2023

Portofolio.

By. **Ivan Yudha**

Ivan Yudha

Introduction.

2023

Hi! I'm **Ivan Yudha**

A Data Analyst and Business Analyst enthusiast. Love to learn new things and challenge myself.

Skill.

Data Analytics Tableau SQL

Python Programming Microsoft Excel

Looker Business Intelligence

Interest.

Along with Analyst, I enjoy working out, traveling, and reading. I also enjoy watching movies.

Education.

2017 - 2020

Dian Nuswantoro University

Diploma
Informatics Engineering

Experience.

Software Engineer
BPBD Provinsi Jawa Tengah

Data Engineer
Kalbe Nutritionals

Business Intelligence Analyst
Bank Muamalat

Big Data Analytics
Kimia Farma

2023

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My Project.

Dashboard HR, Data Engineer, Business Intelligence Analyst, Big Data Analytics

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DATA VISUALIZATION

Graphs are one effective way to create data visualizations that are easy to understand. That's why if your work has a lot to do with data and Microsoft Excel, then the ability to make graphs is one of the things you have to master.

DATA VALIDATION

Data validation in Excel is a technique that restricts user input in a worksheet. It is often used to limit user entry.

1. HR ANALYTICS DASHBOARD

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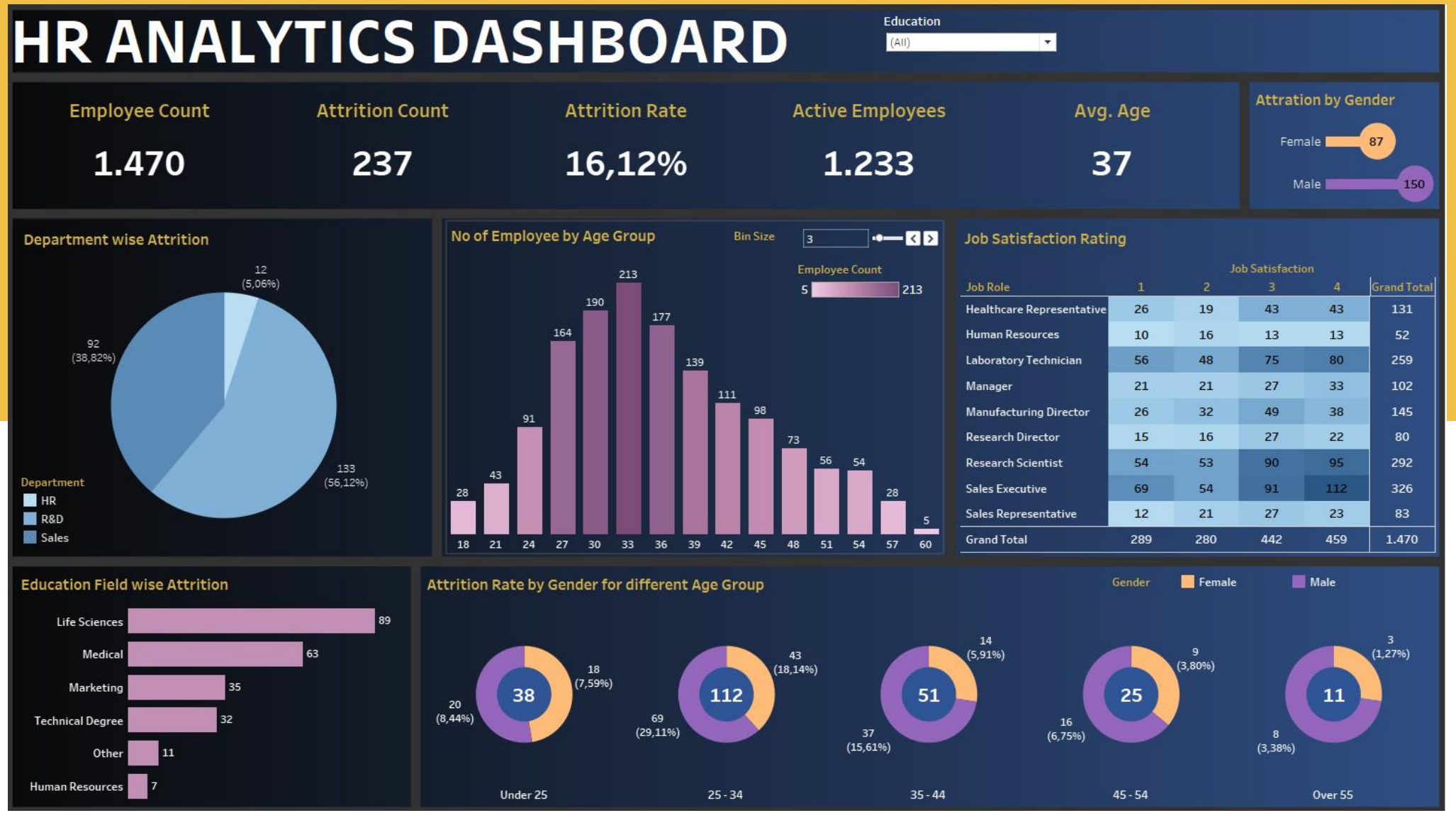

