values

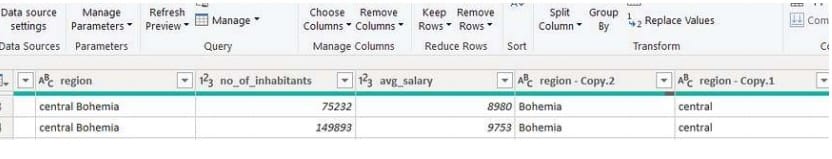
Set some fields to English for easy understanding, we replace values to English

with the Power Query Editor.

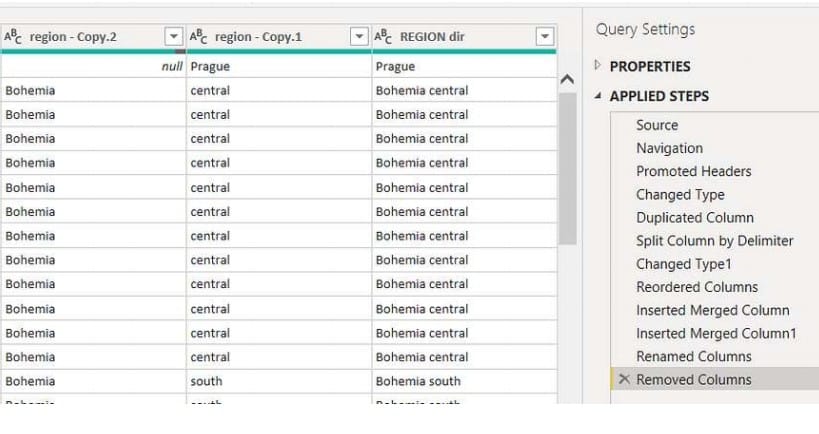


Changing the order of Region name at Power Query

Duplicate the “district /region” then split column using space as delimiter.



Then merge column by Region and direction. Refer to applied steps for details.



**Grouping of age by ranges**

As the customers’ age ranges from 12 to 88, we shall group them into different

generation age range for easier profiling, we will group the ages into 5 groups.

The Gen Y are youths,

Gen X are young working adults, some starting their families

Baby Boomer are working adults with families.

The silent Generations some are working and retired, living on pensions.

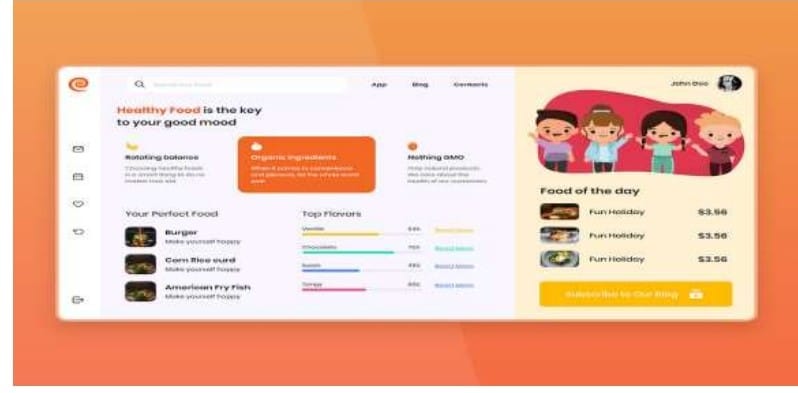
The greatest Generation, retired elderly living on pensions.

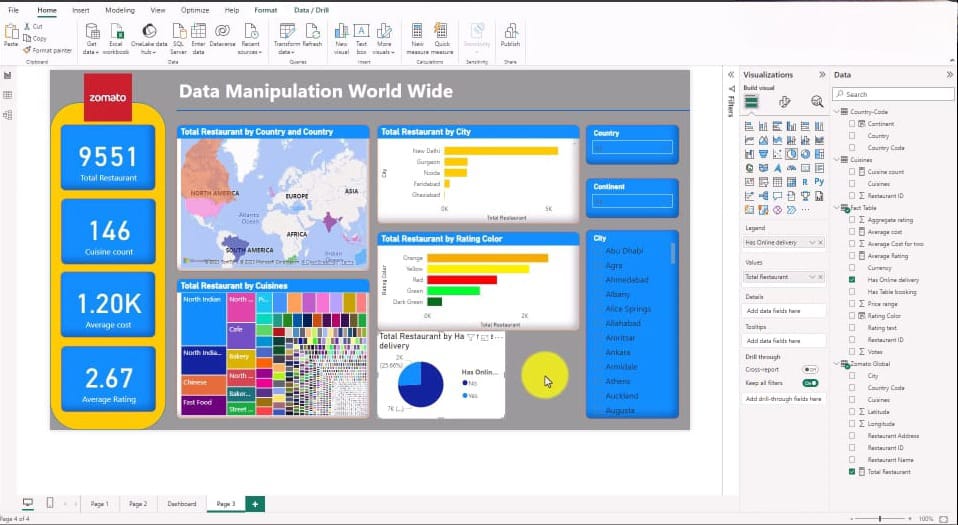
Values of such as “account Id” have also been set as Text.

And District name have been categorized as place to be use for the map to show

the sum of the inhabitants in each region

**DASHBOARD**





**CONCLUSION**

Nowadays, the traditional way of going to a restaurant and eating has

reduced considerably. It's a new age where technology dominates human

life.With the software and technological devices, exceptions are reduced and

even terminated. Also, people prefer easy, quick and safe access to everything.

This project is designed to meet the requirements of a restaurant. The Online

Food Ordering System provides a simple way to store details of the customer,

food items available and to generate the bill. It is an interface that allows the

customer to order the desired food which he/she can relish within a span of forty-

five minutes.

The project is designed is such a way that the user can modify the primary

information required to manage their profile successfully such as the information

about the deliver address and contact number. With this platform we developed,

we are hoping to reduce time wasting, avoid misunderstandings, provide easy

data flow, customer pleasure, and less hard work. We believe that we have

accomplished our goals and satisfied with the code we developed.

**FUTURE SCOPE**

The future scope of this project is vast. With the advent of advanced analytics and

machine learning, Power BI can be leveraged to predict future trends based on

historical data. Integrating these predictive analytics into the project could enable

the bank to anticipate customer needs and proactively offer solutions.

Furthermore, Power BI’s capability to integrate with various data sources opens

up the possibility of incorporating more diverse datasets for a more holistic view

of customers. As data privacy and security become increasingly important, future

iterations of this project should focus on implementing robust data governance

strategies. This would ensure the secure handling of sensitive customer data

while complying with data protection regulations. Additionally, the project could

explore the integration of real-time data streams to provide even more timely

and relevant insights. This could potentially transform the way banks interact with

their customers, leading to improved customer satisfaction and loyalty.

**REFERENCE**