Case Study Report

Data Analytics with Power BI

"360-Degree Business Analytic of Online delivery Apps Using PowerBi"

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ABSTRACT

In today's dynamic business landscape, organizations strive to gain a comprehensive understanding of their operations to make informed decisions swiftly and efficiently. Achieving a 360-degree view of business performance requires integrating data from various sources and analyzing it comprehensively. Power BI, a powerful business analytics tool from Microsoft, offers a robust solution for organizations seeking to unlock actionable insights across all facets of their operations.

This abstract explores the utilization of Power BI in enabling a 360-degree view of business. Firstly, it delves into the significance of holistic analysis in modern enterprises, emphasizing the need for integrated data analytics solutions. It then highlights the capabilities of Power BI, ranging from data integration and transformation to visualization and reporting.

Achieving a holistic view of business operations is imperative for organizations to make strategic decisions effectively. Microsoft Power BI offers powerful analytics capabilities, but to fully harness its potential for comprehensive insights,
organizations can develop custom applications tailored to their specific needs. This abstract proposes a solution that integrates Power BI with custom apps to provide a 360-degree view of business activities, enabling informed decision-making across all departments.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

In the contemporary business landscape, organizations face multifaceted challenges in attaining a comprehensive understanding of their operations. Despite the availability of vast amounts of data, many struggle to harness it effectively to gain actionable insights across all facets of their business. Traditional business intelligence solutions often fall short in providing a holistic view, leading to fragmented analysis and suboptimal decision-making.

1.2 Proposed Solution

Data Integration and Consolidation: Organizations must integrate data from various sources, including internal databases, cloud platforms, and external sources, into a centralized data repository. Power BI's robust data integration capabilities facilitate this process, ensuring data consistency and accuracy.

Advanced Analytics and Visualization: Power BI offers a wide range of analytical tools and visualization options, enabling organizations to explore data from multiple perspectives. Advanced analytics features such as predictive modeling, clustering, and anomaly detection empower users to uncover insights and trends that drive strategic decision-making.

Cross-Functional Dashboards and Reports: Customized dashboards and reports provide stakeholders with real-time visibility into key performance indicators (KPIs) across all business functions. Power BI's interactive dashboards allow users to drill down into data and gain deeper insights, fostering collaboration and alignment across departments.

Mobile Accessibility and Collaboration: Power BI's mobile app enables users to access insights on-the-go, ensuring decision-makers have timely information wherever they are. Additionally, built-in collaboration features facilitate sharing and collaboration, enabling teams to collaborate effectively and drive collective action.

Continuous Improvement and Optimization: Organizations must adopt a culture of continuous improvement, leveraging Power BI's feedback mechanisms and usage analytics to refine analytics models and optimize decision-making processes iteratively.

1.3 Feature

Real-time analysis : In Power BI's real-time data processing capabilities, organizations can analyze data as it is generated, enabling timely insights into business performance and trends. This real-time analytics capability is particularly beneficial for monitoring key metrics and responding swiftly to changes in the business environment.

Advantages:

Centralized Data Management : Power BI allows organizations to consolidate data from disparate sources into a centralized repository, ensuring data consistency and accuracy. By integrating data from various sources such as databases, cloud platforms, and external sources, organizations can gain a holistic view of their operations.

Scope:

Supply Chain Management: Analyze supply chain data to optimize inventory management, supplier relationships, and logistics. Monitor stock levels, track supplier performance, and forecast demand to ensure timely delivery and minimize stockouts.

Quality Control and Customer Satisfaction: Monitor product quality metrics, such as order accuracy and delivery condition, to ensure high customer satisfaction levels. Implement feedback mechanisms to collect customer feedback and address any issues promptly.

Financial Performance Monitoring: Track financial metrics such as profitability, margins, and costs associated with delivery operations. Conduct variance analysis to identify areas of overspending or underperformance and take corrective actions.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- **Order Management System**: Integrate data from the online delivery ı to capture details such as order IDs, timestamps, es, and customer information.
- **Payment Gateway**: Collect transactional data from the payment gateway to analyze payment trends, transaction volumes, and evenue streams.

2.2 Tools and Software used

Tools:

- **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:

- **PowerBI Desktop**: This is a Windows application that you can use to create reports and publish them to PowerBI.

