GOVERNMENT ARTS AND SCIENCE COLLEGE.

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Tech Saksham

Case Study Report

Data Analytics with Power BI

"Supply Chain Analysis Of Inventories"

"College Name"

NM ID	NAME
41746ECC53190DDC976843 4DBBB53BAB5	M.DHARANI

Trainer Name:UMAMAHESHWARI R

Master Trainer: UMAMAHESHWARI R

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INTRODUCTION

POWER BI:

Power BI is a Data Visulisation and Business Intelligence tool by Microsoft that converts data from different data sources to create various business intelligence reports. Microsoft Power BI makes it easy for businesses to spot trends, track performance, and make data-driven decisions.

Here, This power BI tutorial is your one-stop for learning power BI from scratch.It coversall the basic and advanced concept of power BI like, filter power BI, power BI desktop, functions in power BI, Power BI services, etc.

POWER BI DASHBOARD:

Power BI is data visualization and business intelligence tool which helps to convert data from different data source into interactive dashboards and BI reports.

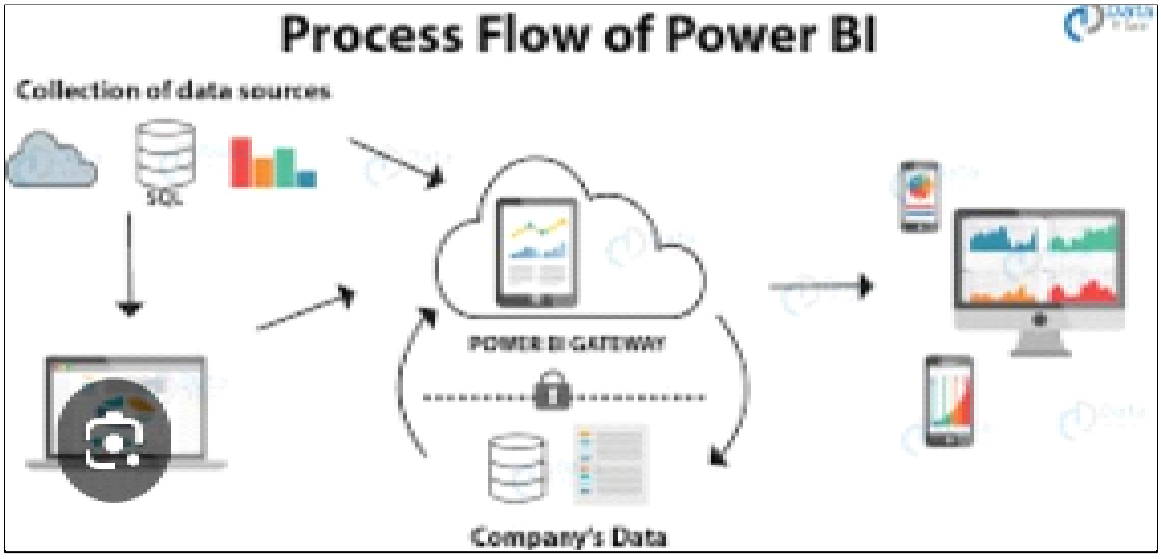
POWER BI PROCESS:

Bring data together and increasing the efficiency of creating clear metrics, interactive and user-friendly.

*Data Acquistion

*Data Enchancement

*Data Presentation



POWER QUERY EDITOR:

Power query is a powerful tool used to connect to many different data sources and transform the data into the shape you want.The scenarios outlined in this article are examples to show you how you can use power query to transform raw data into important actionable business insights.

