Rakamin Academy

Bank Muamalat

SALES DASHBOARD AND ANALYSIS

By : Ismi Ana Sulasiyah

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BI Analyst Project-Based Internship

Table of Content

01 **Introduction**

Study case background, goals, and method

02 **Data Preparation**

SQL Steps: Primary Key, ERD Diagram, Queries

03 **Data Visualization**

Dashboard creation using Looker Studio

04 **Conclusion**

Insight Analysis and Recommendation

01 Introduction

Background

This is the final project of a 4-week project-based internship at Bank Muamalat. In this project, I served as a BI Analyst at PT Sejahtera Bersama (Study Case Company).

Goals

Produce visualized data in the form of **Interactive Dashboards** and provide **Recommendations** based on insight analysis.

01 Method & Tools

Data Preparation

Unzip dataset using winrar and convert each excel file into csv, so it can be used in SQL platform

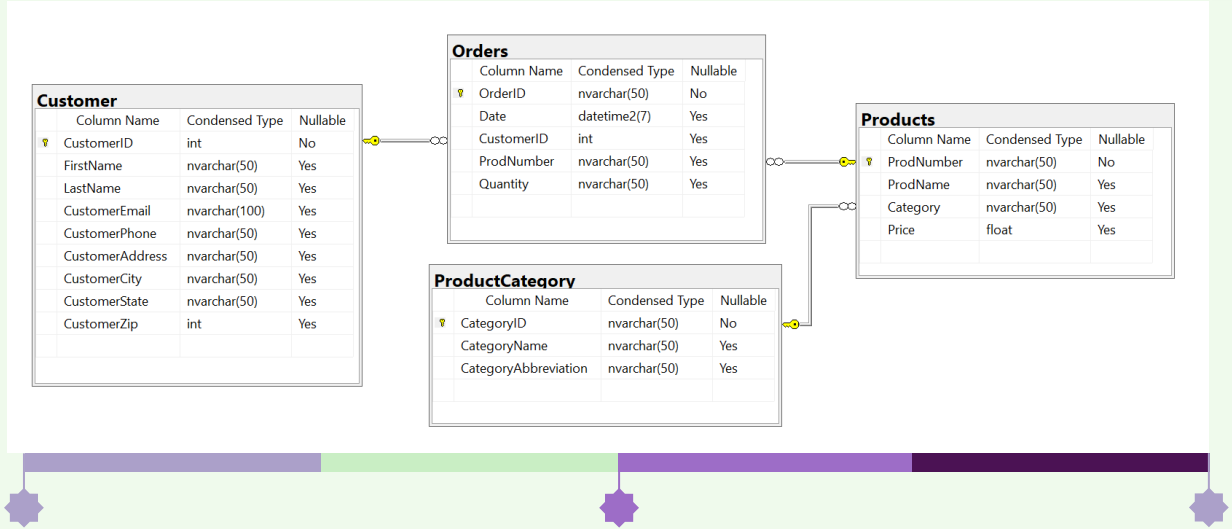
Queries

Determine Primary Key, create ERD and Master Table using Microsoft SQL Server and Google BigQuery

Dashboard

Create interactive dashboard using Looker Studio

02 Primary Key and ERD



Relationship 1

PK CustomerID (Customer Table)
FK CustomerID (Orders Table)

Relationship 2

PK ProdNumber (Products Table)
FK ProdNumber (Orders Table)

Relationship 3

PK CategoryID (ProductCategory Table)
FK Category (Products Table)

02 SQL & Master Table

```
Create master table
SELECT Orders.Date as order_date, ProductCategory.CategoryName as category_name, Products.ProdName as product_name, Products.Price as product_price, Orders.
Quantity as order_qty, (Products.Price * Orders.Quantity) as total_sales, Customer.CustomerEmail as cust_email, Customer.CustomerCity as cust_city  FROM
bm_pbi_finaltask.Customer
JOIN bm_pbi_finaltask.Orders ON Customer.CustomerID = Orders.CustomerID
JOIN bm_pbi_finaltask.Products ON Orders.ProdNumber = Products.ProdNumber
JOIN bm_pbi_finaltask.ProductCategory ON Products.Category = ProductCategory.CategoryID ORDER BY order_date ASC, order_qty ASC;
```

This query will process 256.24 KB when run.