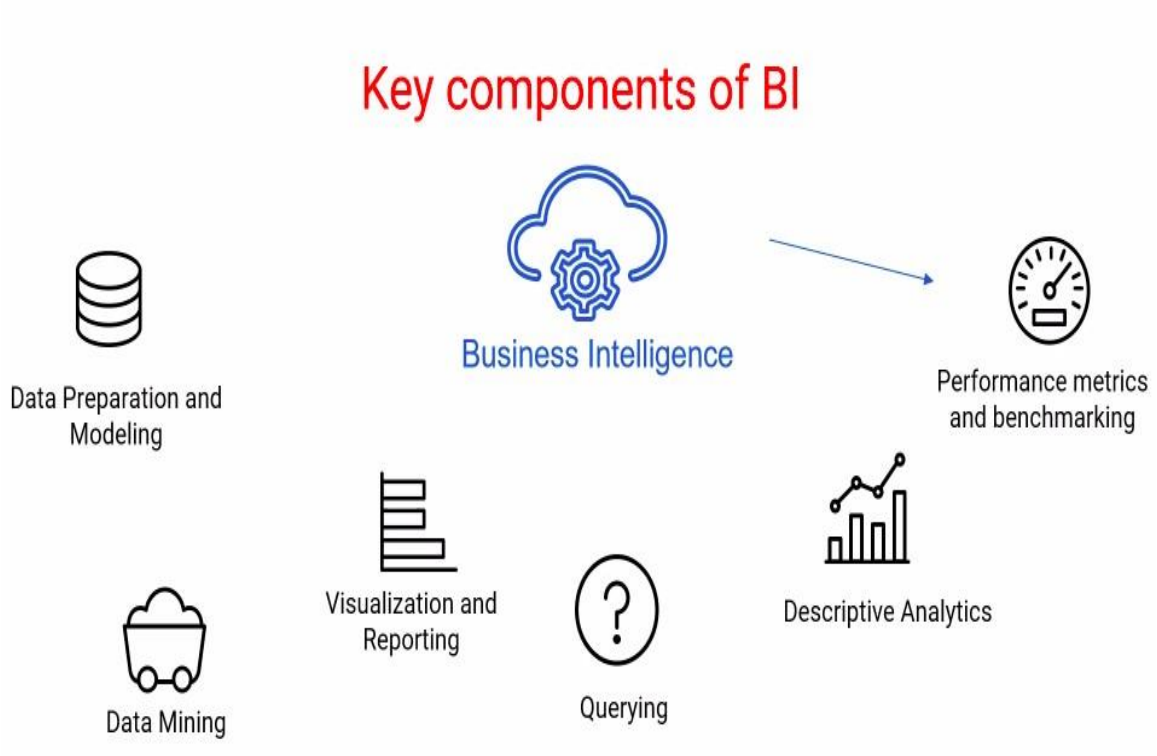
- **PowerBI Service**: This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.

- **PowerBI 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 customer data is collected from various sources like Food Delivery, customer interactions, etc.

2. **Data Storage**: The collected data is stored in a database for processing.

3. **Data Processing**: The stored data is processed in real-time using services like Data Analytics using Power BI

4. **Data Visualization**: The processed data and the results from the predictive models are visualized in real-time using PowerBI. PowerBI allows you to create interactive dashboards that can provide valuable insights into the data.

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

This architecture provides a comprehensive solution for real-time analysis of bank customers. However, it's important to note that the specific architecture may vary depending on the bank's existing infrastructure, 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 "Zomato Global" file will be used as the main connector as it contains most key identifier which can be use to relates the 3 data files together.