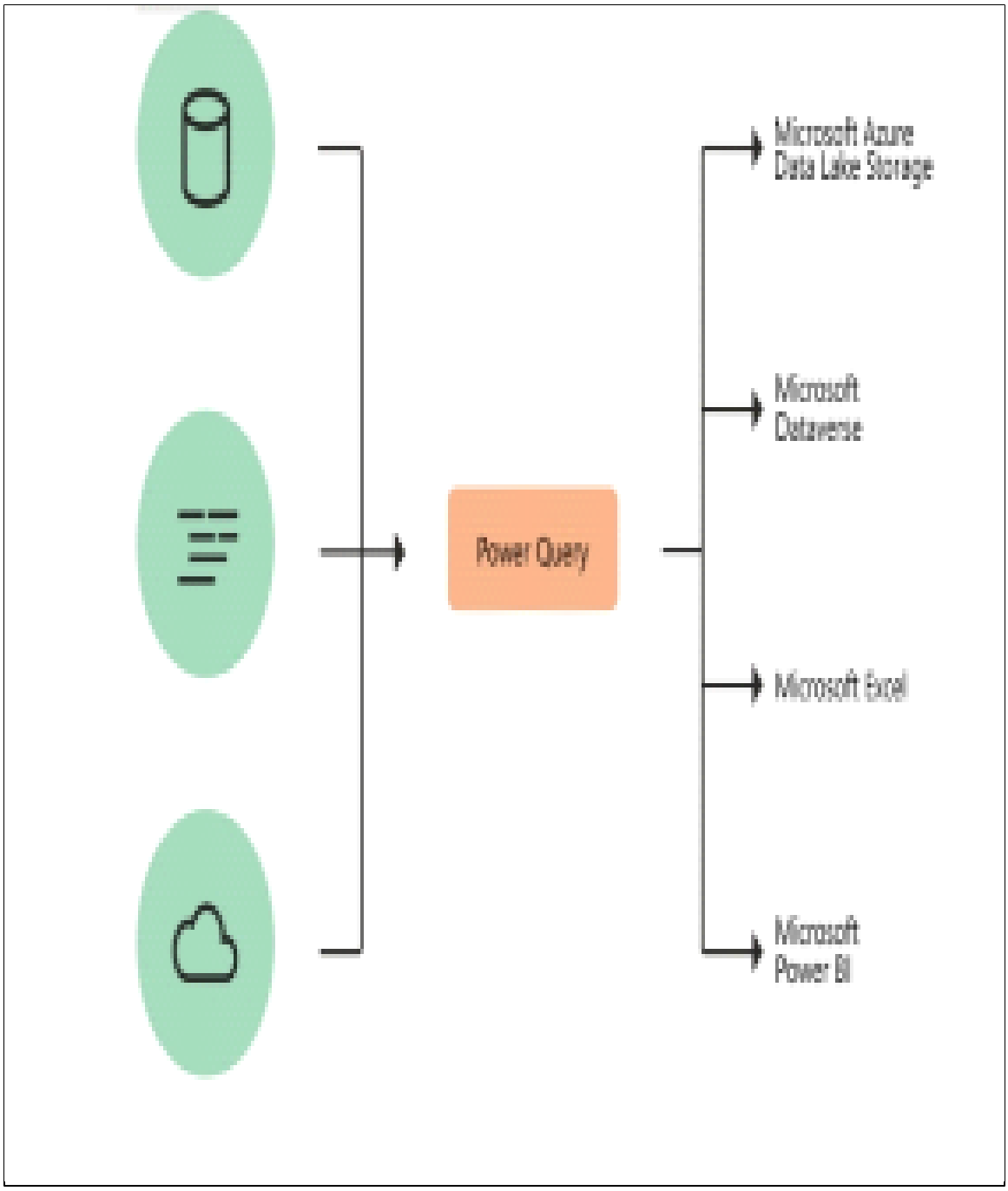
SOFTWARE REQUIREMENT:

* Power BI Desktop: This is a window 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.

*Power Query is a data transformation and data preparation engine. Power Query comes with a graphical interface for getting data from source and a power query editor for applying transformations.Because the engine is available in many products and services, the destination where the data will be stored depends on where power query was used.Using power query, you can perform the extract, transform, and load(ETL) processing of data.



The Power Query editor is the primary data preparation experience, where you can connect to a wide range of data sources and apply hundreds of different data transformations by previewing data and selecting transformations from the UL. These data transformation capabilities are common across all data sources, whatever the underlying data source limitations.

When you create a new transformation step by interacting with the components of

the power query interface. power query automatically creates M code required to do the transformation so you don't need to write any code.

Currently, two power query experiences are available:

* POWER QUERY ONLINE- Found in integrations such as Power BI dataflows, Microsoft power platform dataflows, Azure data factory wrangling dataflows, and many more that provide the experience through an online webpage.

* POWER QUERY FOR DESKTOP- Found in integrations such as power query for Excel and Power BI desktop.

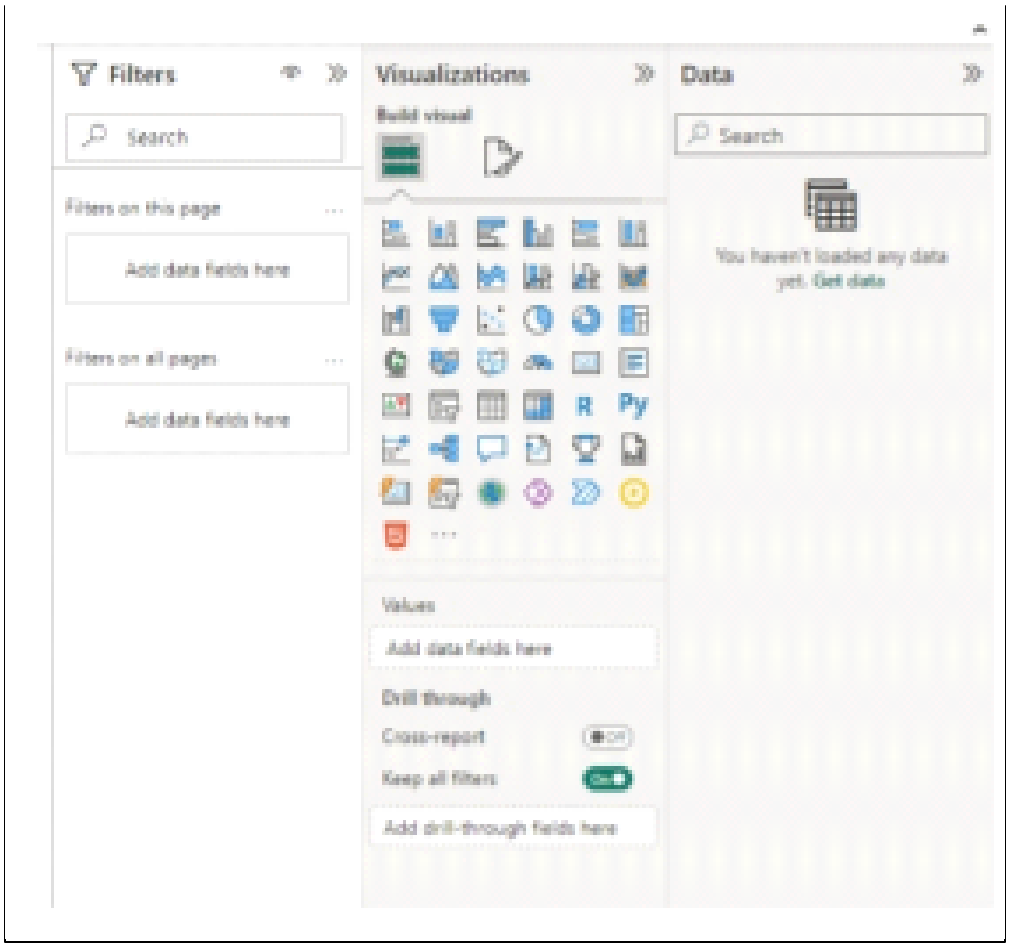
NOTE:

Although two power Query experiences exists, they both provide almost the same user experience in every scenario.

TRANSFORMATION:

The transformation engine in power query includes many prebuilt transformation functions that can be used through the graphical interface of the power query edopter.These transformations can be as simple as removing a column or filtering rows, or as common as using the first row as a table header. There are also advanced transformation options such as merge, append, group by, pivot, and unpivot.

All these transformation are made possible by choosing the transformation option in the menu, and then applying the options required for that transformation. The following illustration shows a few of the transformations available in power query editor.



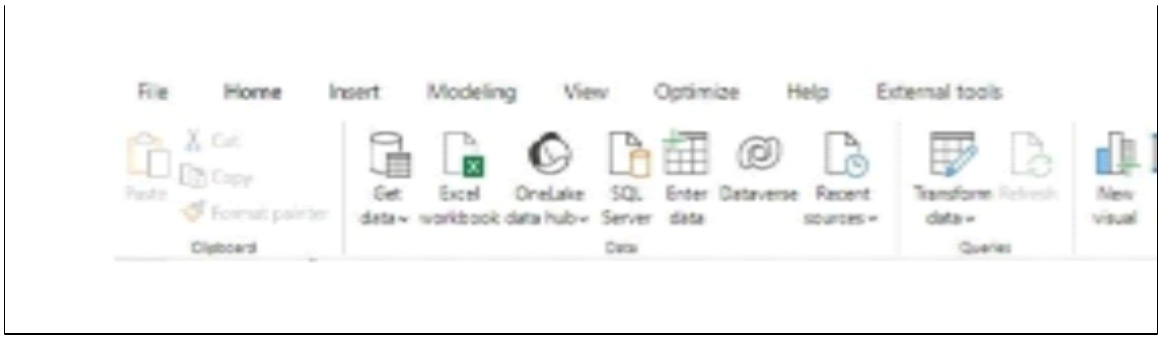
USER INTERFACE:

THE RIBBON:

At the top we have the familiar Microsoft Ribbon.Just like the ribbons in Microsoft Excel and word and powerpoint. the powerpoint. the power BI ribbon is filled with tools spilt up into different tabs.

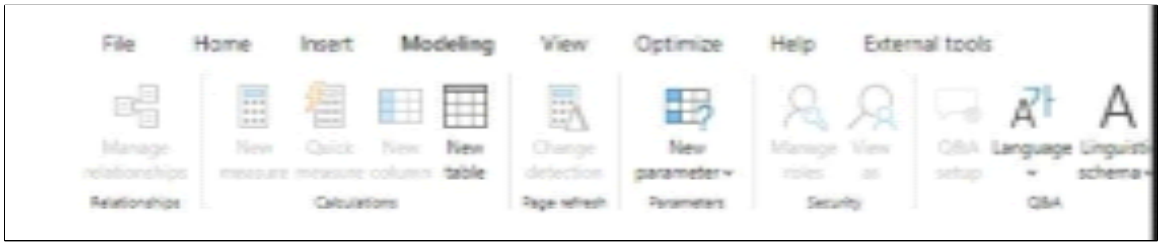
RIBBON TABS:

The HOME tab has tools for adding data sources. accessing power query editor (used for cleaning and transforming data) via the "Transform data" buttons. and adding in visuals and more.



The INSERT tab lets us insert different visual. text boxes. buttons.shapes and images.

