

# “Analysis Kinerja Bisnis Kimia Farma Tahun 2020-2023”

## Kimia Farma-Big Data Analysis

**Presented by:**

Dea Arighie Permatasari



# Profil diri



[Dea Arighie Permatasari | LinkedIn](#)



Surabaya, Jawa Timur

Hi I'm Dea Arighie Permatasari. Graduate of STID Al-Hadid with a Bachelor's degree (S1) in Da'wah Management.

Passionate about data-driven decision making, I have transitioned into the field of data analysis with hands-on experience in:

- SQL (Google BigQuery)
- Data Visualization (Looker Studio, Tableau)
- Python (Pandas, Matplotlib, Seaborn)
- Excel for data cleaning and analytics
- Customer segmentation and sales performance analysis

Customer Service at BPR Buana Dana Makmur  
2018-2019

Staff at Hidayah Umat Social Foundation  
April 2019-June 2025

Virtual Internship - Business Intelligence Analyst  
at PT.Bank Muamalat,Tbk X Rakamin Academy  
Mei –June 2025

Virtual Internship- Data Analyst at Kimia Farma X  
Rakamin Academy  
June-July 2025

# course and sertification



## **Data Science: Machine Learning - Rakamin Academy |**

[https://drive.google.com/file/d/1jxu37-E-Y0BZ0HPSoDo1jEFAi9XscOJ2/view?usp=drive\\_link](https://drive.google.com/file/d/1jxu37-E-Y0BZ0HPSoDo1jEFAi9XscOJ2/view?usp=drive_link)

[https://drive.google.com/file/d/1DTEAjICVPQLipTY4WH3r0sCnw6V-6qJh/view?usp=drive\\_link](https://drive.google.com/file/d/1DTEAjICVPQLipTY4WH3r0sCnw6V-6qJh/view?usp=drive_link)

November–April 2024



## **Kickstart Design Thinking Journey-Rakamin Academy |**

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Januari–April 2024



## **Kickstart Team Work Journey - Rakamin Academy |**

[https://drive.google.com/file/d/12sgwNqB8Tg14vUD6r7DSpJ16FeyodSWH/view?usp=drive\\_link](https://drive.google.com/file/d/12sgwNqB8Tg14vUD6r7DSpJ16FeyodSWH/view?usp=drive_link)

Januari–April 2024



## **Internship at PT. Bank Muamalat Indonesia Tbk X Racamin Academy |**

[https://drive.google.com/file/d/1EH-FLx0I9XDA1jAx2I2U7gVwcPtGR\\_3d/view?usp=sharing](https://drive.google.com/file/d/1EH-FLx0I9XDA1jAx2I2U7gVwcPtGR_3d/view?usp=sharing)

May–June 2025



# About Kimia Farma

Kimia Farma adalah perusahaan industri farmasi pertama di Indonesia yang didirikan oleh Pemerintah Hindia Belanda tahun 1817. Nama perusahaan ini pada awalnya adalah NV Chemicalien Handle Rathkamp & Co. Berdasarkan kebijaksanaan nasionalisasi atas eks perusahaan Belanda di masa awal kemerdekaan, pada tahun 1958, Pemerintah Republik Indonesia melakukan peleburan sejumlah perusahaan farmasi menjadi PNF (Perusahaan Negara Farmasi) Bhinneka Kimia Farma. Kemudian pada tanggal 16 Agustus 1971, bentuk badan hukum PNF diubah menjadi Perseroan Terbatas, sehingga nama perusahaan berubah menjadi PT Kimia Farma (Persero).



# Kimia Farma X Rakamin Academy

Program Project Based Internship kolaborasi Rakamin Academy dan Kimia Farma Big Data Analytics merupakan program pengembangan diri dan akselerasi karier yang diperuntukkan bagi yang tertarik untuk mendalami posisi Big Data Analytics di perusahaan Kimia Farma. Program ini memberikan akses pembelajaran dasar berupa Article Review (materi bacaan) dan Company Coaching Video (video learning) untuk diperkenalkan dengan kompetensi dan keahlian yang harus dimiliki oleh Big Data Analytics di perusahaan. Selain materi, akan ada pengujian atas hasil pembelajaran berupa soal-soal Task di setiap minggunya dan diakhiri dengan pembuatan tugas akhir yang akan menjadi portofolio pada program ini.

# Project portofolio

## Latar Belakang Project

Kimia Farma merupakan perusahaan farmasi terintegrasi terbesar di Indonesia yang memiliki jaringan luas berupa **apotek, klinik, dan laboratorium** di berbagai provinsi. Setiap tahun, perusahaan ini memproses **ratusan ribu transaksi** yang mencakup data pelanggan, produk, harga, lokasi cabang, dan diskon.

Namun, besarnya volume data ini belum diimbangi dengan sistem analitik yang mampu menyajikan informasi secara holistik dan mendalam untuk mendukung pengambilan keputusan strategis.





# Project portfolio

## Problem statement

Namun, tantangan utama yang dihadapi adalah:

- Belum adanya **dashboard terpadu** untuk memantau performa penjualan, profit, dan transaksi secara real-time di seluruh cabang.
- **Minimnya analisis perilaku pelanggan dan kinerja produk**, sehingga strategi promosi dan distribusi belum optimal.
- **Gap informasi antar unit bisnis**, yang menyebabkan kurangnya keseragaman dalam evaluasi performa cabang dan wilayah.
- Tidak adanya alat visualisasi yang **membantu manajemen memahami tren, peluang, dan masalah bisnis** secara cepat.