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Insight.

Highest Attrition in the R&D Department: The fact that the highest attrition rate occurs in the R&D Department remains a major concern. Some insights that can be derived from this are:

An in-depth analysis is needed to understand why attrition is high in the R&D Department. There may be issues in management, a high workload, or a lack of career development that could be contributing factors.

Specific improvement measures are required to reduce attrition in the R&D Department, such as enhancing management, providing training, or improving compensation and incentives.

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2. DATA ENGINEER

at Kalbe Nutritionals

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Create a shell/bash script

- To check whether directory exists inside a given path.
- Create a crontab syntax to run the script at **07:00** AM Daily

```
in/bash

ath="/hdfs/data/data1"
name_of_directory="data1"

filename_excel="daily_market_price.xlsx"
source_dir="/local/data/market"
target_dir="$path/$name_of_directory"

if [ -d "$target_dir" ]; then
        echo "There is $name_of_directory Directory Exist!"

        if [ -f "$source_dir/$filename_excel" ]; then
                cp "$source_dir/$filename_excel" "$target_dir/"
                echo "File $filename_excel copied to $target_dir"

                log_file="$target_dir/log.txt"
                echo "File Moved Successfully" > "$log_file"
                echo "Log Created at: $log_file"
        else
```

Complete below Syntax {Highlighted Sentence} to insert data from Python to MySQL.

```
#Melakukan import mysql connector
import mysql.connector
#Melakukan percobaan koneksi
conn = mysql.connector.connect(user='username', password='password',
                               host='localhost', database='database_name')
#Membuat object cursor sebagai penanda
cursor = conn.cursor()
#Deklarasi SQL Query untuk memasukkan record ke DB (KARYAWAN)
insert_sql = ("INSERT INTO KARYAWAN (FIRST_NAME, LAST_NAME, AGE, SEX, INCOME)"
              "VALUES (%s, %s, %s, %s, %s)" )
values = ('John', 'Doe', 25, 'M', 5000)
try:
    #Eksekusi SQL Command
    cursor.execute(insert_sql, values)
    #Melakukan perubahan (commit) pada DB
    conn.commit()
except:
    #Roll Back apabila ada issue
    conn.rollback()
```

Create a simple star schema for KALBE database consist of 1 Fact and 5 Dimensions using Physical Data Model Theory.