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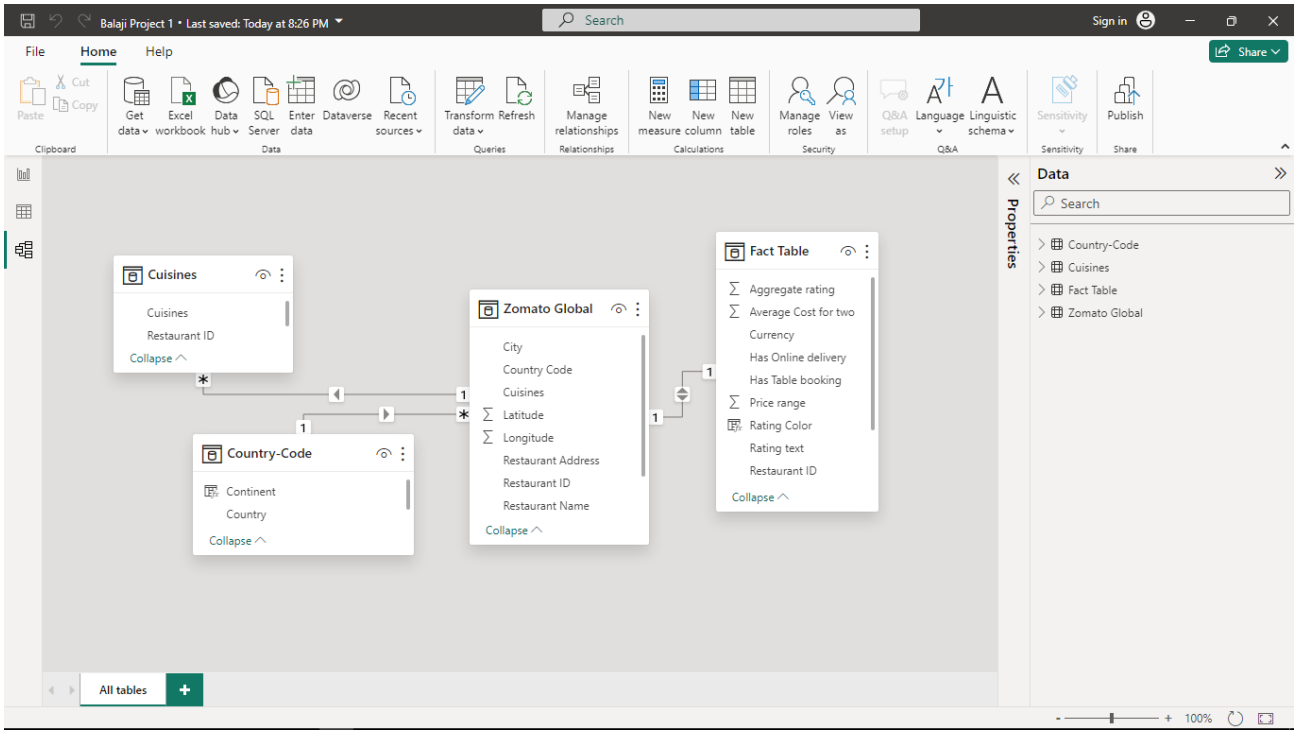
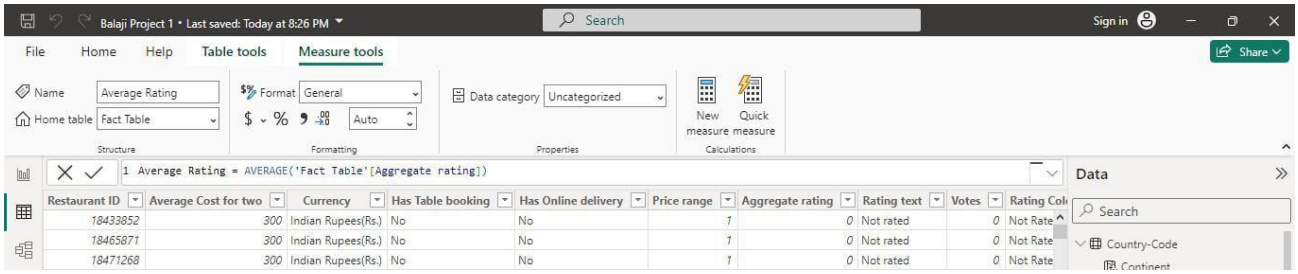
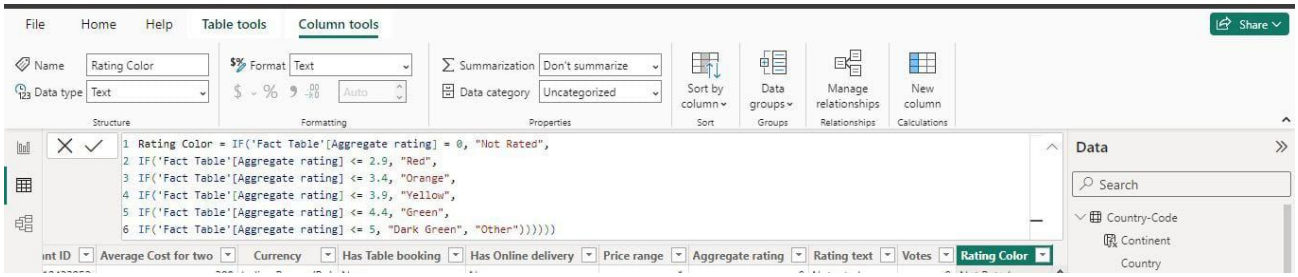
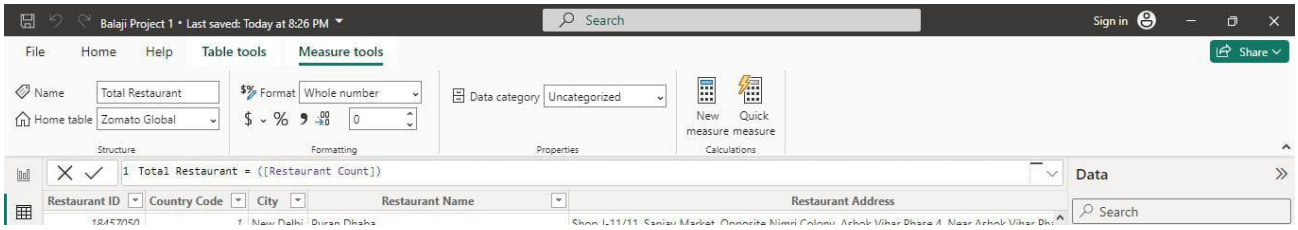