# Project portfolio

## Goals

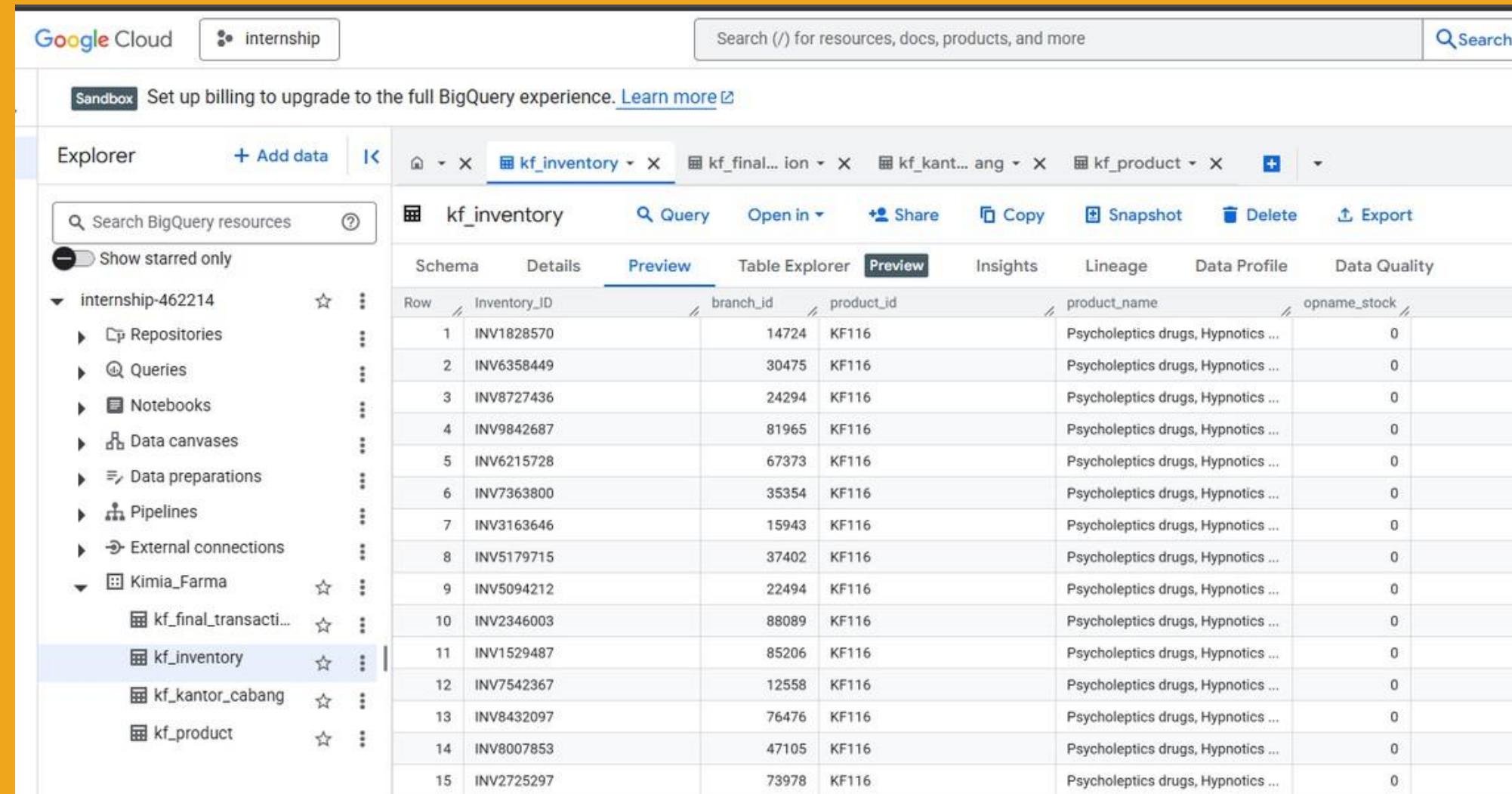
- **Mengembangkan dashboard analitik interaktif** berbasis Looker Studio yang mengintegrasikan data dari berbagai sumber (transaksi, produk, cabang).
- Menyediakan **insight bisnis** terkait performa cabang, pelanggan, produk, dan profitabilitas selama periode 2020–2023.
- Memberikan **rekomendasi strategi berbasis data** untuk mendorong peningkatan penjualan, loyalitas pelanggan, dan efisiensi operasional.
- Menjadi acuan bagi manajemen dalam **pengambilan keputusan berbasis data (data-driven decision making)**.





# 1.importing dataset to Bigquery

- Load dataset kf\_inventory



The screenshot shows the Google Cloud BigQuery console interface. The top navigation bar includes the Google Cloud logo, a project selector set to 'internship', and a search bar. Below this, a 'Sandbox' banner prompts the user to set up billing for the full BigQuery experience. The left sidebar, titled 'Explorer', contains a search bar and a tree view of resources. Under the 'Kimia\_Farma' project, several datasets are listed: 'kf\_final\_transacti...', 'kf\_inventory' (which is selected and highlighted), 'kf\_kantor\_cabang', and 'kf\_product'. The main panel displays the 'kf\_inventory' dataset with tabs for 'Schema', 'Details', 'Preview', 'Table Explorer', 'Insights', 'Lineage', 'Data Profile', and 'Data Quality'. The 'Preview' tab is active, showing a table with 15 rows. The table columns are 'Row', 'Inventory\_ID', 'branch\_id', 'product\_id', 'product\_name', and 'opname\_stock'. All 'opname\_stock' values are 0.

Row	Inventory_ID	branch_id	product_id	product_name	opname_stock
1	INV1828570	14724	KF116	Psycholeptics drugs, Hypnotics ...	0
2	INV6358449	30475	KF116	Psycholeptics drugs, Hypnotics ...	0
3	INV8727436	24294	KF116	Psycholeptics drugs, Hypnotics ...	0
4	INV9842687	81965	KF116	Psycholeptics drugs, Hypnotics ...	0
5	INV6215728	67373	KF116	Psycholeptics drugs, Hypnotics ...	0
6	INV7363800	35354	KF116	Psycholeptics drugs, Hypnotics ...	0
7	INV3163646	15943	KF116	Psycholeptics drugs, Hypnotics ...	0
8	INV5179715	37402	KF116	Psycholeptics drugs, Hypnotics ...	0
9	INV5094212	22494	KF116	Psycholeptics drugs, Hypnotics ...	0
10	INV2346003	88089	KF116	Psycholeptics drugs, Hypnotics ...	0
11	INV1529487	85206	KF116	Psycholeptics drugs, Hypnotics ...	0
12	INV7542367	12558	KF116	Psycholeptics drugs, Hypnotics ...	0
13	INV8432097	76476	KF116	Psycholeptics drugs, Hypnotics ...	0
14	INV8007853	47105	KF116	Psycholeptics drugs, Hypnotics ...	0
15	INV2725297	73978	KF116	Psycholeptics drugs, Hypnotics ...	0