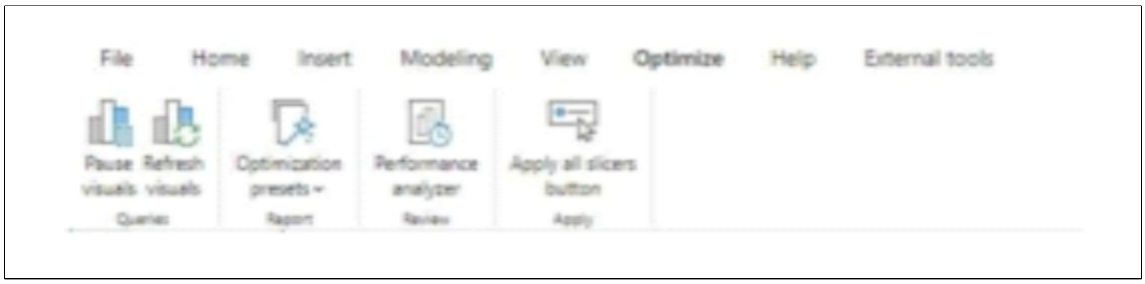
The MODELING tab lets us create DAX measures. or even new coloumns and tables. and also lets us set up a security model if we need some users to only see some data.



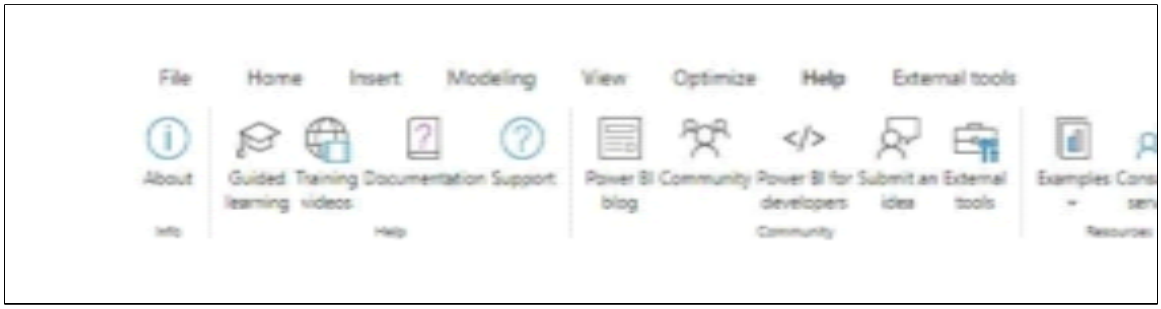
The VIEW tab lets us set a theme for our reports. set up mobile layouts. and access other panes that don't show up by default.

The OPTIMIZE tab has tools to check the efficiency of our reports...as in if

they are loading really slow. we can analyze what parts of the report are loading really slowly.



The HELP tab has links to things like Microsoft forums Power BI blog which has new about new features.



The EXTERNAL TOOLS tab is where 3rd-oatry tools live. There are only a few of these okay'd by Microsoft. and if you haven't download one. this tab doesn't show up.

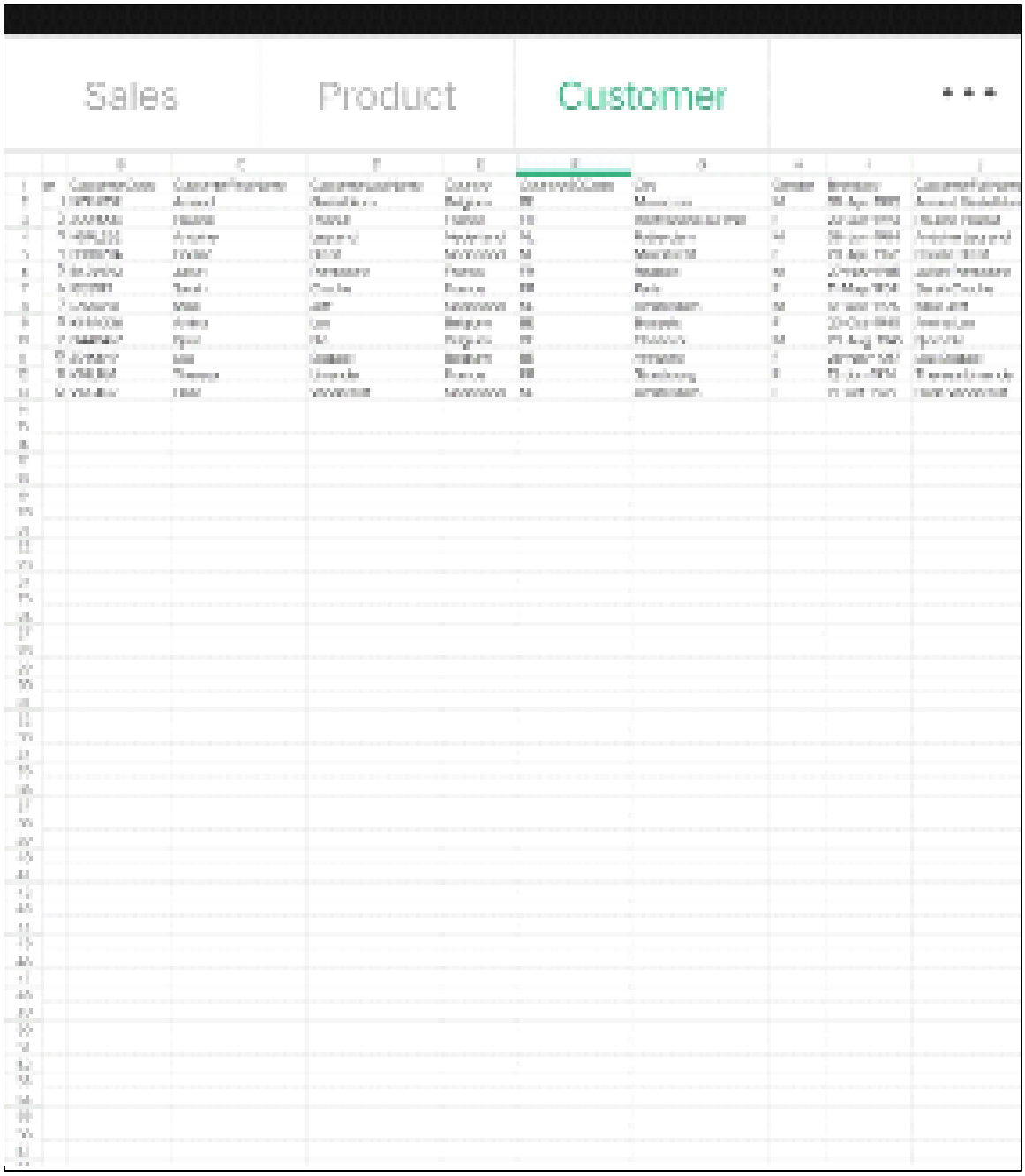
ABOUT MY PROJECT:

