



Tech Saksham

Case Study Report

Data Analytics with Power BI

**“Supply Chain Analysis of
Inventories”.**

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INTRODUCTION:

power BI and dashboard date sources to interactive dashboards and BI werepors. power BI suite providesPower BI is a Date and Business Intelligence tool that converts date from different multiple software, connector, and service-power BI desktop, powerBi service based on saas, and mobile power Bi apps available for different platforms. these set of services are used by bussiness users to consume data and build Bi reports. power Bi desktop app is used to create reports,while power Bi

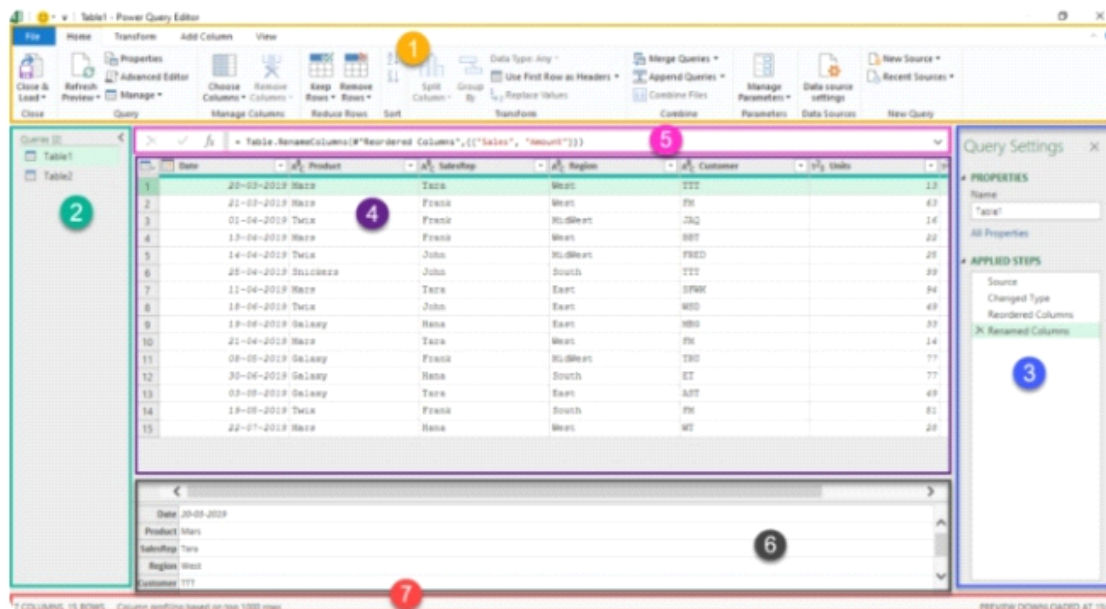


services (software as a service-saas) is used to publish the reports, and power Bi mobile app is used to view the reports .

POWER BI DASHBOARD:

Power BI offers interactive and dynamic features required for creating interactive dashboard. these dashboard, which are simply a collection of visuals, can be built with a deep level of interactivity and are accessible in various formats to consumers. since they are usually a single page, power Bi dashboards need to be well-designed highlights of an entire story.

POWER QUERY EDITOR



How to Access or Activate the Power Query Editor

Power Query Editor is where we can Transform or Shape our data using Queries and there are 3 ways to access it.

1. Launch the Power Query Editor using the Get Data button in Data tab of Excel Ribbon,



2. Load data into Power Query Editor using different options in the Get & Transform group

3. Edit an Existing Query.

User Interface of power Query

1. Query Editor Ribbon — Query Editor Ribbon is similar to the Excel Ribbon and has 5 Tabs in it. The different data transformation options available with Power Query are arranged in these tabs called File, Home, Transform, Add Column and View. We will explore these tabs in detail, later in this page.

2. Queries — This pane lists the Queries, Tables and Custom Functions present in a workbook. Using this pane we can Rename, Duplicate or Navigate to different

3. Applied Steps/Query Settings — Each transformation step applied to the data will be listed in their chronological order in this pane. We can Rename, Delete or Reorder a Transformation Step or Steps using this pane. When we select a particular step on this pane, the result of that applied step will be displayed in the Preview Grid.

4. Preview Grid/Data Pane — This area displays the preview of data at each applied step of a Query. We can also access different transformation options from the Column Header or Individual cell by right-clicking on them.

5. Formula Bar — Each transformation step in a Query will have a corresponding M Code. When we select a particular applied step from the Applied Steps Pane, corresponding M Code will be displayed in the Formula bar. We can edit or modify the code using this queries or tables in the current workbook

USER INTERFACE

For the boundary between computer systems, see Interface (computing).

"Man-machine interface" redirects here. For the communications protocol, see GSM Man-Machine Interface.



A graphical user interface following the desktop metaphor

In the industrial design field of human–computer interaction, a user interface (UI) is the space where interactions between humans and machines occur. The goal of this interaction is to allow effective operation and control of the machine from the human end, while the machine simultaneously feeds back information that aids the operators' decision-making process. Examples of this broad concept of user interfaces include the interactive aspects of computer operating systems, hand tools, heavy machinery operator controls and process controls. The design considerations applicable when creating user interfaces are related to, or involve such disciplines as, ergonomics and psychology.