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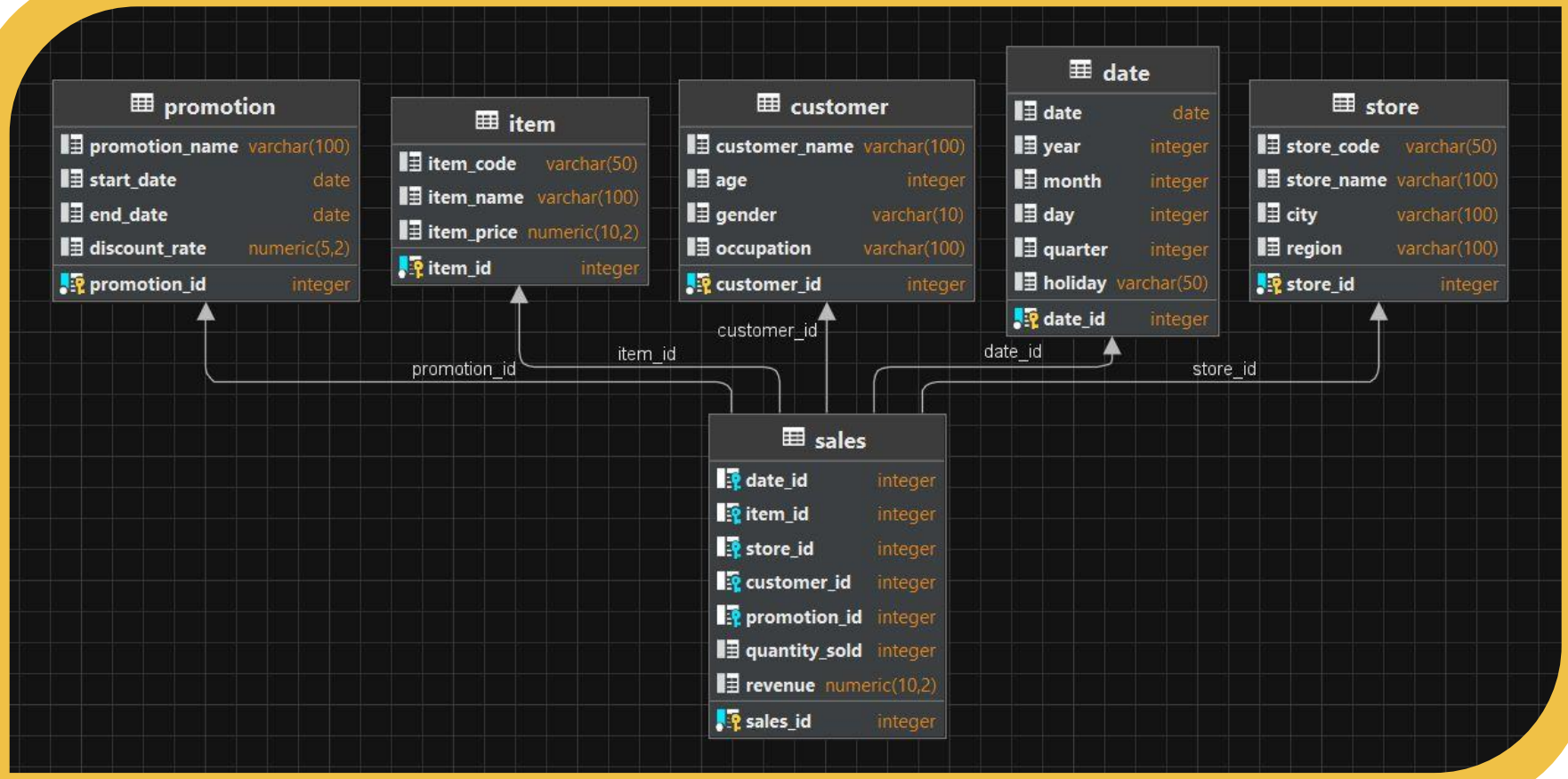

3. BUSINESS INTELLIGENCE ANALYST

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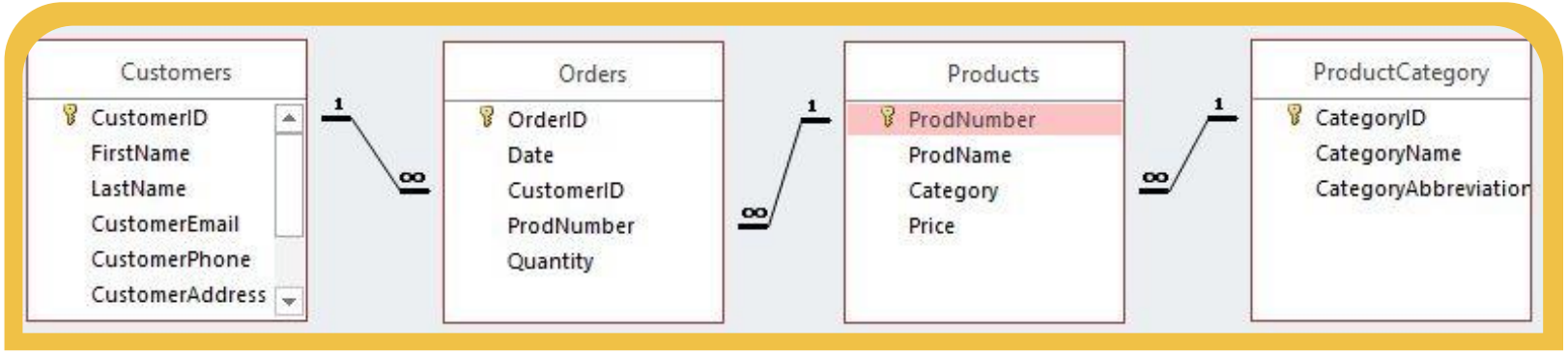
at Bank Muamalat

Relationship Table

When you want to combine several tables into 1, need to determine the relationship in 1 table withother tables.