Supply chain management encompasses the planning and management of all activities involved in sourcing.Procruement.conversion.and.logistics management activities. Importantly. it also includes coordination and colloboration with channel partners. which can be suppliers. intermediaries. third-party service providers. and customers. In essence. supply chain management integrates supply and demand management within and across companies.

At the most fundamental level. supply chain management (SCM) is management of the flow of goods.data.and finances related to a product or service. from the procurement of raw materials to the delivery of the product at its final destination.

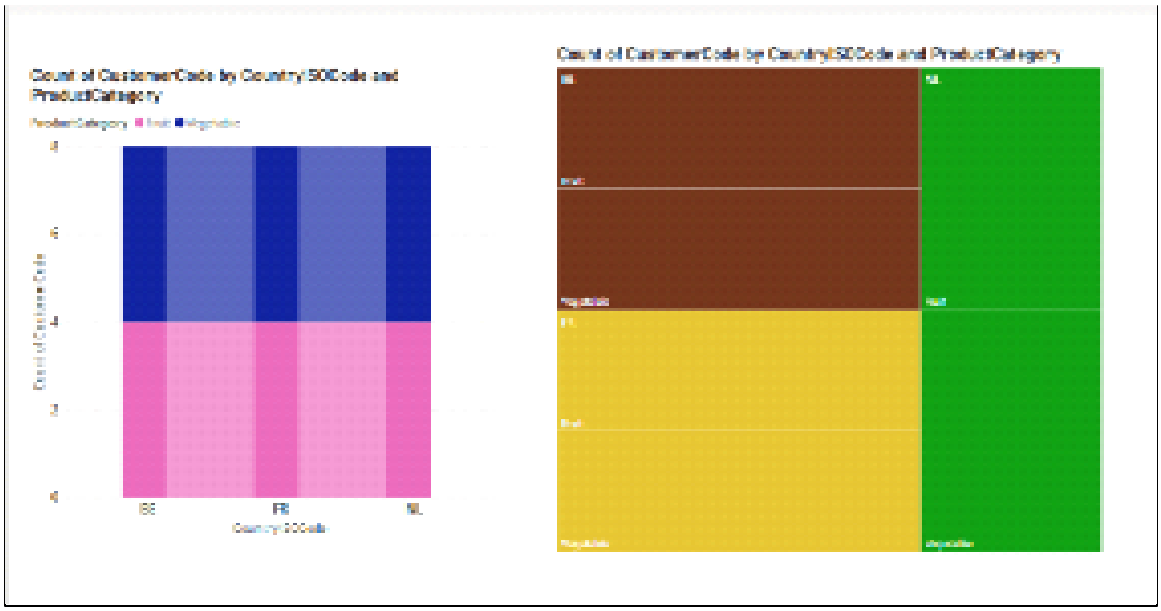

ANALYSIS
MANAGEMENT
LOGISTICS
SCM
SUPPLY CHAIN
MANAGEMENT
PROFIT
TIME TO
MARKET
PROCUREMENT
DISTRIBUTION
PLAN

DATA SHEET:



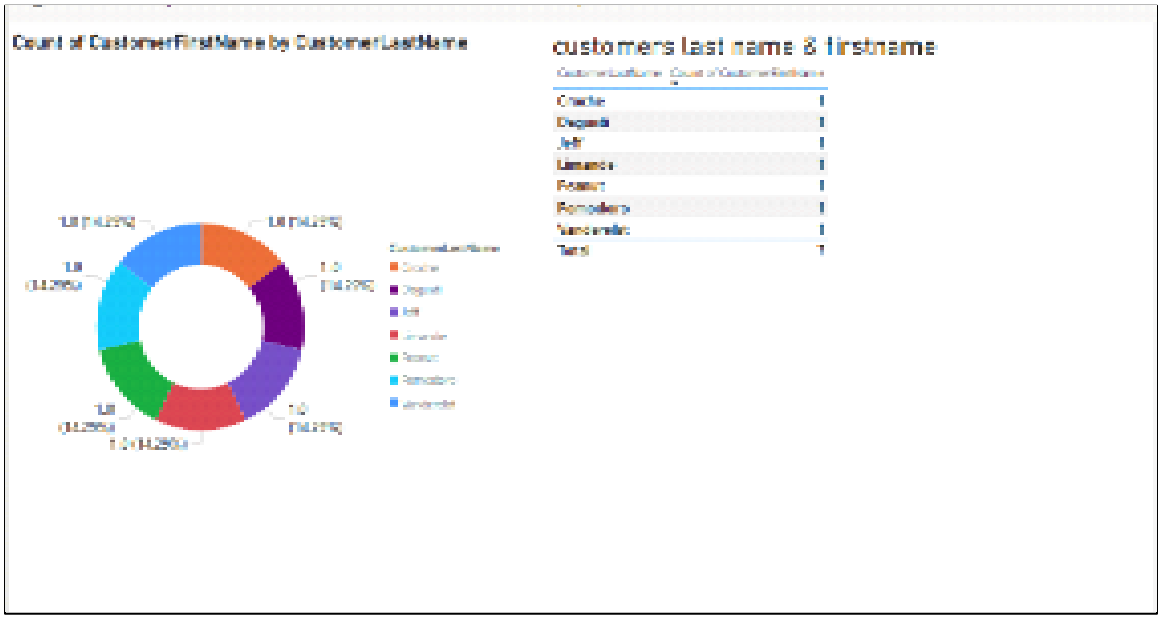
VISUALIZATION:

TREE CHART:



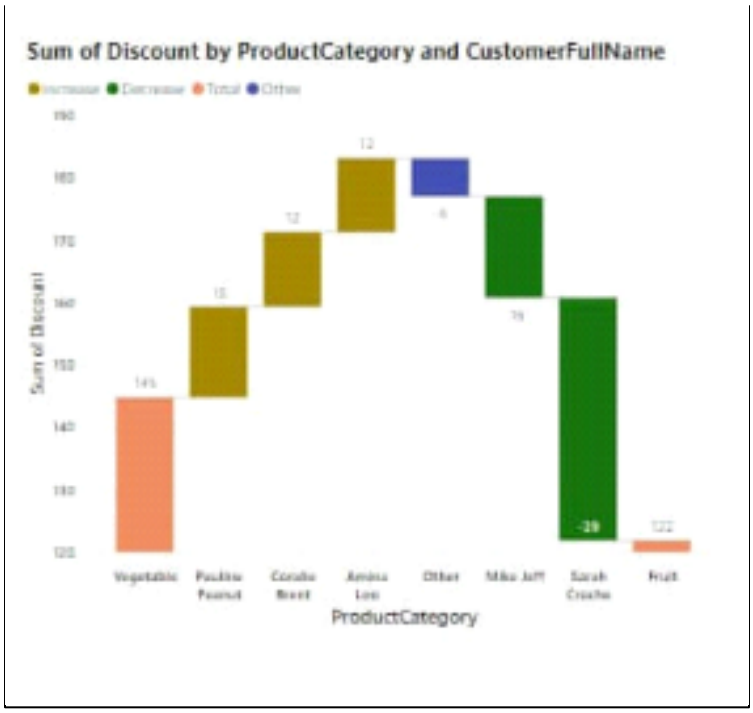
The above chart represent the customer code and customer ISO code and the product.

DOUGHNUT CHART:



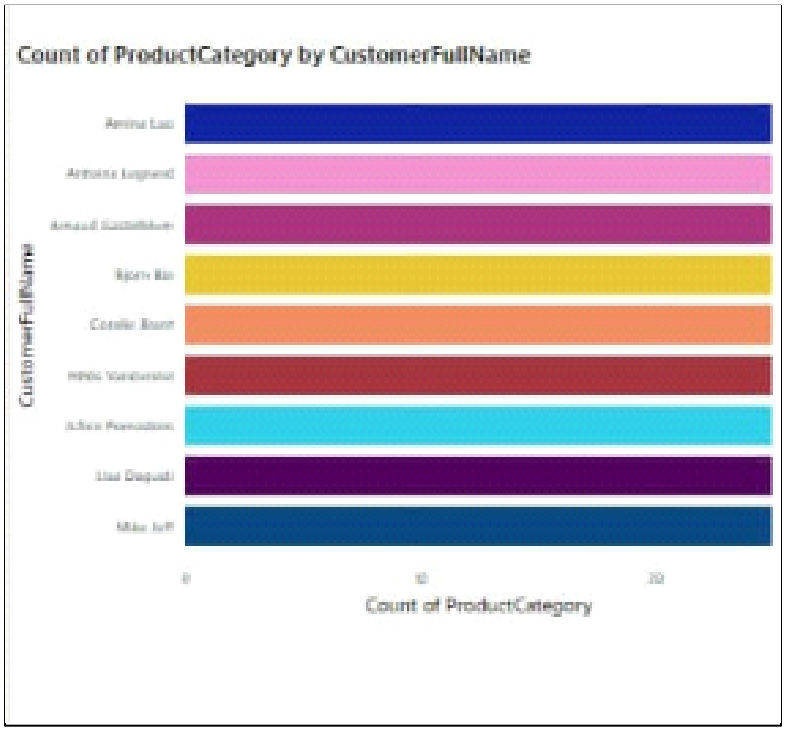
Its shows the graph between customers first and last name.