Generally, the goal of user interface design is to produce a user interface that makes it easy, efficient, and enjoyable (user-friendly) to operate a machine in the way which produces the desired result (i.e. maximum usability). This generally means that the operator needs to provide minimal input to achieve the desired output, and also that the machine minimizes undesired outputs to the user.

User interfaces are composed of one or more layers, including a human-machine interface (HMI) that typically interfaces machines with physical input hardware (such as keyboards, mice, or game pads) and output hardware (such as computer monitors, speakers, and printers). A device that implements an HMI is called a human interface device (HID). User interfaces that dispense with the physical movement of body parts as an intermediary step between the brain and the machine use no input or output devices except electrodes alone; they are called brain–computer interfaces (BCIs) or brain–machine interfaces (BMIs).

Other terms for human–machine interfaces are man–machine interface (MMI) and, when the machine in question is a computer, human–computer interface. Additional



UI layers may interact with one or more human senses, including: tactile UI (touch), visual UI (sight), auditory UI (sound), olfactory UI (smell), equilibria UI (balance), and gustatory UI (taste).

ABOUT MY PROJECT

supply chain analysis of inventories:

proc Supply chain analysis can help businesses optimize their processes to remove redundancies in the supply chain while helping create new value-added processes. This increases efficiency, reduces costs and minimizes risks. Efficient supply chain management is the backbone of a streamlined and cost-effective operation.

Supply chain project management refers to the process of planning, executing, and controlling projects within the context of a supply chain or logistics operation. It involves the application of project management principles and practices to ensure that specific supply chain-related projects are completed successfully, on time, within budget, and with the desired outcomes.

It entails the application of processes, methods, skills, knowledge, and experience to develop and reach specific project objectives within agreed parameters, according to project acceptance criteria. The final deliverables of PM are constrained by a finite budget and timeframe. Key elements of PM include scope, schedule, quality, cost, risk, and procurement.

DATE SHEET

SUPPLY CHAIN ANALYSIS OF INVENTORIES (date sheet)in excel format



Sales

Product

Customer

...

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|----|-------------|--------------|-------------------|------------------|-----------|----------------|----------------------|--------|-------------|-------------------|---|---|---|---|---|---|---|
| 1 | PK_Customer | CustomerCode | CustomerFirstName | CustomerLastName | Country | CountryISOCode | City | Gender | Birthdate | CustomerFullName | | | | | | | |
| 2 | | 1 N79H709 | Arnaud | Gastelblum | Belgium | BE | Mouscron | M | 09-Apr-1982 | Arnaud Gastelblum | | | | | | | |
| 3 | | 2 Z5GR003 | Pauline | Peanut | France | FR | Villefranche sur mer | F | 23-Jun-1993 | Pauline Peanut | | | | | | | |
| 4 | | 3 H59L252 | Antoine | Legrand | Nederland | NL | Rotterdam | M | 08-Jun-1984 | Antoine Legrand | | | | | | | |
| 5 | | 4 030R794 | Coralie | Brent | Nederland | NL | Maastricht | F | 20-Apr-1962 | Coralie Brent | | | | | | | |
| 6 | | 5 B42W912 | Julien | Pomodoro | France | FR | Roubaix | M | 27-Nov-1985 | Julien Pomodoro | | | | | | | |
| 7 | | 6 I85S191 | Sarah | Croche | France | FR | Paris | F | 11-May-1959 | Sarah Croche | | | | | | | |
| 8 | | 7 L75A698 | Mike | Jeff | Nederland | NL | Amsterdam | M | 12-Dec-1976 | Mike Jeff | | | | | | | |
| 9 | | 8 K49A336 | Amina | Loo | Belgium | BE | Brussels | F | 23-Oct-1940 | Amina Loo | | | | | | | |
| 10 | | 9 Q44B467 | Bjorn | Bio | Belgium | BE | Charleroi | M | 23-Aug-1945 | Bjorn Bio | | | | | | | |
| 11 | | 10 Z91K849 | Lisa | Dagusti | Belgium | BE | Antwerp | F | 28-Nov-1957 | Lisa Dagusti | | | | | | | |
| 12 | | 11 K74L361 | Theresa | Limande | France | FR | Strasbourg | F | 12-Jun-1974 | Theresa Limande | | | | | | | |
| 13 | | 12 V17E452 | Hilde | Vanderelst | Nederland | NL | Amsterdam | F | 19-Oct-1969 | Hilde Vanderelst | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | |
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VISUALIZATION IN POWER BI:

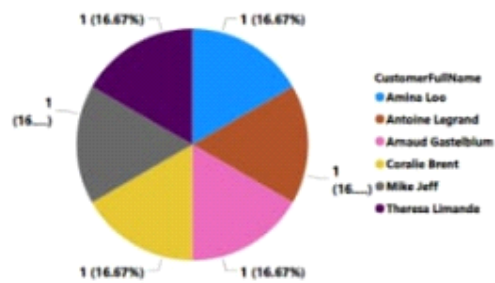
Stacked Column Chart And Donut Chart

This both chart shows in a **Count of PK_Product by Customer code and Product Code & Count of PK_Product by Customer Code and Lastname.**

