

FINAL TASK

“Digital User Churn Dashboard & Business Insight”

Bank Muamalat Indonesia - Business Intelligence

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Project Overview

This project involved analyzing sales data from customers, products, and orders. By identifying key relationships between tables, building a clean master dataset, and visualizing sales data, we were able to generate insights into sales performance and customer behavior. This supported data-driven decision-making and targeted strategies to maintain and grow sales.

Dataset

- Customers
- Products
- Orders
- Product Category

<https://drive.google.com/file/d/1RwsBQ1FriNfz6qiq0V5nD7gF7j081To3/view>

Tools



BigQuery





Looker Studio


1. Primary Key Identification


Primary key : a column, or a combination of columns, used **to uniquely identify** each row in a table. It must contain non-null, distinct values to ensure the uniqueness of each record. Serving as the **main identifier**, the primary key enables accurate and reliable relationships between tables.

- Primary key in Customers Table = CustomerID
- Primary key in Orders Table = OrderID
- Primary key in Products Table = ProdNumber
- Primary key in Product Category Table = CategoryID

Customers	
	CustomerID
	FirstName
	LastName
	CustomerEmail
	CustomerPhone
	CustomerAddress
	CustomerCity
	CustomerState
	CustomerZip

Orders	
	OrderID
	Date
	CustomerID
	ProdNumber
	Quantity

Products	
	ProdNumber
	ProdName
	Category
	Price

ProductCategory	
	CategoryID
	CategoryName
	CategoryAbbreviation

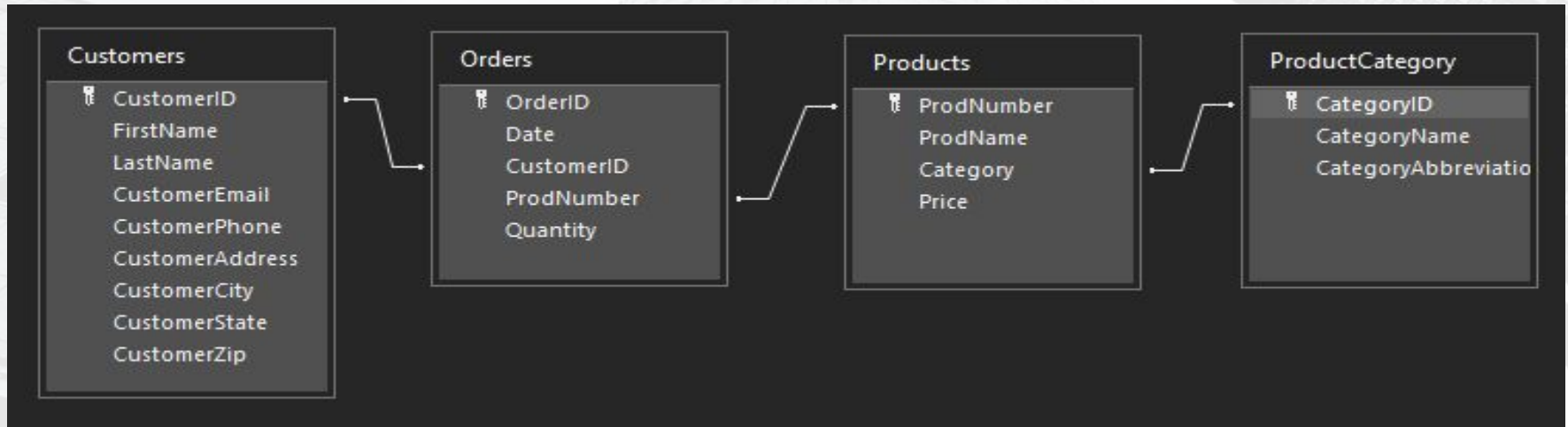
2. Entity Relationship

Ensuring relational consistency within the dataset is key to preserving **data integrity** and enabling reliable **multivariable** analysis.

One to Many

Many to One

Many to One



3. Master Table

By building a master table first, we can combine **key data** in one place. This simplifies dashboard creation, **boosts performance**, and ensures the insights presented are **accurate and dependable**.

```
1 SELECT
2   o.Date AS order_date,
3   pc.CategoryName AS category_name,
4   p.ProdName AS product_name,
5   p.Price AS product_price,
6   o.Quantity AS order_qty,
7   (o.Quantity * p.Price) AS total_sales,
8   c.CustomerEmail AS cust_email,
9   c.CustomerCity AS cust_city
10  FROM `projectbimb.Sales.Orders` o
11  LEFT JOIN `projectbimb.Sales.Customers` c ON o.CustomerID = c.CustomerID
12  LEFT JOIN `projectbimb.Sales.Products` p ON o.ProdNumber = p.ProdNumber
13  LEFT JOIN `projectbimb.Sales.ProductCategory` pc ON p.Category = pc.CategoryID
14  ORDER BY o.Date ASC;
```