# 1.importing dataset to Bigquery

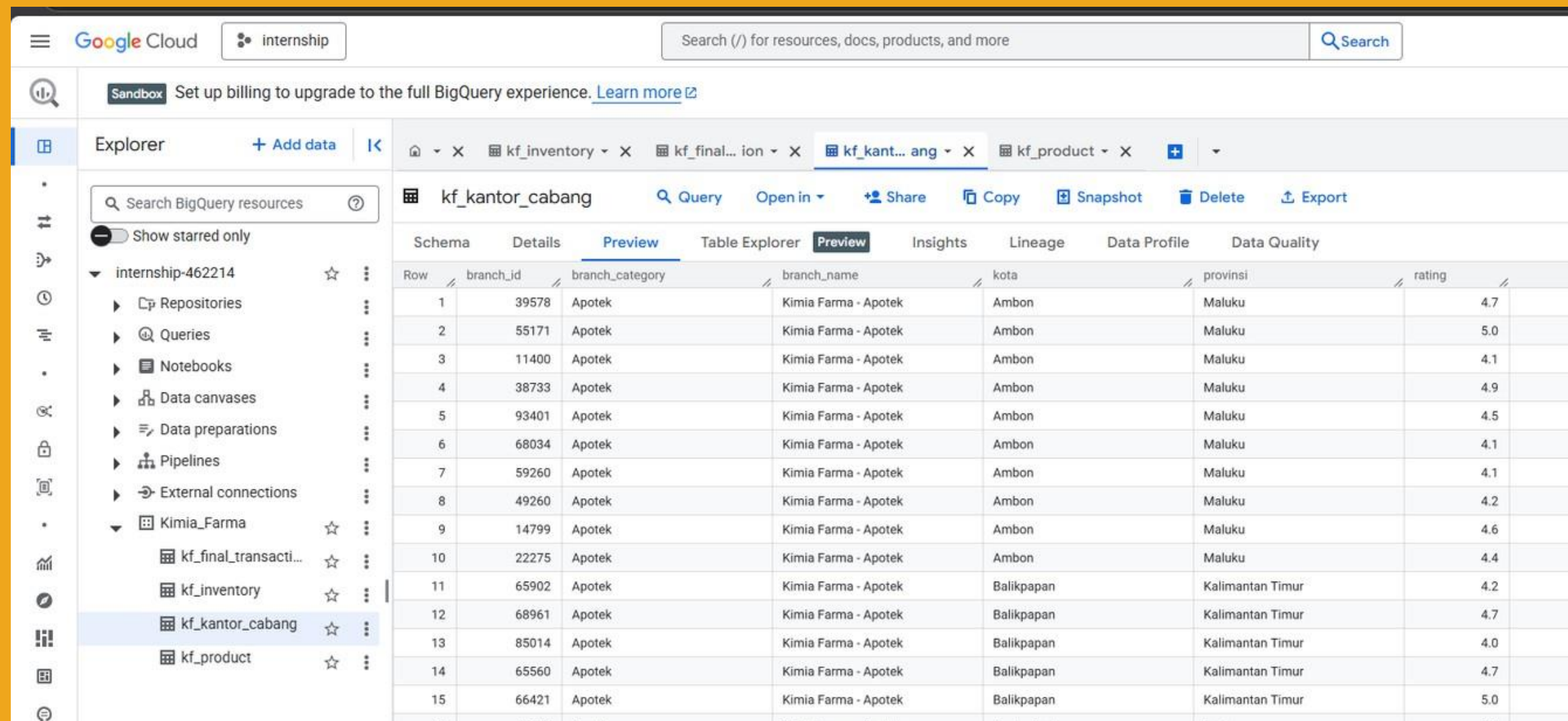
- Load dataset kf\_final\_transaction

The screenshot shows the Google Cloud BigQuery interface. The top navigation bar includes the Google Cloud logo, a project selector set to 'internship', and a search bar. Below this, a 'Sandbox' banner prompts the user to set up billing. The left sidebar contains the 'Explorer' view with a search bar and a tree of resources. The 'internship-462214' project is expanded, showing repositories, queries, notebooks, data canvases, data preparations, pipelines, external connections, and a folder named 'Kimia\_Farma'. Inside 'Kimia\_Farma', the 'kf\_final\_transaction' dataset is selected and starred. The main panel displays the 'kf\_final\_transaction' dataset with tabs for Schema, Details, Preview, Table Explorer, Insights, Lineage, Data Profile, and Data Quality. The 'Preview' tab is active, showing a table with 15 rows and 10 columns: transaction\_id, date, branch\_id, customer\_name, product\_id, price, discount\_per..., and rating. The data shows transactions from 2020-02-03 to 2022-10-19, all with a price of 251700 and a rating of 3.0.

Row	transaction_id	date	branch_id	customer_name	product_id	price	discount_per...	rating
1	TRX5103706	2021-08-25	93529	Derrick Wright III	KF116	251700	0.1	3.0
2	TRX5388139	2020-12-29	24832	Elizabeth Ramos	KF116	251700	0.12	3.0
3	TRX7251897	2020-02-03	20505	Meghan Warner	KF116	251700	0.09	3.0
4	TRX4943675	2022-09-09	17678	Steven Roberts	KF116	251700	0.1	3.0
5	TRX3469820	2020-06-20	28315	Linda Bruce DDS	KF116	251700	0.07	3.0
6	TRX1213133	2021-09-17	22280	Cory Castro	KF116	251700	0.11	3.0
7	TRX2020131	2020-12-16	40028	Stephanie Boone	KF116	251700	0.03	3.0
8	TRX5015870	2022-08-17	41343	Mary Hughes	KF116	251700	0.03	3.0
9	TRX7064077	2021-06-21	86546	Tamara Bruce	KF116	251700	0.04	3.0
10	TRX5979742	2020-12-31	18235	Aaron Reed	KF116	251700	0.11	3.0
11	TRX2209141	2021-03-20	59571	Nancy Kennedy	KF116	251700	0.1	3.0
12	TRX5385534	2023-03-17	69280	Paul Morales	KF116	251700	0.11	3.0
13	TRX9155202	2020-04-11	29626	Stephen Jones	KF116	251700	0.02	3.0
14	TRX1702542	2022-09-15	48590	Zachary White	KF116	251700	0.12	3.0
15	TRX8205780	2022-10-19	37915	Jennifer Larsen	KF116	251700	0.13	3.0

# 1.importing dataset to Bigquery

- Load dataset kf\_kantor\_cabang



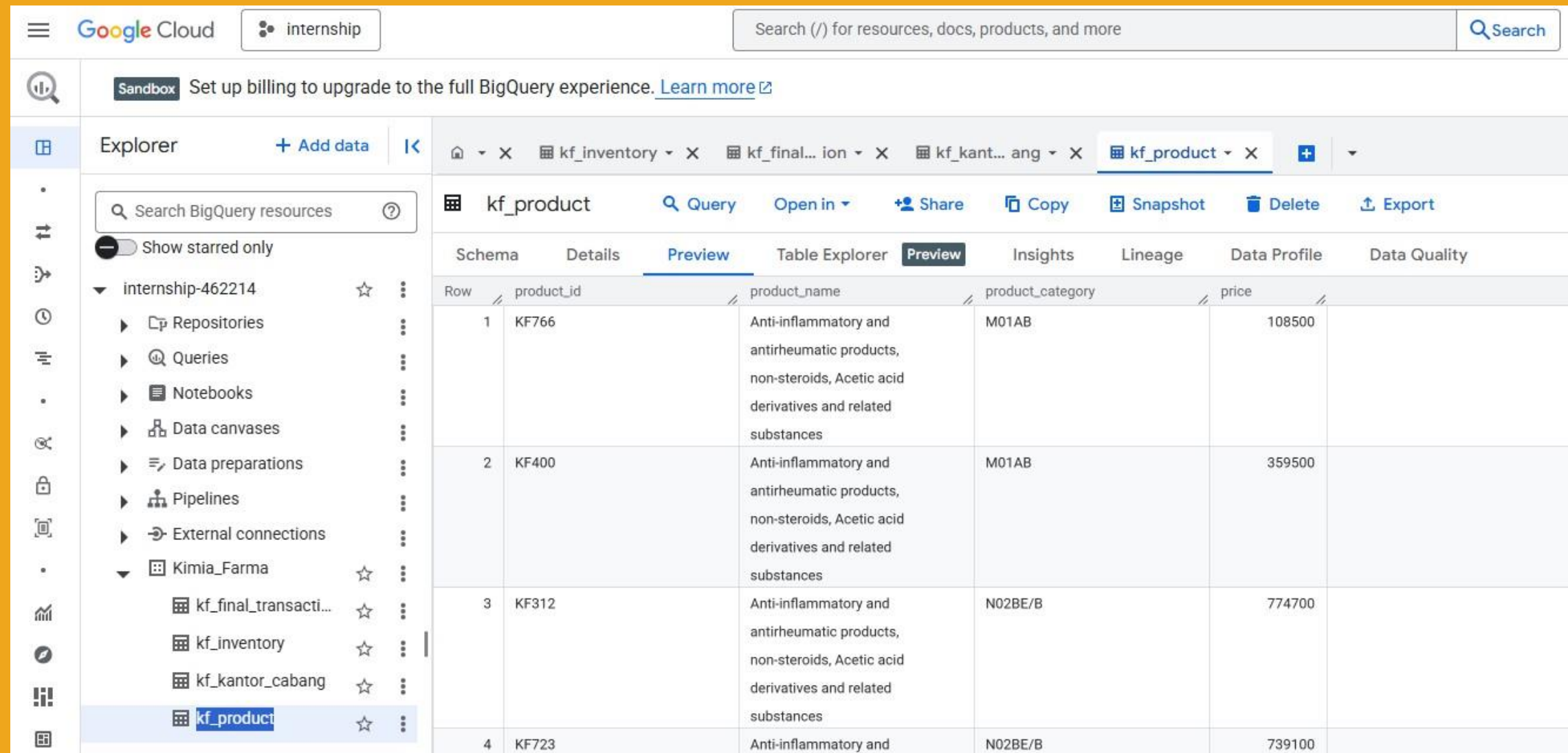
The screenshot displays the Google Cloud BigQuery interface. The left sidebar shows the 'Explorer' view with a search bar and a list of resources. The 'Kimia\_Farma' dataset is expanded, showing tables like 'kf\_final\_transacti...', 'kf\_inventory', 'kf\_kantor\_cabang', and 'kf\_product'. The 'kf\_kantor\_cabang' table is selected, and its 'Preview' tab is active. The main panel shows a table with 15 rows and 7 columns: 'branch\_id', 'branch\_category', 'branch\_name', 'kota', 'provinsi', and 'rating'. The data shows 15 pharmacy branches, all categorized as 'Apotek', located in either 'Ambon' or 'Balikpapan' within 'Maluku' or 'Kalimantan Timur' provinces. The 'rating' column contains numerical values ranging from 4.0 to 5.0.