Using on-demand processing quota

Query results

Save results | Open in

Job information | Results | Visualization | 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	69.0	1	69.0	edew@nba.com#mailto:edew@...	Honolulu
2	2020-01-01	eBooks	Polar Robots	23.99	2	47.98	fvaslerqt@comsenz.com#mailt...	Jackson
3	2020-01-01	Robots	RWW-75 Robot	883.0	3	2649.0	tmckernot@tinyurl.com#mailto:...	Katy
4	2020-01-01	eBooks	SCARA Robots	19.5	5	97.5	llespercx@com.com#mailto:lle...	Des Moine
5	2020-01-01	eBooks	Spherical Robots	16.75	5	83.75	lfromonte9@de.vu#mailto:lfrom...	Birminghar
6	2020-01-01	Training Videos	Drone Video Techniques	37.99	6	227.94	gstingersdd@eventbrite.com#	Saint Peter

Results per page: 50 | 1 – 50 of 3339

Master Table is a combination of all tables, which contains:
- Customer Table: CustomerEmail (cust_email), CustomerCity (cust_city)
- Orders Table: OrderDate (order_date), OrderQty (order_qty)
- Products Table: ProductName (product_name), ProductPrice (product_price)
- ProductCategory Table: ProductCategoryName (category_name)
- **TotalSales (total_sales) is Multiplication between product_price and order_qty**

Sales %Growth Dashboard
(PT Sejahtera Bersama Study Case)

