

Final Project

Business Intelligence Analyst

Presented by
Jedi Jamari Manullang



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About You

a Bachelor of Science from IPB University with keen interest in Data Analytics and Data science. I have graduated from Data Science Bootcamp of Rakamin Academy. I am enthusiastic to learn new things everyday especially to improve data knowledge and skills.

Experiences

- Scientific Engineer (Climate Data Analyst)
PT. Songo Aviasi Indonesia
Jan – Jul 2023
- Graduated from Data Science Bootcamp
at Rakamin Academy
Jan - Jun 2023
- Project-Based Internship (VIX) at Kalbe
Nutritionals x Rakamin Academy
Jul 2023

Case Study

As a BI Analyst of Bank Muamalat, I have 5 challenges to finish. The challenges:

1. Determine the primary key and secondary key.
2. Create Entity Relationship Diagram of the database.
3. Create master table from the chosen columns.
4. Visualize sales performance using dashboard in Google Looker Studio.
5. Gather insights and recommendation from the analysis and visualization.

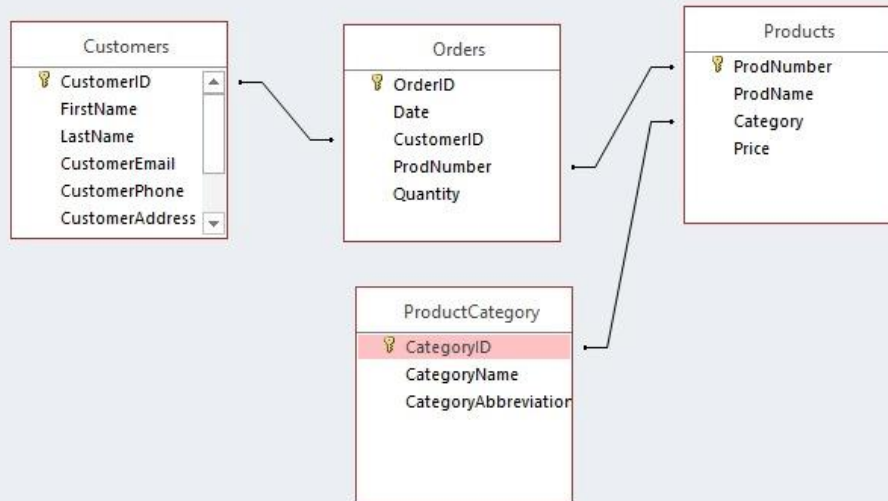
Tools:

1. Google BigQuery SQL
2. Microsoft Access
3. Microsoft Excel
4. Google Looker Studio

1. Identify Primary Key from Each Table

1. Customer Table : **CustomerID**
2. Products Table : **ProdNumber**
3. Orders Table : **OrderID**
4. ProductCategory Table : **CategoryID**

2. Identify relationship from the tables (ERD)



3. Create Master Table

Row	order_date	category_name	cust_city	cust_email	order_qty	
1	2020-01-01	Drone Kits	Honolulu	edew@nba.com#mailto:edew...	1	E
2	2020-01-01	eBooks	Jackson	fvaslerqt@comsenz.com#mailt...	2	F
3	2020-01-01	eBooks	Des Moines	llespercx@com.com#mailto:lle...	5	S