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As a **BI Analyst at PT Sejahtera Bersama**, we will Create a master table containing information:
- CustomerEmail (cust_email)
- CustomerCity (custom_city)
- OrderDate (order_date)
- OrderQty (order_qty)
- ProductName (product_name)
- ProductPrice (product_price)
- ProductCategoryName (category_name)
- TotalSales (total_sales)

Sort the data based on the transaction date earliest to last.

```sql
SELECT
o.Date order_date,
pc.CategoryName category_name,
p.ProdName product_name,
p.Price product_price,
o.Quantity order_qty,
(o.Quantity * p.Price) total_sales,
c.CustomerEmail cust_email,
c.CustomerCity cust_city
FROM masterdata.orders o
LEFT JOIN masterdata.customers c ON o.CustomerID = c.CustomerID
LEFT JOIN masterdata.products p ON p.ProdNumber = o.ProdNumber
LEFT JOIN masterdata.productcategory pc ON pc.CategoryID = p.Category
ORDER BY 1 ASC
```

DIGITAL USER CHURN DASHBOARD

Category

City

Total Sales
4.332.906

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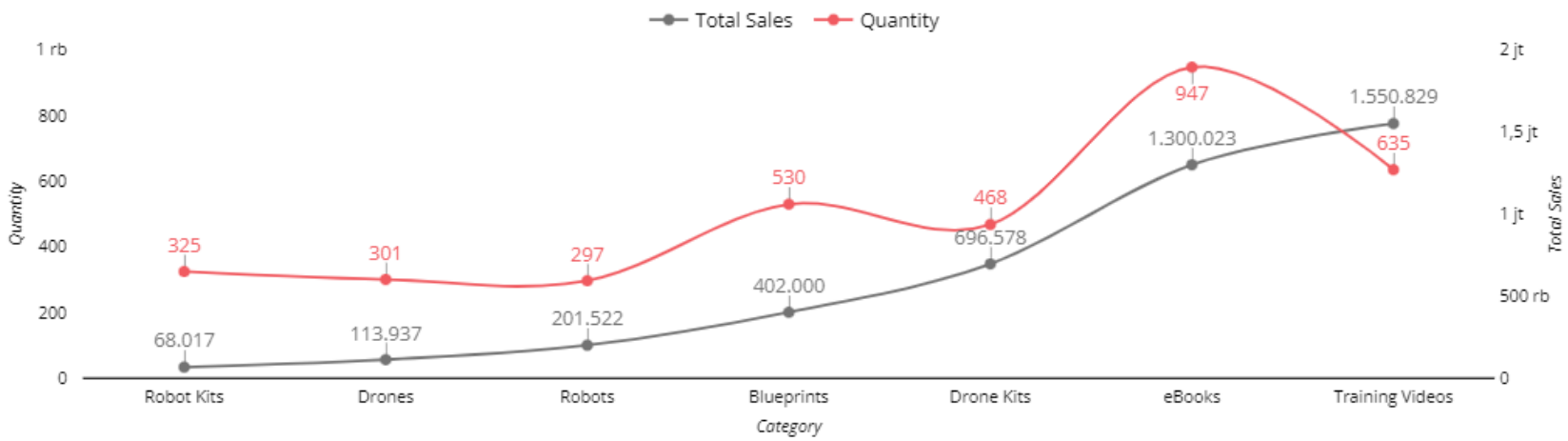
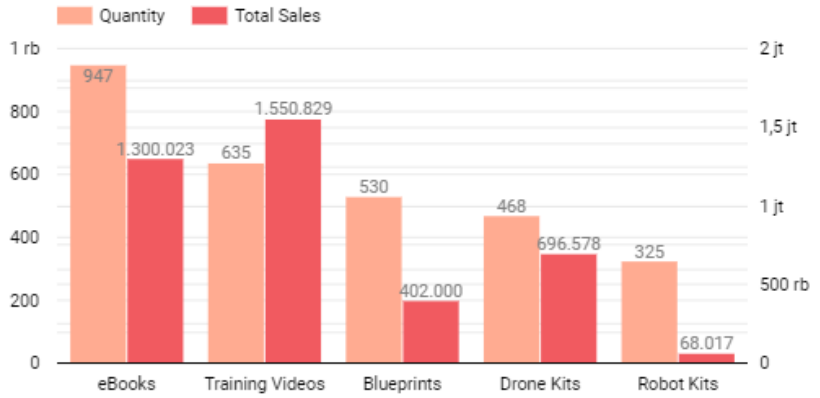
Sales & Quantity by Category Product