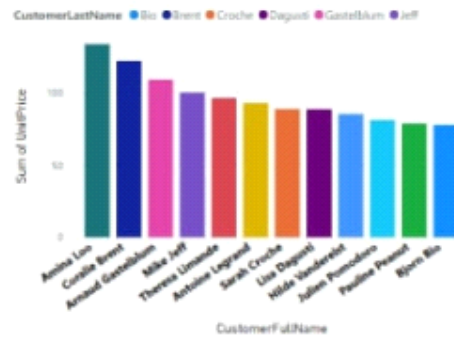
This both chart shows in a **Count of PK_Customer by Customer Fullname and Customer Lastname & Sum of Unitprice by Customer Fullname and Customer Lastname.**



Count of PK_Customer by CustomerFullName and CustomerLastName



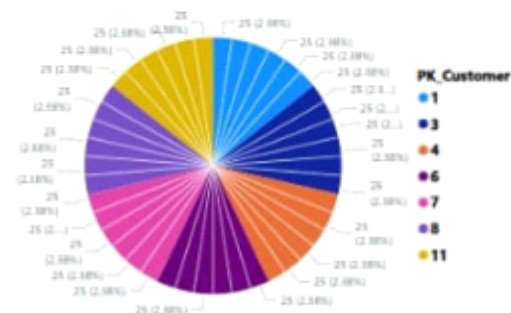
Sum of UnitPrice by CustomerFullName and CustomerLastName



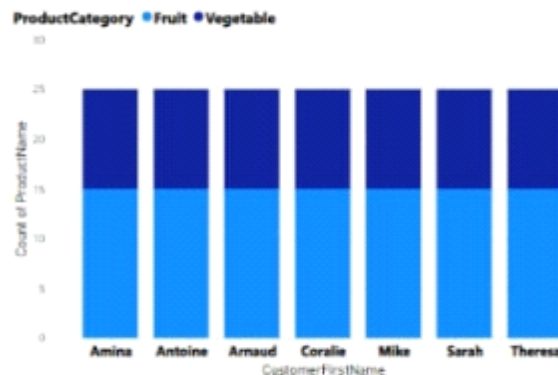
PIE CHART AND STACKED COLUMN CHART:

This both chart shows in a Count of Product name by PK_Customer and Quantity & Count of Product name by Customer Firstname and Product category.

Count of ProductName by PK_Customer and Quantity



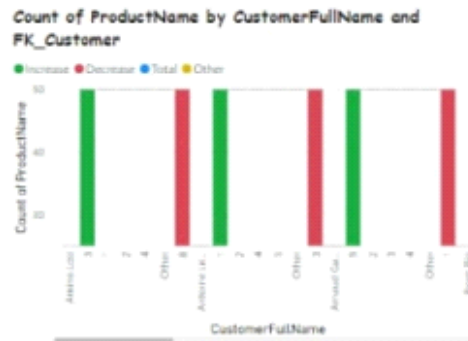
Count of ProductName by CustomerFirstName and ProductCategory



RIBBON CHART AND STACKED CHART:

This both chart shows in a Count of Product code by Customer last name and FK_product

D



ASHBOARD AND REPORT:

Supply Chain Analysis of Inventories.



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REPORTS:

Power BI offers numerous benefits for project tracking one of the main advantages is its ability to consolidate data from multiple source ,such as project management tools ,financial system , and spreadsheets. this allows project manages to have a holistic view of the project ,making it easier to identify trends,patterns,and anomalies.Power BI's advanced visualizations enable the creation of intuitive dashboards, making it effortless to track project progress at a glance.Furthermore, Power BI's interactive features allow users to explore and drill down into the data, gaining deeper insights into the project's performance.

Another benefit of using Power BI for project tracking is its ability to automate data refreshes.With Power BI, project managers can set up scheduled refreshers to ensure that the data is always up to date.This eliminates the need for manual data updates andreduces the risk of using outdated information for decision-making.

In addition, Power BI offers a wide range of collaboration features that enhance team collaboration and communication. Project teams cn easily share dashboards and reports with stakeholders, enabling real-time collaboration and



feedback. Power BI also allows users to add comments and annotations to specific data points, facilitating discussions and improving the overall project tracking process.

CONCLUSION

Microsoft Power BI is an indispensable tool in the realm of business intelligence. Its robust features, ease of use, and ability to transform raw data into actionable insights make it a top choice for organizations worldwide. As you wrap up your Power BI project, consider the following key points:

Data connectivity: Power BI's extensive connector library allows seamless integration with various data sources, including Google Analytics, SQL databases and more.

Custom visualization: Leverage Power BI's pre-designed visualizations to create interactive reports tailored to your specific needs. Additionally, explore third-party solutions like FluentPro's report packs for enhanced intelligence and analytics.

Performance Optimization: The columnar database engine within Power BI significantly improves performance by compressing large datasets, making it an efficient choice for data modeling.

<https://github.com/NithyaC1S23218/Nithya-power-bi>