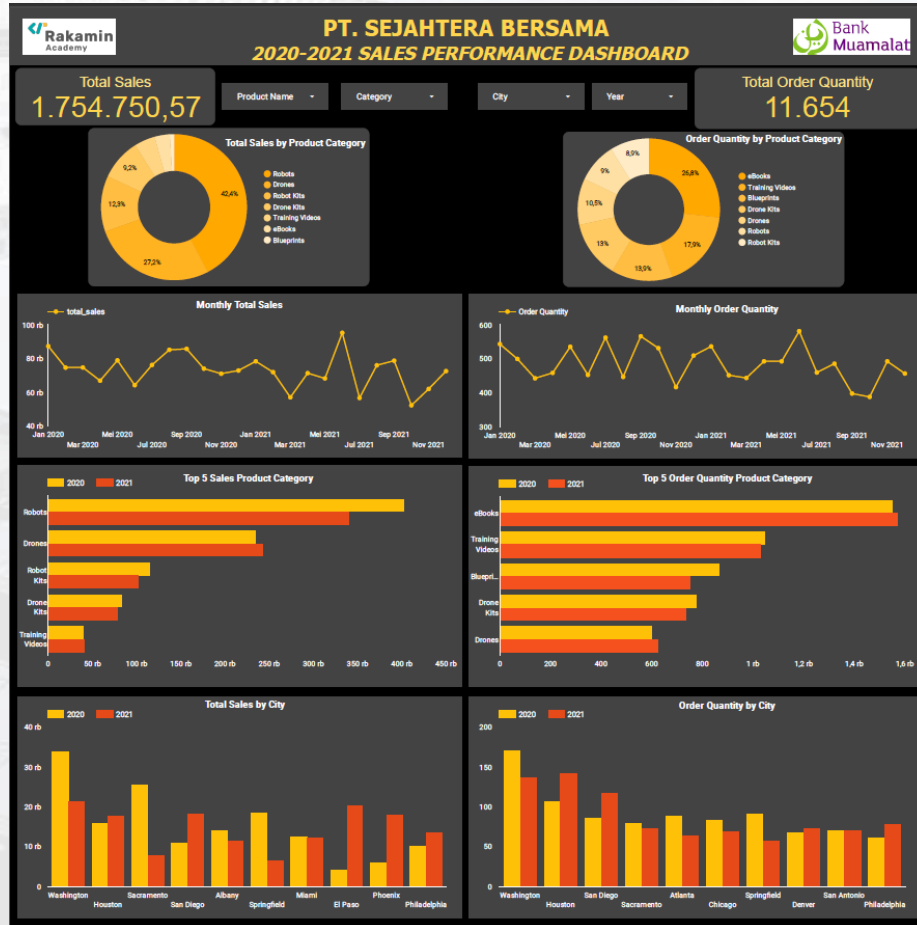
The Query:

```

1 SELECT
2   `Final_Task.Orders`.Date as order_date,
3   `Final_Task.ProductCategory`.CategoryName as category_name,
4   `Final_Task.Customers`.CustomerCity as cust_city,
5   `Final_Task.Customers`.CustomerEmail as cust_email,
6   `Final_Task.Orders`.Quantity as order_qty,
7   `Final_Task.Products`.ProdName as product_name,
8   `Final_Task.Products`.Price as product_price,
9   (`Final_Task.Orders`.Quantity * `Final_Task.Products`.Price) as total_sales
10 FROM `Final_Task.Customers`
11 INNER JOIN
12   `Final_Task.Orders` ON `Final_Task.Customers`.CustomerID = `Final_Task.Orders`.CustomerID
13 INNER JOIN
14   `Final_Task.Products` ON `Final_Task.Orders`.ProdNumber = `Final_Task.Products`.ProdNumber
15 INNER JOIN
16   `Final_Task.ProductCategory` ON `Final_Task.Products`.Category = `Final_Task.ProductCategory`.CategoryID
17 ORDER BY order_date;

```


4. Sales Performance Dashboard



Check the details here:
<https://lookerstudio.google.com/reporting/c/238a812-74d5-4904-b050-602dc0bb8161>

5. Insights and Recommendations

1. Total Sales and Order Quantity in 2021 is lower than 2020. The sales team have to set a higher target for a year ahead.
2. Robots Product is the highest in total sales but the least in order quantity, it shows that robots has the highest price despite the low quantity sales. Sales team is suggested to give discounts for higher order quantity in Robots Product.
3. eBooks is the highest in order quantity but low in the total sales. Sales team is suggested to raise the price and giving special offers for high order quantity.
4. Monthly sales and order quantity varies through the year and do not strongly affected by the season.
5. Most of the products experience a decrease in sales from 2020 to 2021 except for drones. Sales of Robots has to be the top focus of the team due to its high contribution potential to the revenue.
6. Washington is the highest city in Sales and Order Quantity, followed by Houston. The sales team is suggested to focus in these two cities to increase sales performance. In reverse, Philadelphia is the least city in both Sales and Order Quantity. Sales Division is suggested to analyze customer behaviour in Philadelphia and build strategy to boost the sales performance.

See the details in Github:

https://github.com/jedijm/VIX-Bank_Muamalat

Video Presentation Here
[https://youtu.be/J4n9drqfJ](https://youtu.be/J4n9drqfJv0)
v0

Thank You



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