WATER FLOW CHART:



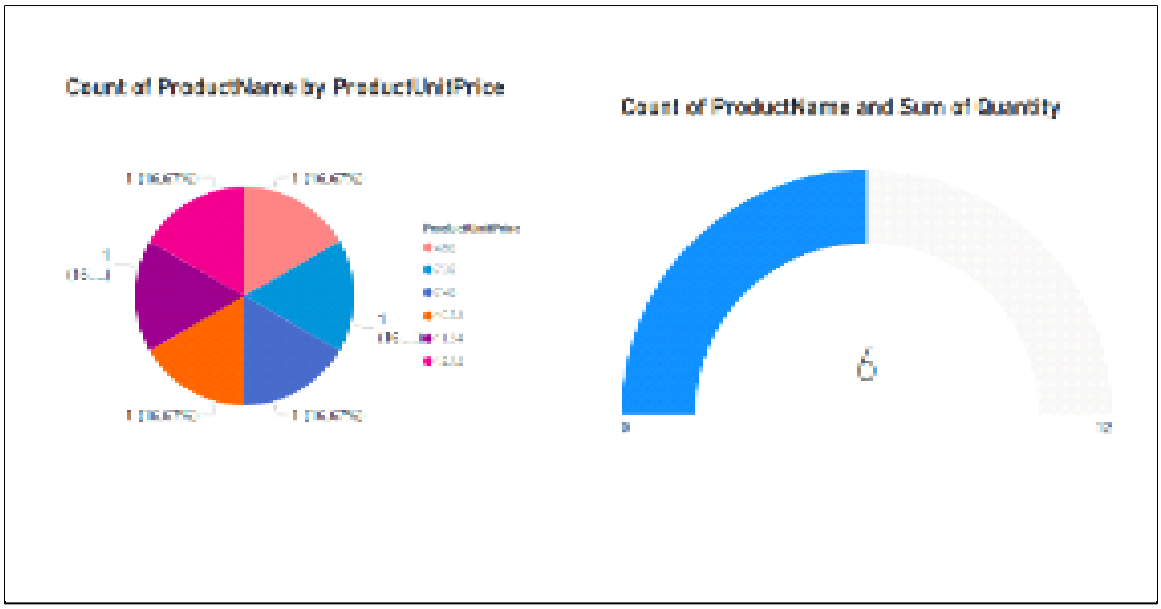
This visualize represent between product category and customer full name.

BAR CHART:



This graph represent count of product category and customer full name.

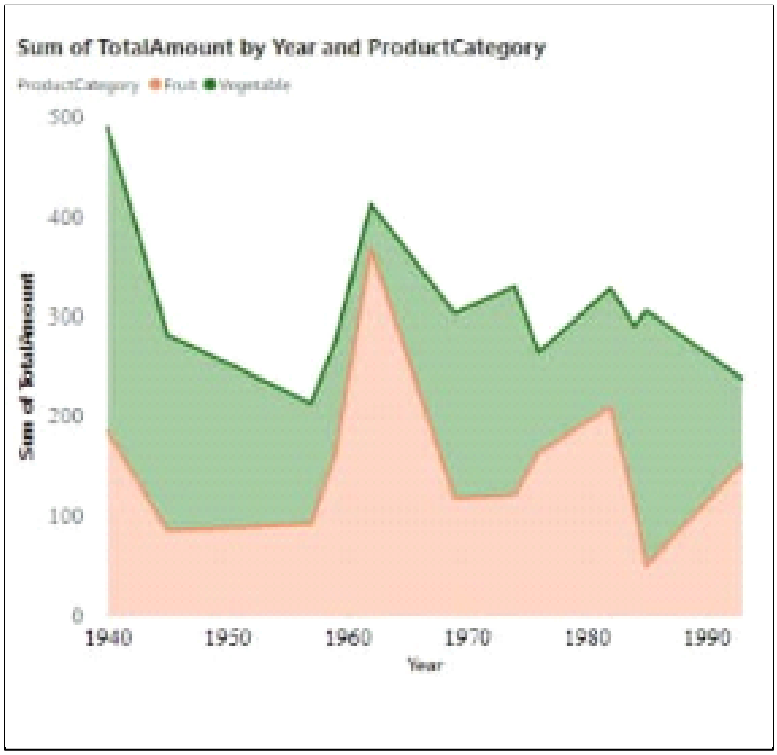
PIE CHART AND GAUGE CHART:



The pie chart represent the product name and product unit price.