✓ Query completed

Query results

Save results ▾

Open in ▾



Job information

Results

Chart

JSON

Execution details

Execution graph

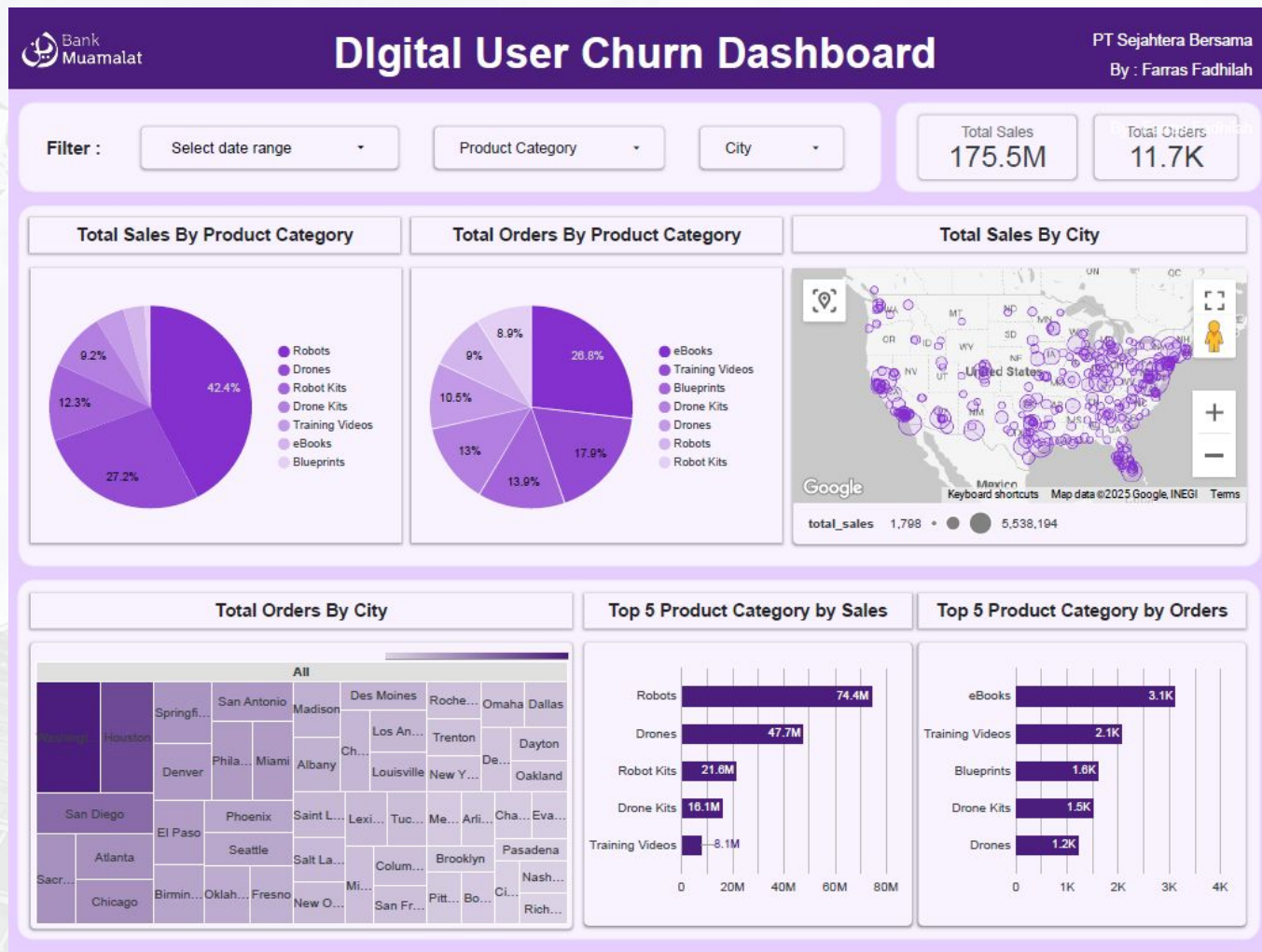
Row	order_date ▾	category_name ▾	product_name ▾	product_price ▾	order_qty ▾	total_sales ▾	cust_email ▾	cust_city ▾
1	2020-01-01	Drone Kits	BYOD-220	6900	1	6900	edew@nba.com#mailto:edew@...	Honolulu
2	2020-01-01	eBooks	Polar Robots	2399	2	4798	fvaslerqt@comsenz.com#mailt...	Jackson
3	2020-01-01	eBooks	SCARA Robots	1950	5	9750	llespercx@com.com#mailto:lle...	Des Moines
4	2020-01-01	eBooks	Spherical Robots	1675	5	8375	lfromonte9@de.vu#mailto:lfrom...	Birmingham
5	2020-01-01	Robots	RWW-75 Robot	88300	3	264900	tmckernot@tinvurl.com#mailto:...	Katv

4. Dashboard

Link Looker Studio :

<https://lookerstudio.google.com/reporting/6195a76f-3ee2-480e-8b44-bdb6fed3db98>

This Dashboard provides an overview of **Sales Dataset** including sales & orders distribution across product categories & city. It enables quick, data-driven insights into **business performance** & **customer demand patterns**.



5. Business Insight

To support sales growth at PT Sejahtera Bersama, I've analyzed the current sales data to provide a clearer understanding of the business condition. Key insights include:

- **42% of revenue** comes from **Robot** category (high-value but low-volume).
- **eBooks lead in order quantity** (but generate low revenue).
- **Top 5 product categories** differ for sales vs. orders (signals different buyer behaviors).
- Sales are **geographically spread** (with higher concentrations in major cities and nearby regions).

Strategic Recommendations:

- **Upsell physical products** (Robots, Drones) to digital buyers (eBooks, Training Videos).
- **Focus marketing efforts** on segments with high demand to boost conversion and loyalty.
- **Introduce product bundles or discount packages** to encourage larger basket sizes.
- **Launch targeted campaigns** in cities with high order volumes but relatively low sales to boost revenue

Thank You



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Academy



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