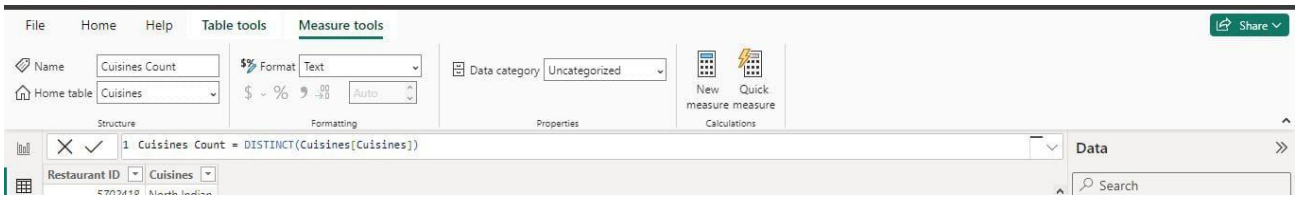


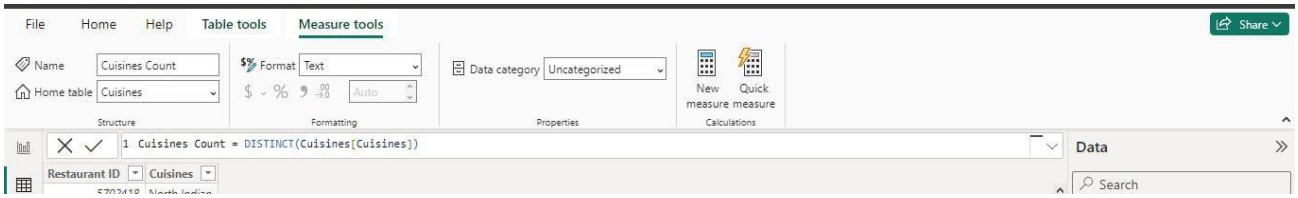
For birthday, we need to reduce the birth month of the female by 50 and then change the date format to DD/MM/YYYY adding 1900 to the year.

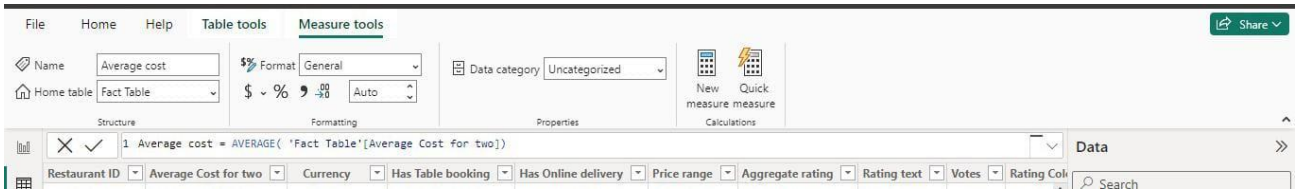


For Age, we shall assume it is year 1999 as explain previously and use it to minus from the birth year.









Replacing values:

Set some fields to English for easy understanding, we replace values to English with the Power Query Editor.