Row	branch_id	branch_category	branch_name	kota	provinsi	rating
1	39578	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.7
2	55171	Apotek	Kimia Farma - Apotek	Ambon	Maluku	5.0
3	11400	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.1
4	38733	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.9
5	93401	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.5
6	68034	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.1
7	59260	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.1
8	49260	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.2
9	14799	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.6
10	22275	Apotek	Kimia Farma - Apotek	Ambon	Maluku	4.4
11	65902	Apotek	Kimia Farma - Apotek	Balikpapan	Kalimantan Timur	4.2
12	68961	Apotek	Kimia Farma - Apotek	Balikpapan	Kalimantan Timur	4.7
13	85014	Apotek	Kimia Farma - Apotek	Balikpapan	Kalimantan Timur	4.0
14	65560	Apotek	Kimia Farma - Apotek	Balikpapan	Kalimantan Timur	4.7
15	66421	Apotek	Kimia Farma - Apotek	Balikpapan	Kalimantan Timur	5.0



# 1.importing dataset to Bigquery

- Load dataset kf\_product



The screenshot shows the Google Cloud BigQuery console interface. The top navigation bar includes the Google Cloud logo, a project selector set to 'internship', and a search bar. Below this, a banner for the 'Sandbox' environment is visible. The left sidebar contains the 'Explorer' panel with a search bar and a tree view of resources. The 'kf\_product' dataset is selected and highlighted in blue. The main panel displays the 'kf\_product' dataset with tabs for Schema, Details, Preview, Table Explorer, Insights, Lineage, Data Profile, and Data Quality. The 'Preview' tab is active, showing a table with 4 rows and 5 columns: product\_id, product\_name, product\_category, and price. The data is as follows:

Row	product_id	product_name	product_category	price
1	KF766	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	M01AB	108500
2	KF400	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	M01AB	359500
3	KF312	Anti-inflammatory and antirheumatic products, non-steroids, Acetic acid derivatives and related substances	N02BE/B	774700
4	KF723	Anti-inflammatory and	N02BE/B	739100

# Cek Null, Missing Value & Duplicate Data

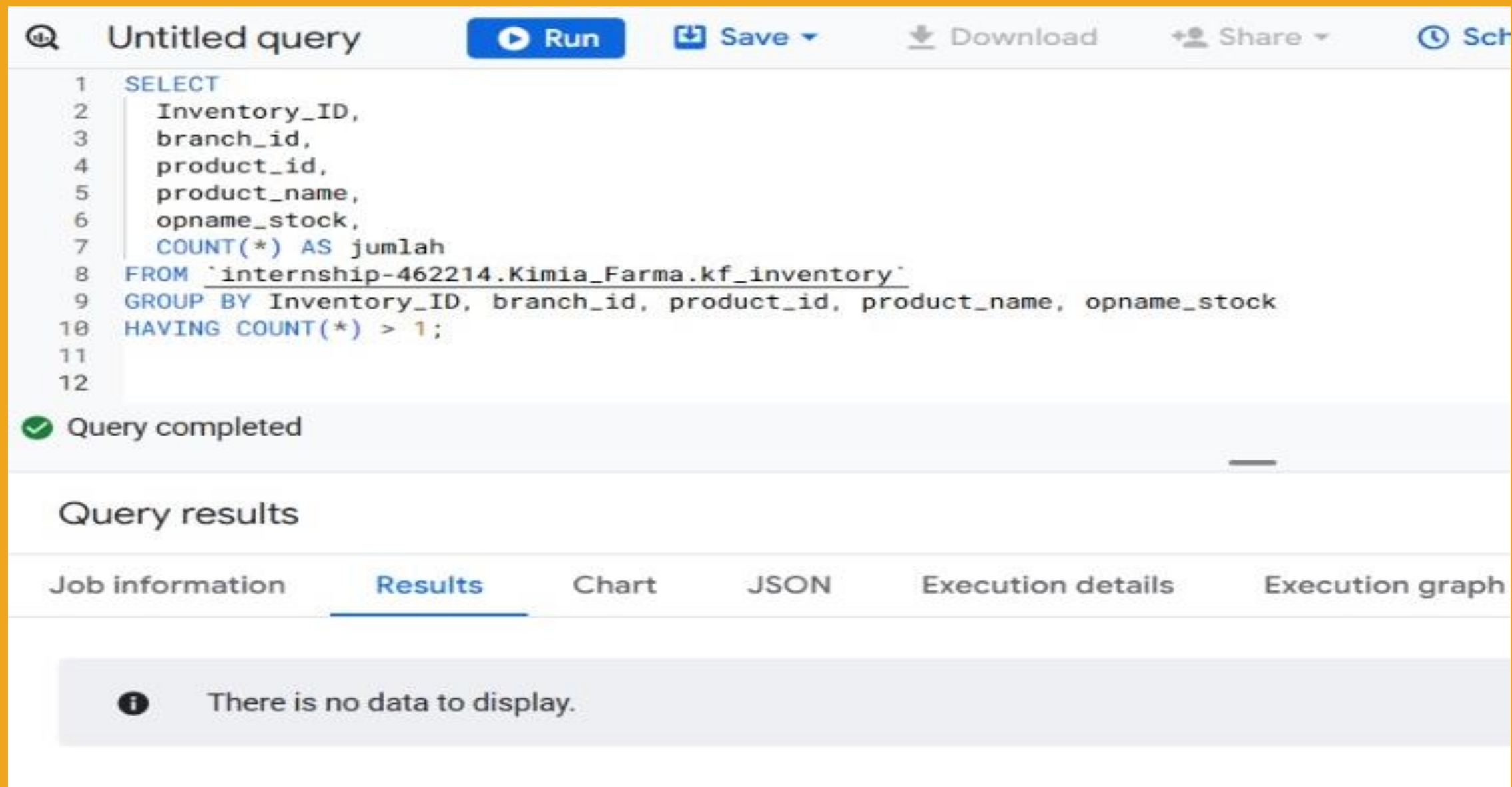
# kf\_inventory

[illegible]

ow	total_rows	null_inventory_id	null_branch_id	null_product_id	null_product_name	null_opname_stock	kosong_inventory...	kosong_product_id	kosong_product...
1	1035000	0	0	0	0	0	0	0	0

# Cek Null, Missing Value & Duplicate Data

## Cek Duplikat kf\_inventory



The screenshot shows a SQL query editor interface. At the top, there's a toolbar with icons for search, run, save, download, share, and schedule. The query is titled "Untitled query". The SQL code is as follows:

```
1 SELECT
2   Inventory_ID,
3   branch_id,
4   product_id,
5   product_name,
6   opname_stock,
7   COUNT(*) AS jumlah
8 FROM `internship-462214.Kimia_Farma.kf_inventory`
9 GROUP BY Inventory_ID, branch_id, product_id, product_name, opname_stock
10 HAVING COUNT(*) > 1;
11
12
```

Below the query, a green checkmark icon indicates "Query completed". Underneath, the "Query results" section is visible, with tabs for "Job information", "Results" (selected), "Chart", "JSON", "Execution details", and "Execution graph". The "Results" tab shows a message: "There is no data to display."