Sales & Quantity by City

City	Quantity	Total Sales
Washington	92	171.917
Houston	75	58.387
Atlanta	69	74.159
El Paso	59	94.162
San Diego	51	60.360
Chicago	48	65.775
San Antonio	48	61.309
Oklahoma City	47	33.064
Springfield	47	38.873

Top 5 Sales & Quantity by Category Product



Here are some proposed ways:

- **Maximizing Customer Email Information**: Utilize customer email information as a method to maintain communication.
- **Segmenting Customers**: Segment customers based on their total purchases during a specific time frame and provide attractive offers to each customer segment.
- **Maximizing Cross-Selling and Upselling**: Implement cross-selling and upselling strategies. For cross-selling, you can use the Association Rule technique with the Apriori algorithm to recommend other products when a customer purchases a specific item.

As a **BI Analyst**, in addition to analyzing and presenting past events, it is also expected to maximize existing data sources to provide recommendations or proposals for business decisions.

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4. BIG DATA ANALYTICS

at Kimia Farma

Design Datamart

Of the 3 tables available (sales, customers, and goods) I assume these 3 tables are indata lake. To create a datamart, there are 2 steps:

1. Table base

- The base table is a table resulting from merging 3 tables with sales_id granularityas Primary Key (i.e. a combination of invoice_id and item_id)
- The number of rows of data in the base table is the same as the total in the sales table
- The base tables are stored in the data warehouse2. Aggregate tableA. Aggregate tables are derivatives of base tables on which data is collected baseddate, customer_id and invoice_idB. Aggregate tables are stored in the datamart

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Table Base “Penjualan”

```sql
SELECT
  CONCAT(id_invoice, '_', id_barang) id_penjualan,
  pjl.id_invoice,
  pjl.tanggal,
  pjl.id_barang,
  brg.nama_barang,
  pjl.harga,
  pjl.unit,
  pjl.jumlah_barang,
  (jumlah_barang * pjl.harga) AS total_harga_per_barang,
  pjl.mata_uang,
  brg.kode_brand,
  brg.brand,
  pjl.id_customer,
  plg.nama nama_customer,
  plg.cabang_sales,
  plg.id_distributor,
  plg.group AS group_category
FROM `composite-silo-130101.rakamin.penjualan` pjl
LEFT JOIN `composite-silo-130101.rakamin.barang` brg
ON (pjl.id_barang = brg.kode_barang)
LEFT JOIN `composite-silo-130101.rakamin.pelanggan` plg
ON (pjl.id_customer = plg.id_customer)
```

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Table Base “Penjualan”

column	data type	description	transformation
id_penjualan	string	PK dari tabel penjualan	CONCAT(id_invoice, '_', id_barang)
id_invoice	string	id invoice	-
tanggal	date	tanggal transaksi dilakukan	-
id_barang	string	id barang, key join ke tabel barang	-
nama_barang	string	nama barang	-
harga	numeric	harga barang	-
unit	string	kemasan untuk setiap penjualan	-
jumlah_barang	numeric	jumlah barang yang dibeli	-
total_harga_per_barang	numeric	harga barang x jumlah barang	(jumlah_barang * pjl.harga)
mata_uang	string	mata uang. default = IDR	-
kode_brand	string	kode brand dari barang	-

column	data type	description	transformation
brand	string	nama brand	-
id_customer	string	id customer, key join ke tabel pelanggan	-
nama_customer	string	nama pelanggan	-
cabang_sales	string	cabang yang supply barang ke pelanggan	-
id_distributor	string	distributor yang supply barang ke cabang	-
group_category	string	kategori pelanggan, possible value: - Apotek - Klinik	-

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Table Aggregate “Penjualan harian”

```sql
SELECT
  id_invoice, tanggal,
  id_customer, nama_customer, cabang_sales,
  id_distributor, group_category,
  COUNT(DISTINCT id_barang) total_barang, SUM(total_harga_per_barang) total_pembelian
FROM `composite-silo-130101.datamart_rakamin.penjualan`
GROUP BY 1,2,3,4,5,6,7
ORDER BY 1
```

Table Base “Penjualan”