Total Sales

1,754,750.57

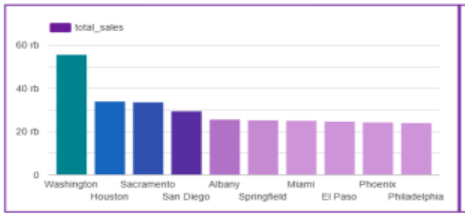
Jan 1, 2020 - Dec 31, 202

Total Order QTY

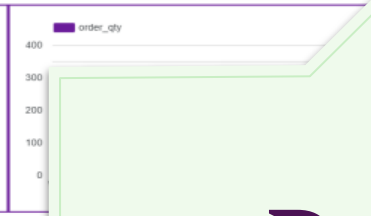
11,654

Sales %Growth per Month

Sales per Customer City



Order Qty per Customer City



Top 5 Sales per Product Category

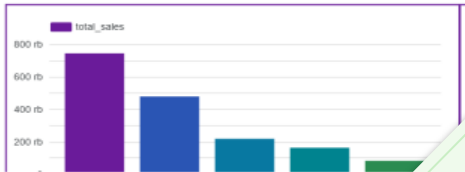


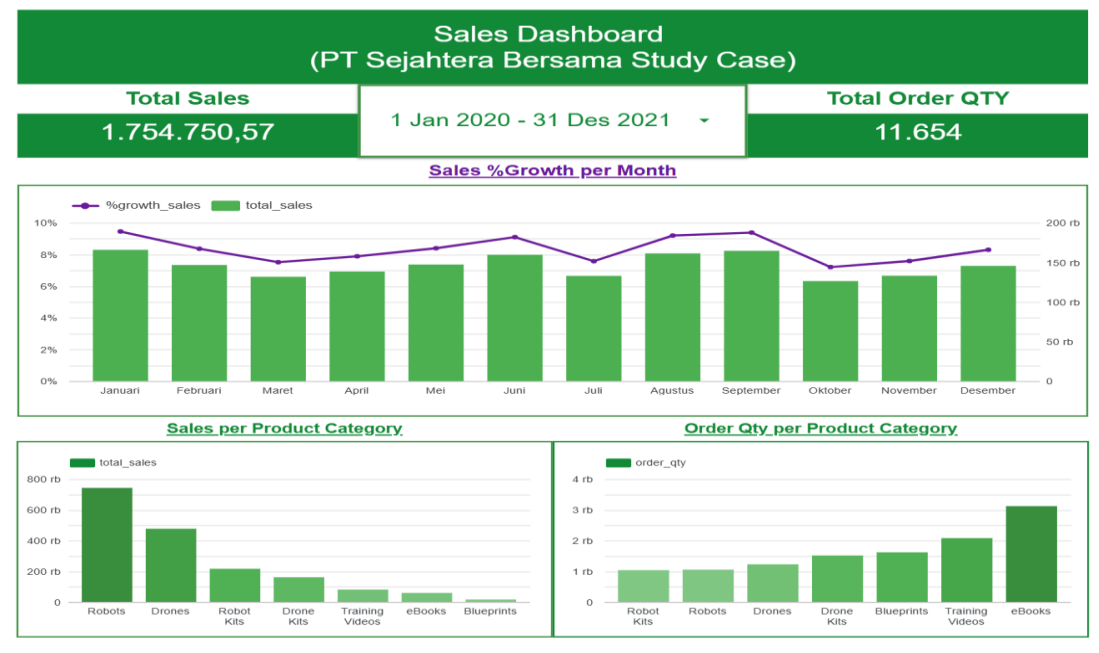
Table Transaction
(PT Sejahtera Bersama Study Case)

Total Order QTY	Total Sales	City	Category
1.654	1.754.750,57		

product_price	order_qty	total_sales	cust_email	cust_city
69	1	69	edew@nba.com...	Honolulu
23.99	2	47.98	fvaslerqh@coms...	Jackson
883	3	2649	tmckemot@tinyu...	Katy
19.5	5	97.5	lliespercx@com.c...	Des Moines
16.75	5	83.75	ffromonte9@de.v...	Birmingham
37.99	6	227.94	gstiggersdd@ev...	Saint Peter...
44.95	1	44.95	ksteershp@ame...	San Diego
250	2	500	jcolthurstgu@cbs...	Sacramento
214	2	428	croylede@dot.go...	Virginia Be...
189	2	378	gmirrlees4v@sta...	Washington
37.99	2	75.98	tgatenbyet@qua...	Des Moines
	2	378	aguiongo@beha...	Houston