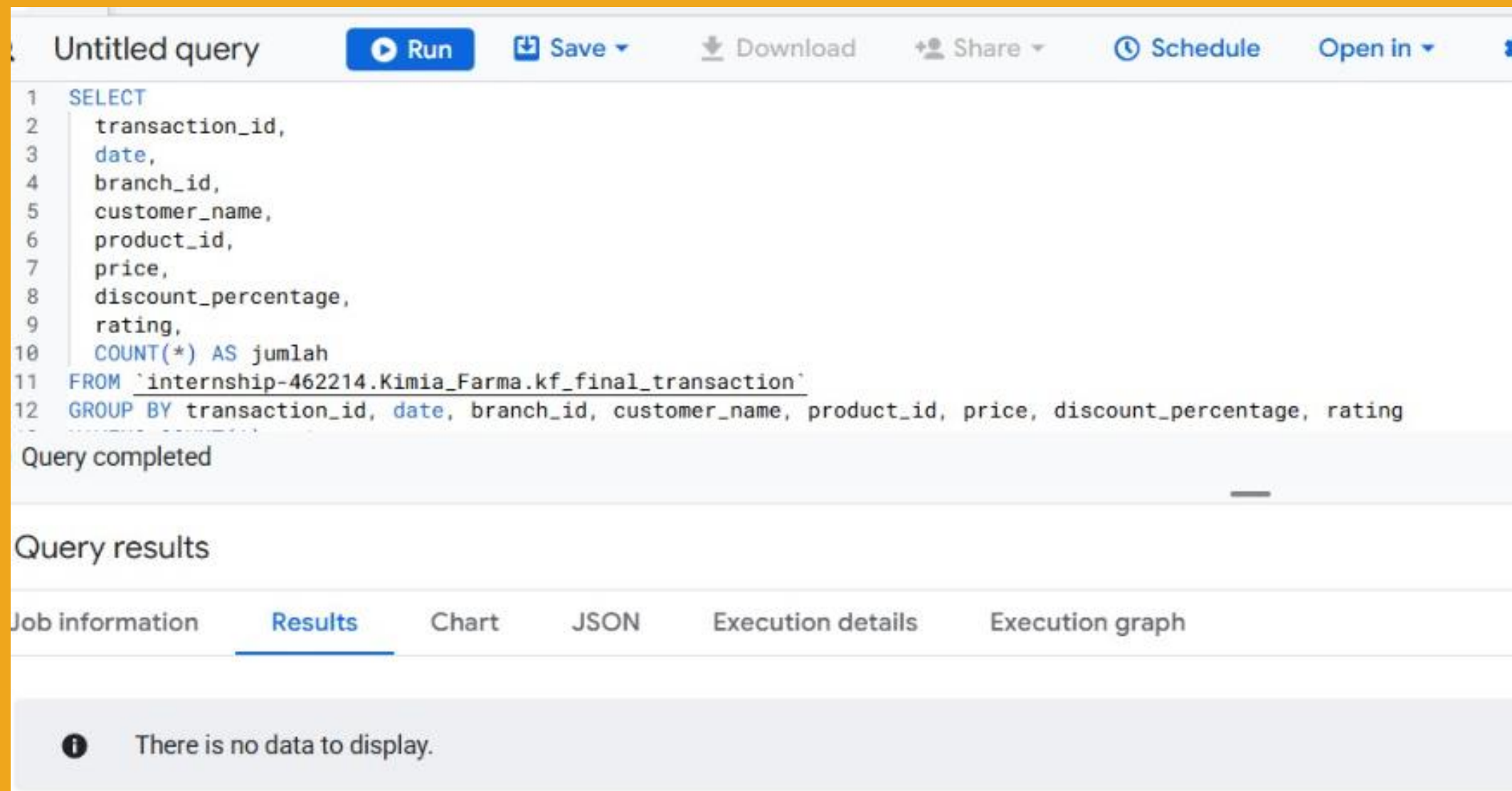
# Cek Null, Missing Value & Duplicate Data

- **kf\_final\_transaction**

[illegible]

# Cek Null, Missing Value & Duplicate Data

- kf\_final\_transaction



The screenshot shows a SQL query editor interface. At the top, there's a toolbar with buttons for 'Run', 'Save', 'Download', 'Share', 'Schedule', and 'Open in'. Below the toolbar, the query text is as follows:

```
1 SELECT
2   transaction_id,
3   date,
4   branch_id,
5   customer_name,
6   product_id,
7   price,
8   discount_percentage,
9   rating,
10  COUNT(*) AS jumlah
11 FROM `internship-462214.Kimia_Farma.kf_final_transaction`
12 GROUP BY transaction_id, date, branch_id, customer_name, product_id, price, discount_percentage, rating
```

Below the query text, it says 'Query completed'. Underneath that, there's a section for 'Query results' with tabs for 'Job information', 'Results', 'Chart', 'JSON', 'Execution details', and 'Execution graph'. The 'Results' tab is selected. At the bottom, there's a message: 'There is no data to display.'

# Cek Null, Missing Value & Duplicate Data

- kf\_kantor\_cabang

The screenshot shows a SQL query editor with a query to check for null and missing values in the `kf_kantor_cabang` table. The query is as follows:

```
1 SELECT
2   COUNT(*) AS total_rows,
3
4   -- Cek NULL
5   COUNTIF(branch_id IS NULL) AS null_branch_id,
6   COUNTIF(branch_category IS NULL) AS null_branch_category,
7   COUNTIF(branch_name IS NULL) AS null_branch_name,
8   COUNTIF(kota IS NULL) AS null_kota,
9   COUNTIF(provinsi IS NULL) AS null_provinsi,
10  COUNTIF(rating IS NULL) AS null_rating,
11
12  -- Cek string kosong tapi bukan NULL
13  COUNTIF(TRIM(branch_category) = '') AS kosong_branch_category,
14  COUNTIF(TRIM(branch_name) = '') AS kosong_branch_name,
15  COUNTIF(TRIM(kota) = '') AS kosong_kota,
16  COUNTIF(TRIM(provinsi) = '') AS kosong_provinsi
17
18 FROM `internship-462214.Kimia_Farma.kf_kantor_cabang`;
```