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column	data type	description	transformation
id_invoice	string	PK dari tabel penjualan harian	-
tanggal	date	tanggal transaksi dilakukan	-
id_customer	string	id pelanggan	-
nama_customer	string	nama pelanggan	-
cabang_sales	string	nama cabang	-
id_distributor	numeric	distributor	-
group_category	string	kategori pelanggan, possible value: - Apotek - Klinik	-
total_barang	numeric	total barang yang dibeli untuk setiap invoice id	COUNT(DISTINCT id_barang) total_barang
total_pembelian	numeric	total harga yang dibayar untuk setiap invoice id	SUM(total_harga_per_barang) total_pembelian

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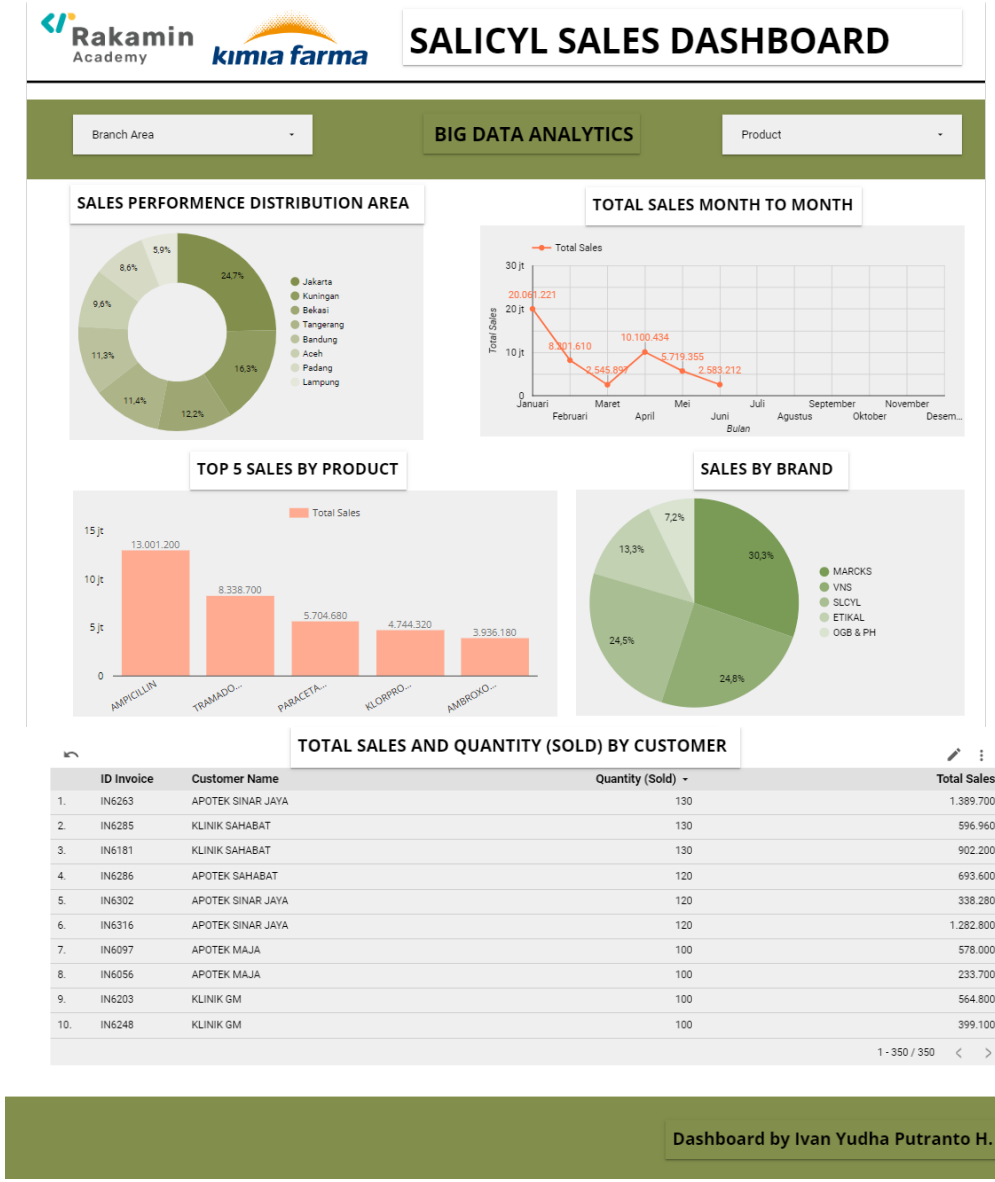
SALICYL SALES DASHBOARD



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Thank You.