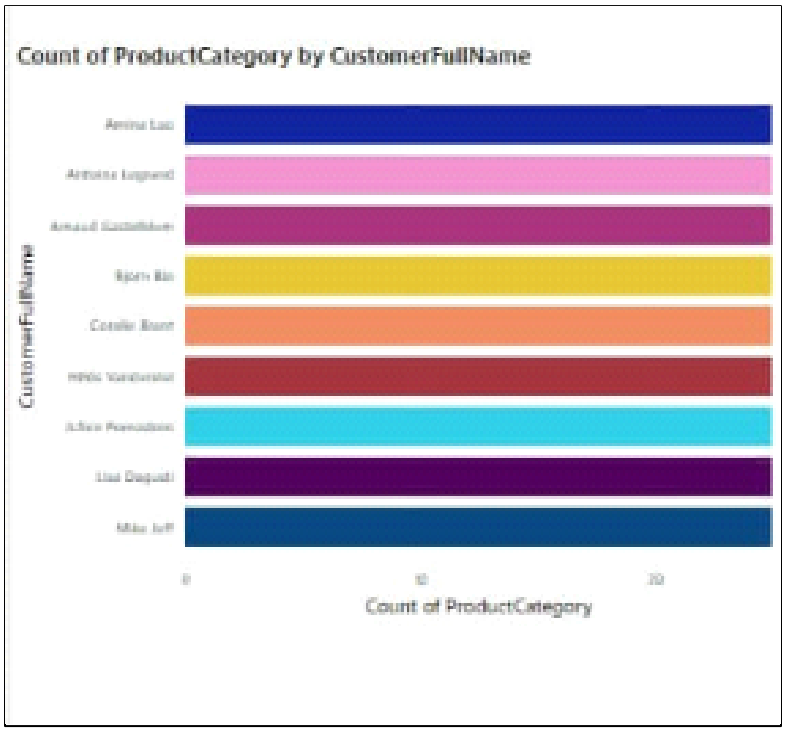
The gauge chart shows product name and their quantity.

BAR CHART:



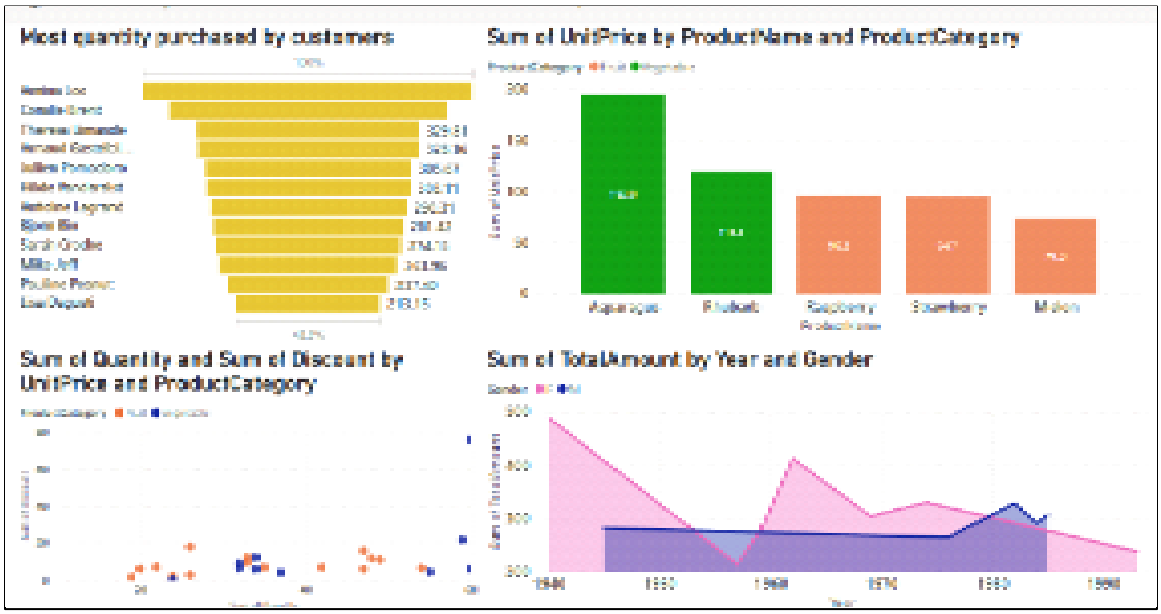
It represent the sum of total amount and product category.

COLUMN CHART:



This graph indicates the count of product category and customer full name.

DASHBOARDS AND REPORTS:



SUPPLY CHAIN ANALYSIS

REPORTS:

Power BI numerous benefits for project tracking. One of the main advantages is its ability to consolidate data from multiple sources, such as project management tools,financial systems,and spreadsheets.This allows project managers 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 into the data, gaining deeper insights into the project's performance.

Another benefit of using power BI for project tra king is its ability to automate data refreshes.With power BI, project managers can set up scheduled refreshes to ensure that the data is always up to date.This eliminates the need for manual data updates and reduce the risk of using outdated information for decision making.

In addition, Power BI offer a wide range of collobration features that enhance team coolobration and communication. Project teams can easily share dashboards and reports with stakeholders, enabling real-time annotations to specific data points, facilitating disscussion and improving the overall project tracking process.

CONCLUSION:

Microsoft Power BI is an indispensable tool in the real 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 you power BI project, consider the following key points.

CUSTOM VISUALIZATION:

Leverage power BI's pre-designed visulaisations to create interactive reports tailored to your specific needs. Additionally, explore third-party solutions like fluenpro'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 effect choice for data modeling.

DATA CONNECTIVITY:

Power BI's extensive connector library allows seamless integration with various data sources. including google analytics. SQL database. and more.