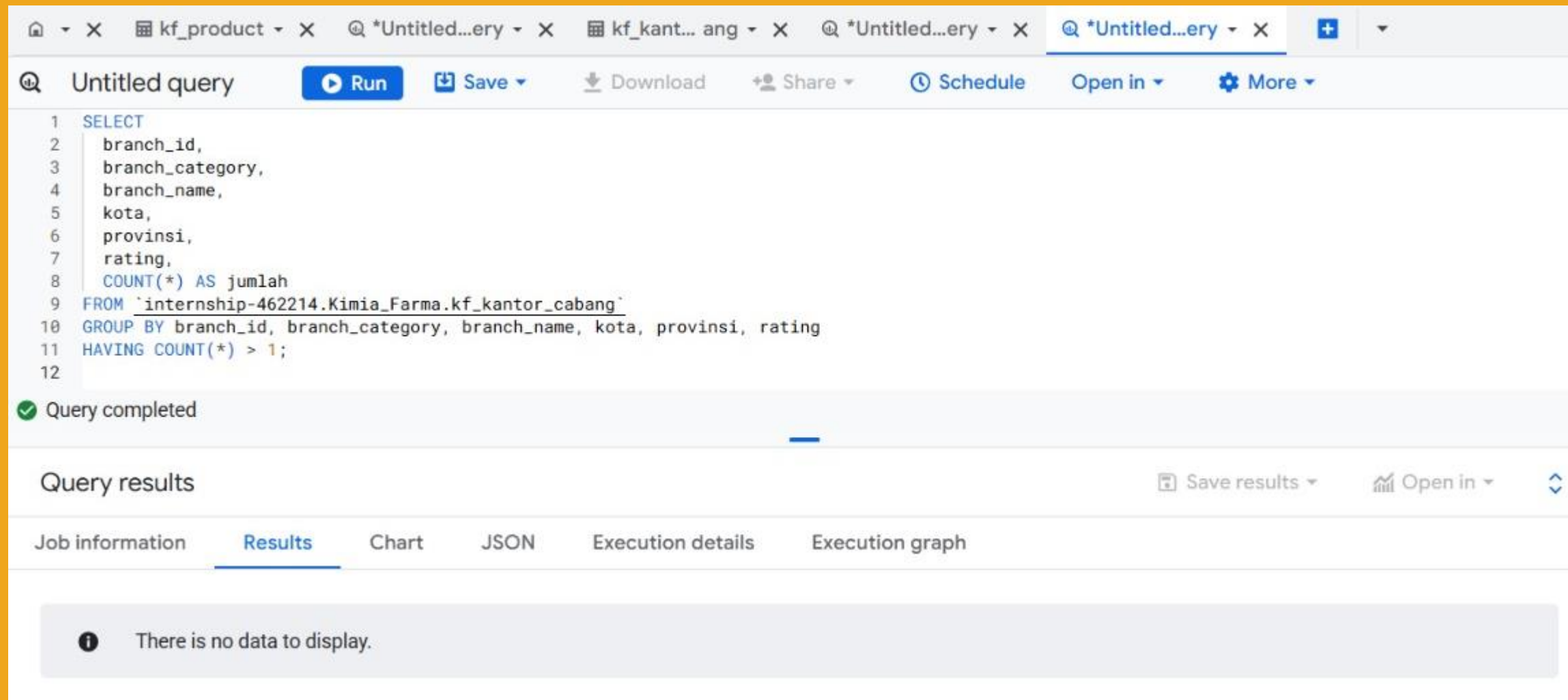
The query has been executed successfully, as indicated by the "Query completed" message. The results are displayed in a table with the following columns:

Job information	Results	Chart	JSON	Execution details	Execution graph																
total_rows	1725	null_branch_id	0	null_branch_cate...	0	null_branch_name	0	null_kota	0	null_provinsi	0	null_rating	0	kosong_branch_c...	0	kosong_branch_n...	0	kosong_kota	0	kosong_provinsi	0



# Cek Null, Missing Value & Duplicate Data

- Cek duplikat kf\_kantor\_cabang



The screenshot shows a SQL query editor interface with a query to find duplicate data in the `kf_kantor_cabang` table. The query is as follows:

```
1 SELECT
2   branch_id,
3   branch_category,
4   branch_name,
5   kota,
6   provinsi,
7   rating,
8   COUNT(*) AS jumlah
9 FROM `internship-462214.Kimia_Farma.kf_kantor_cabang`
10 GROUP BY branch_id, branch_category, branch_name, kota, provinsi, rating
11 HAVING COUNT(*) > 1;
12
```

Below the query editor, a status bar indicates "Query completed". The "Query results" section is visible, showing tabs for "Job information", "Results", "Chart", "JSON", "Execution details", and "Execution graph". The "Results" tab is selected, and a message states: "There is no data to display."

# Cek Null, Missing Value & Duplicate Data

- kf\_product

The screenshot shows a SQL query editor with a query to check for null and missing values in the `kf_product` table. The query is as follows:

```
1 SELECT
2   COUNT(*) AS total_rows,
3
4   -- Cek NULL
5   COUNTIF(product_id IS NULL) AS null_product_id,
6   COUNTIF(product_name IS NULL) AS null_product_name,
7   COUNTIF(product_category IS NULL) AS null_product_category,
8   COUNTIF(price IS NULL) AS null_product_price,
9
10  -- Cek string kosong (" atau spasi)
11  COUNTIF(TRIM(product_name) = '') AS kosong_product_name,
12  COUNTIF(TRIM(product_category) = '') AS kosong_product_category
13
14 FROM `internship-462214.Kimia_Farma.kf_product`;
15
```

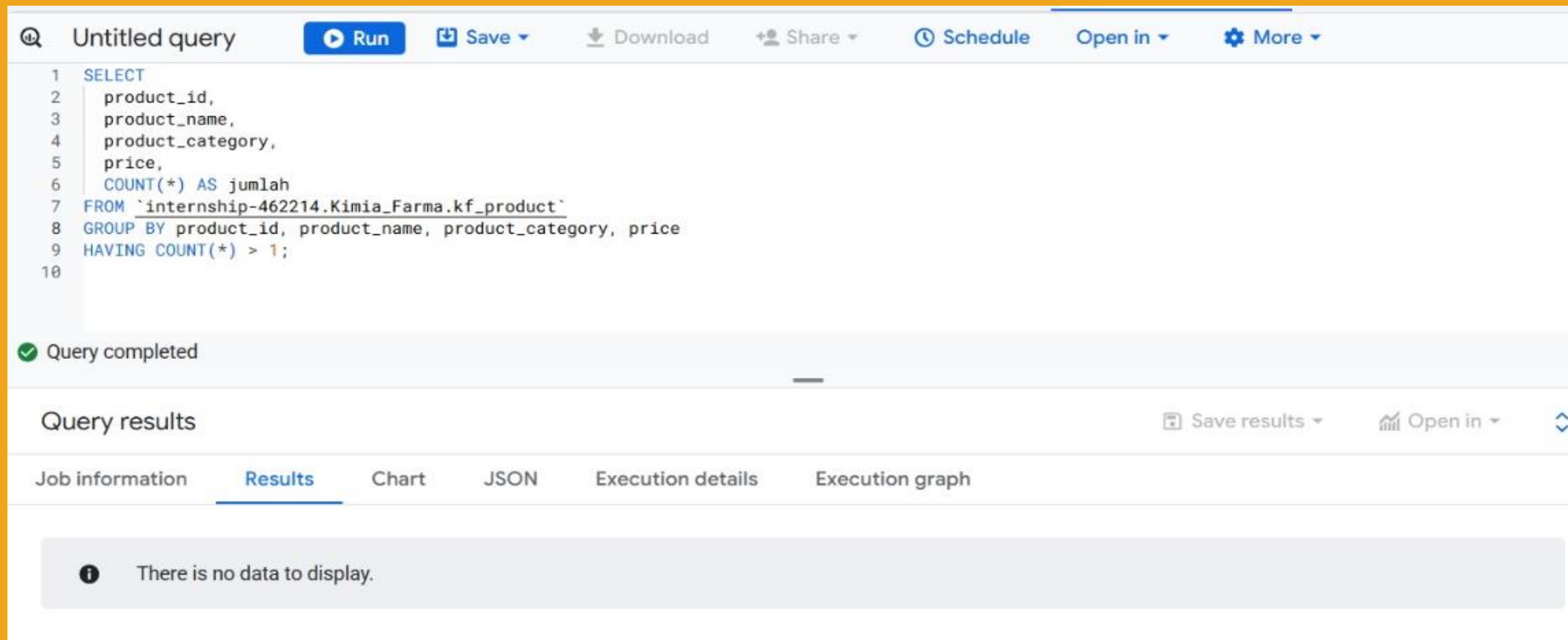
Below the query, a status bar indicates "Query completed".