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

Dashboard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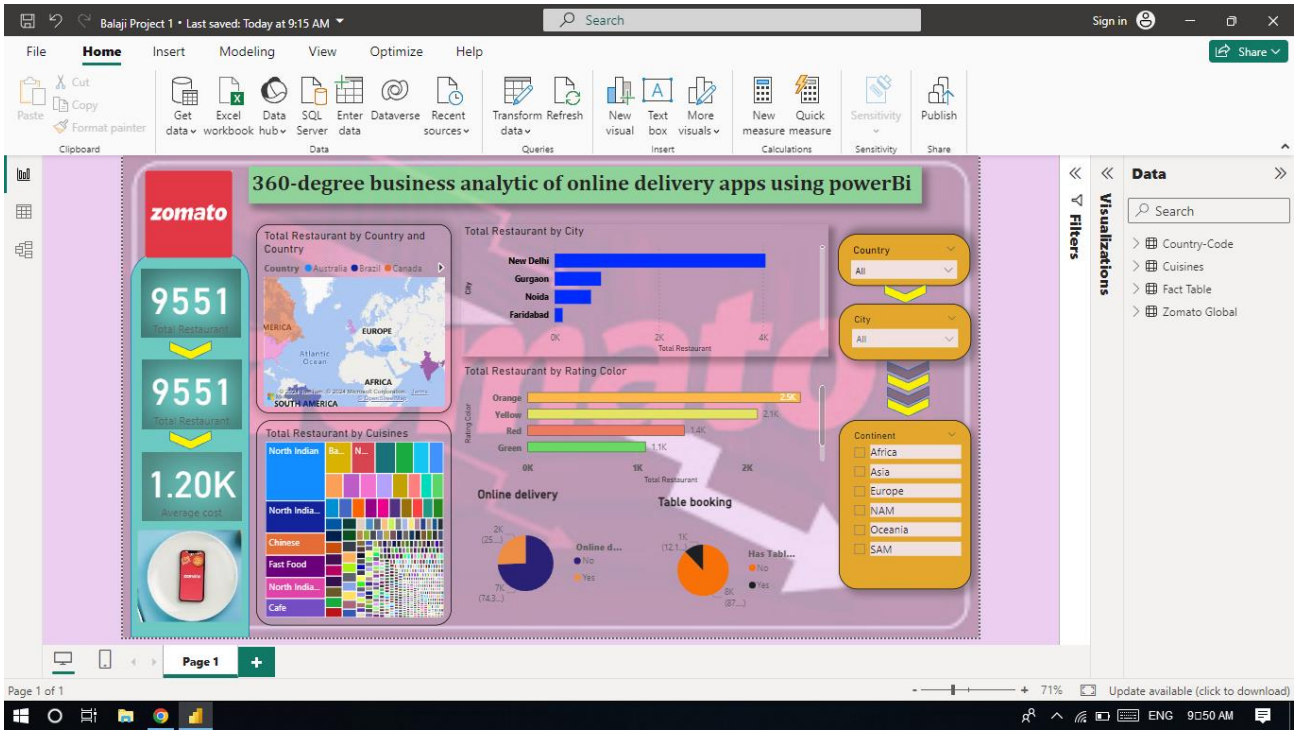
zomato
360 DEGREE BUSINESS
ANALYTICS OF ONLINE DELIVERY
APPS USING POWER BI



CONCLUSION

The project "360-degree Business analytics of online delivery apps using power BI" using PowerBI has successfully demonstrated the potential of data analytics in the Online Apps. The 360-degree Business 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

The future scope of this project is vast. With the advent of advanced analytics and machine learning, PowerBI can be leveraged to predict future trends based on historical data. Integrating these predictive analytics into the project could enable the Online Apps to anticipate customer needs and proactively offer solutions.

Furthermore, PowerBI'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.

Power BI could expand its integration capabilities to include a wider range of external data sources and APIs relevant to online delivery, such as weather data, traffic information, social media feeds, and competitor analysis. This would enable businesses to enrich their analytics with contextual information and gain a more comprehensive understanding of the factors influencing their operations.

Future versions of Power BI may incorporate advanced natural language processing (NLP) capabilities, allowing users to interact with data using conversational queries and commands. This would make analytics more accessible to non-technical users and streamline the process of extracting insights from data.

Blockchain technology offers the promise of increased transparency and traceability in supply chains. Power BI could integrate with blockchain networks to provide businesses with insights into the entire supply chain, from sourcing raw materials to final delivery, enabling greater transparency, efficiency, and trust among stakeholders.

Overall, the future of 360-degree business analytics using online delivery in Power BI holds immense potential for innovation and growth. By staying abreast of emerging technologies and evolving customer demands, businesses can leverage Power BI to drive efficiency, optimize operations, and deliver superior online delivery experiences.

REFERENCES

https://www.projectpro.io/article/power-bi-microsoft-projects-examples-and-ideas-for-practice/533

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