03
Dashboard

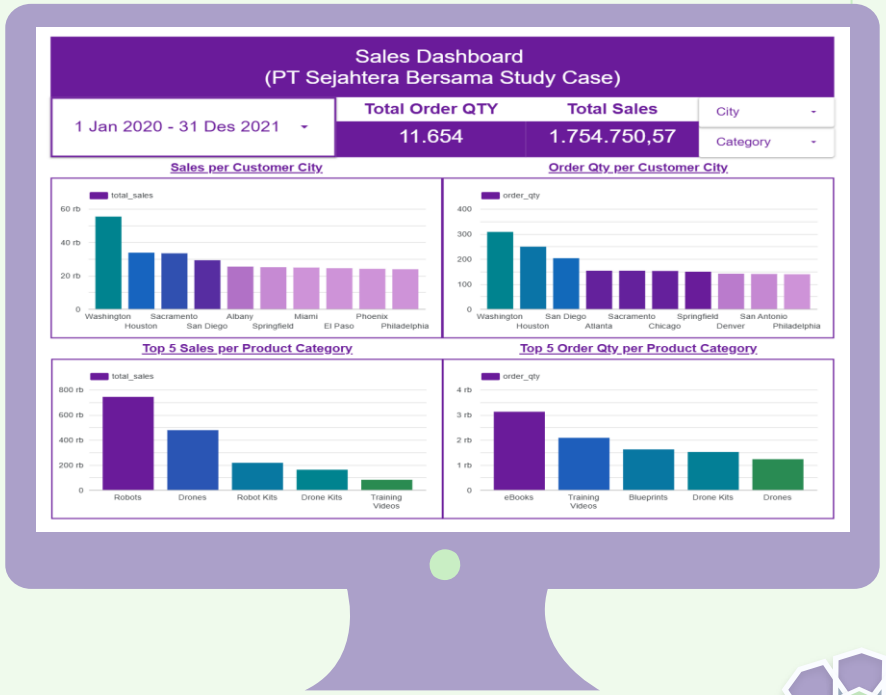
Dashboard 1

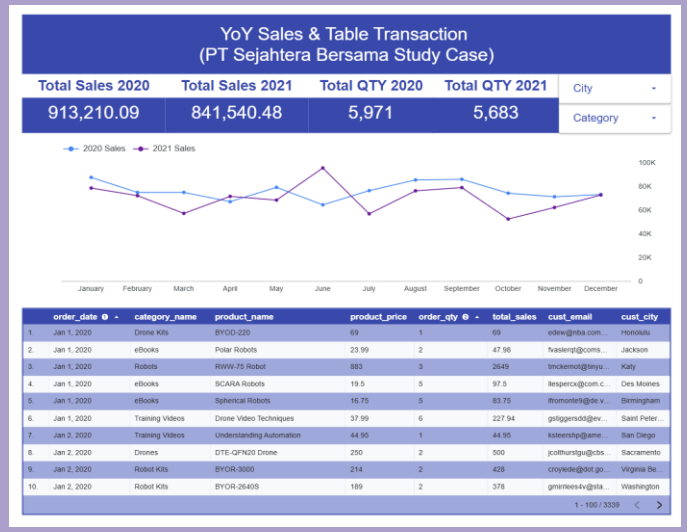


This dashboard contains the percentage of **sales growth** per month (2020 - 2021), **sales per product category**, and **number of orders per product category**. This dashboard also has a scorecard to display **total sales** and **total number of orders** which can be customized using date filters.

Dashboard 2

This dashboard contains the **Sales** and **Order Qty per Customer City**, and **Top 5 Sales** and **Order Qty per Product Category**. This dashboard also has a scorecard with date filters, and Dropdown filter of City and Category fields.





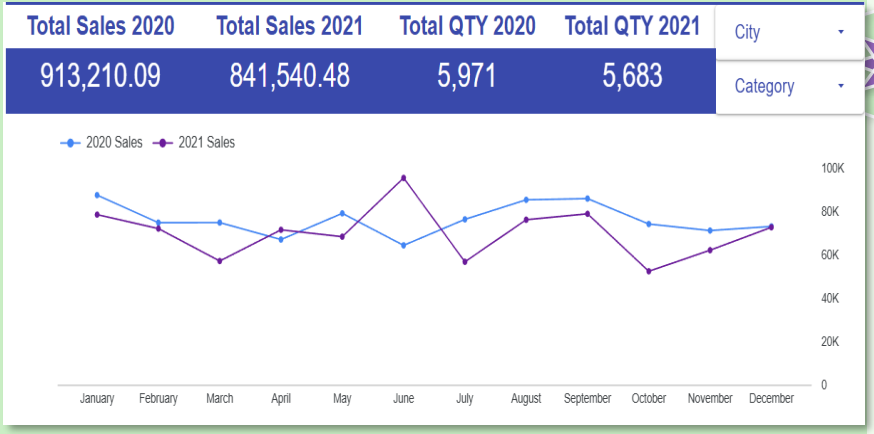
Dashboard 3

This dashboard shows the **YoY (year-over-year) Sales** and **Transaction Table** with the same initial features from previous dashboard.

04 Conclusion

Questions

What can be suggested to maintain sales or increase sales with the existing detailed transaction table?



Insight	**Overall Performance Decline (YoY)** ➢ Total **Sales decreased** from 913K (2020) to 842K (2021) → ~8% decline. ➢ Total **Quantity** Sold also **dropped** from 5,971 to 5,683 units
Recommendation	Sales **declined** in 2021 due to **reduced product demand**. By focusing on the **success of June** (the highest growth) and applying the **same strategy** as in the weaker months, driving sales through **targeted promotions and segment-level optimization**, growth will recover.

Thanks!

Do you have any questions?

annaismi17@gmail.com
https://www.linkedin.com/in/ismiana/

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