The "Query results" section shows a table with the following data:

Row	total_rows	null_product_id	null_product_name	null_product_cate...	null_product_price	kosong_product...	kosong_product...
1	150	0	0	0	0	0	0

# Cek Null, Missing Value & Duplicate Data

- Cek duplikat kf\_product



The screenshot shows a SQL query editor interface. At the top, there's a toolbar with buttons for 'Run', 'Save', 'Download', 'Share', 'Schedule', 'Open in', and 'More'. Below the toolbar, the query text is displayed in a monospace font. The query is a SELECT statement that retrieves product details and counts duplicates. Below the query, a status bar indicates 'Query completed'. The 'Query results' section is visible, showing tabs for 'Job information', 'Results', 'Chart', 'JSON', 'Execution details', and 'Execution graph'. The 'Results' tab is active, but it displays a message: 'There is no data to display.'

```
1 SELECT
2   product_id,
3   product_name,
4   product_category,
5   price,
6   COUNT(*) AS jumlah
7 FROM `internship-462214.Kimia_Farma.kf_product`
8 GROUP BY product_id, product_name, product_category, price
9 HAVING COUNT(*) > 1;
10
```

Query completed

Query results

Job information Results Chart JSON Execution details Execution graph

There is no data to display.



# 2. Tabel Analisa

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Search (/) for resources, docs, products, and more

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Search

Sandbox

Set up billing to upgrade to the full BigQuery experience. [Learn more](#)

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📄 Snapshot

🗑 Delete

📄 Export

🔄 Refelete

📄 Export

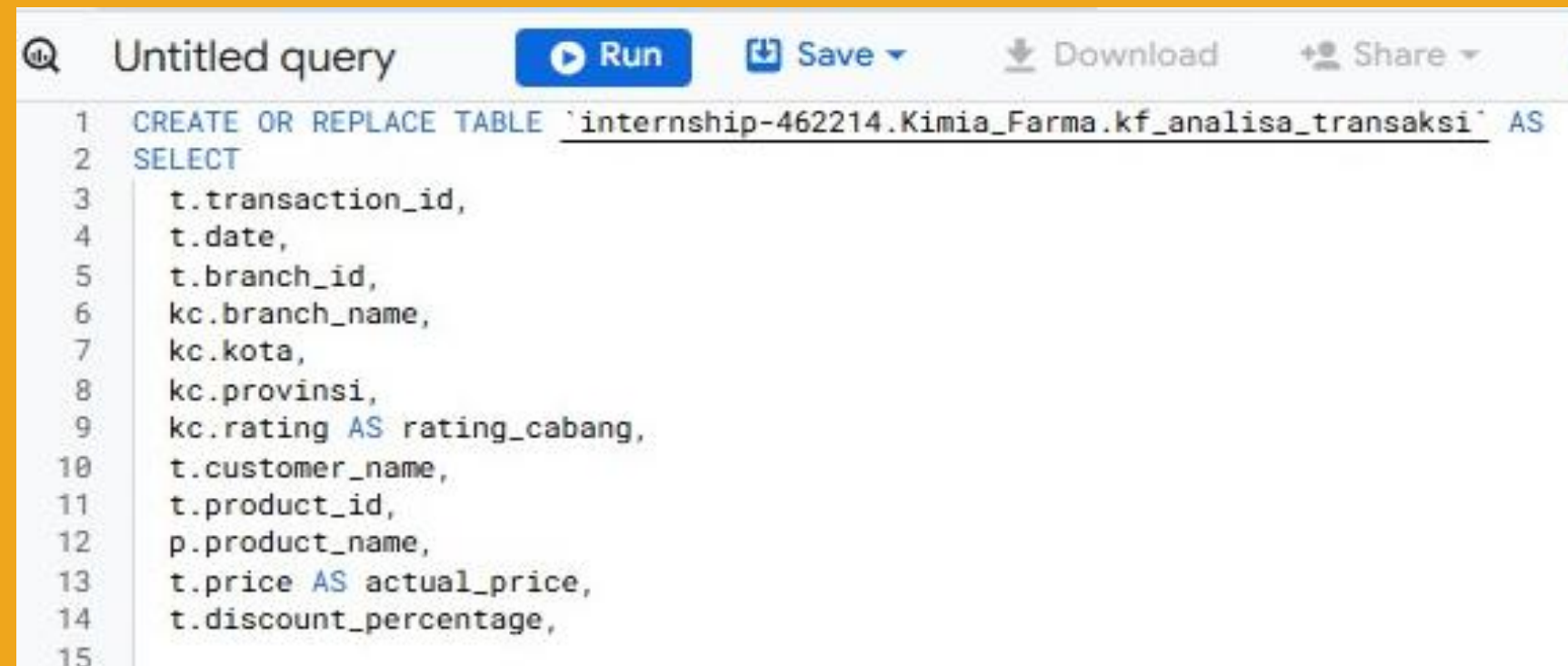
Schema	Details	Preview	Table Explorer	Preview	Insights	Lineage	Data Profile	Data Quality	Data Quality							
Row	transaction_id	date	branch_id	branch_name	kota	provinsi	rating_cabang	customer_name	product_id	product_name	actual_price	discount_per...	persentase_...	nett_sales	nett_profit	rating_transa...
1	TRX9996563	2021-06-01	43007	Kimia Farma - Apotek	Ciamis	Jawa Barat	4.0	Lisa Campbell	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	4.1
2	TRX6539812	2021-01-25	17275	Kimia Farma - Apotek	Banda Aceh	Aceh	3.9	Linda Buchanan	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	4.7
3	TRX1232342	2023-05-30	62312	Kimia Farma - Apotek	Cianjur	Jawa Barat	4.5	Linda Butler	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	4.8
4	TRX6546352	2021-02-23	96065	Kimia Farma - Apotek	Karawang	Jawa Barat	5.0	Chelsea Williams	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	3.1
5	TRX4605325	2022-05-09	99182	Kimia Farma - Apotek	Makassar	Sulawesi Selatan	4.6	Keith Shaffer	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	3.3
6	TRX6565400	2020-01-05	90734	Kimia Farma - Apotek	Sukabumi	Jawa Barat	4.6	Belinda Flores	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	3.6
7	TRX9876181	2023-07-08	47344	Kimia Farma - Apotek	Tanjungpinang	Kepulauan Riau	4.9	Phillip George	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	4.7
8	TRX3448274	2022-10-27	49520	Kimia Farma - Apotek	Subang	Jawa Barat	4.4	Andre Hawkins	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	3.9
9	TRX2215482	2021-04-29	67373	Kimia Farma - Apotek	Subang	Jawa Barat	4.6	Christopher Cunningham	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	4.6
10	TRX2165480	2022-10-01	79972	Kimia Farma - Apotek	Mataram	Nusa Tenggara Barat	4.7	Megan Mercer	KF172	Psycholeptics drugs, Hypnotics ...	2100	0.15	0.1	2096.85	209.685	3.8

# 3. Bigquery Syntax Tabel Analisa

```
>|  kf_anali... ksi  +  |
Untitled query  Run  Save  Download  Share  Sch
1 CREATE OR REPLACE TABLE `internship-462214.Kimia_Farma.kf_analisa_transaksi` AS
2 SELECT
3     t.transaction_id,
4     t.date,
5     t.branch_id,
6     kc.branch_name,
7     kc.kota,
8     kc.provinsi,
9     kc.rating AS rating_cabang,
10    t.customer_name,
11    t.product_id,
12    p.product_name,
13    t.price AS actual_price,
14    t.discount_percentage,
15
16    CASE
17        WHEN t.price <= 50000 THEN 0.10
18        WHEN t.price > 50000 AND t.price <= 100000 THEN 0.15
19        WHEN t.price > 100000 AND t.price <= 300000 THEN 0.20
20        WHEN t.price > 300000 AND t.price <= 500000 THEN 0.25
21        ELSE 0.30
22    END AS persentase_gross_laba,
23
24    t.price * (1 - t.discount_percentage / 100.0) AS nett_sales,
25
26    (t.price * (1 - t.discount_percentage / 100.0)) *
27    CASE
28        WHEN t.price <= 50000 THEN 0.10
29        WHEN t.price > 50000 AND t.price <= 100000 THEN 0.15
30        WHEN t.price > 100000 AND t.price <= 300000 THEN 0.20
31        WHEN t.price > 300000 AND t.price <= 500000 THEN 0.25
32        ELSE 0.30
33    END AS nett_profit,
34
35    t.rating AS rating_transaksi
36
37 FROM
38     `internship-462214.Kimia_Farma.kf_final_transaction` t
39 LEFT JOIN
40     `internship-462214.Kimia_Farma.kf_kantor_cabang` kc
41     ON t.branch_id = kc.branch_id
42 LEFT JOIN
43     `internship-462214.Kimia_Farma.kf_product` p
44     ON t.product_id = p.product_id
45
```

# 3. Bigquery Syntax

## Penjelasan syntax



```
1 CREATE OR REPLACE TABLE `internship-462214.Kimia_Farma.kf_analisa_transaksi` AS
2 SELECT
3   t.transaction_id,
4   t.date,
5   t.branch_id,
6   kc.branch_name,
7   kc.kota,
8   kc.provinsi,
9   kc.rating AS rating_cabang,
10  t.customer_name,
11  t.product_id,
12  p.product_name,
13  t.price AS actual_price,
14  t.discount_percentage,
15
```

Select columns: mengambil data dari table transaksi dan table relasi lain.

Untuk Menyusun data gabungan dari 3 tabel:

- t = transaksi
- kc = kantor cabang
- p = produk



# 3. Bigquery Syntax

## Penjelasan syntax

```
CASE
  WHEN t.price <= 50000 THEN 0.10
  WHEN t.price > 50000 AND t.price <= 100000 THEN 0.15
  WHEN t.price > 100000 AND t.price <= 300000 THEN 0.20
  WHEN t.price > 300000 AND t.price <= 500000 THEN 0.25
  ELSE 0.30
END AS presentase_gross_laba,
```

```
24 t.price * (1 - t.discount_percentage / 100.0) AS nett_sales,
```

```
24 t.price * (1 - t.discount_percentage / 100.0) AS nett_sales,
25
26 (t.price * (1 - t.discount_percentage / 100.0)) *
27 CASE
28   WHEN t.price <= 50000 THEN 0.10
29   WHEN t.price > 50000 AND t.price <= 100000 THEN 0.15
30   WHEN t.price > 100000 AND t.price <= 300000 THEN 0.20
31   WHEN t.price > 300000 AND t.price <= 500000 THEN 0.25
32   ELSE 0.30
33 END AS nett_profit,
```

```
34
35 t.rating AS rating_transaksi
```

→ CASE untuk membuat kolom presentase\_gross\_laba. Kolom ini adalah margin laba kotor berdasarkan rentang harga produk.

→ Harga akhir setelah dikurangi diskon

→ Menghitung profit bersih berdasarkan harga setelah diskon (net\_sales) x Margin berdasarkan harga produk

→ Menambahkan kolom rating dari transaksi

# 3. Bigquery Syntax

## Penjelasan syntax

```
37 FROM
38   'internship-462214.Kimia_Farma.kf_final_transaction' t
39 LEFT JOIN
40   'internship-462214.Kimia_Farma.kf_kantor_cabang' kc
41   ON t.branch_id = kc.branch_id
42 LEFT JOIN
43   'internship-462214.Kimia_Farma.kf_product' p
44   ON t.product_id = p.product_id
```

Menggabungkan data dari 3 table:

- t = transaksi
- Kc = informasi cabang
- P = informasi product

# 4. Executive Summary Dashboard





# 4. Dashboard Customer Analysis



# 4. Dashboard Produk Analysis



# Insight Bisnis

## 1) Kinerja Penjualan dan Profit Stabil, Namun Tidak Bertumbuh Signifikan

Total pendapatan (nett sales): Rp347 M

Total profit: Rp98,5 M

Transaksi tahunan stagnan di kisaran 167–168 ribu meski jumlah pelanggan meningkat dari 160 ribu ke 176 ribu.

## 2) Dominasi Sumatera Utara dalam Penjualan dan Transaksi

10 besar cabang dengan nett sales dan jumlah transaksi tertinggi seluruhnya berasal dari Sumatera Utara.

Performa cabang lainnya di Jawa dan Sulawesi belum mampu menyaingi.

## 3) Kualitas Pelanggan Tinggi tapi Frekuensi Rendah

47,8% pelanggan adalah high spender.

Namun frekuensi transaksi per pelanggan relatif rendah, menandakan potensi retensi belum maksimal.

## 4) Gap Antara Rating Cabang dan Rating Transaksi

Rata-rata rating cabang: 4,4

Rata-rata rating transaksi: 4,0

Terdapat cabang dengan gap hingga 1 poin, menandakan adanya ekspektasi pelanggan yang tidak terpenuhi.



# Insight Bisnis

## 5) Kontributor Produk Terbaik Berasal dari Kategori Tertentu

Produk paling menguntungkan berasal dari kategori sistem saraf, anti-inflamasi, dan antihistamin (KF953, KF633, KF977).

## 6) Strategi Diskon Efisien dan Tidak Menggerus Margin

Produk dengan diskon 7–15% tetap menghasilkan gross margin hingga 30%.

## 7) Distribusi Produk Belum Merata Secara Geografis

Ada kota dengan distribusi produk sangat tinggi (>20.000 unit) dan ada yang sangat rendah (<5.000), menunjukkan peluang redistribusi.

## 8) Produk Penjualan Rendah Masih Menguntungkan

Produk low selling seperti KF998 dan KF222 mampu menghasilkan sales > Rp200 juta, artinya masih layak dipromosikan dengan pendekatan berbeda.

# Rekomendasi Bisnis

## 1. Dorong Repeat Order dan Loyalitas Pelanggan

- Implementasi program loyalitas, bundling produk, dan promosi berbasis riwayat pembelian.

## 2. Replikasi Strategi Cabang Sukses di Sumatera Utara

- Audit operasional cabang Sumut, lalu adopsi ke provinsi dengan potensi pasar tinggi seperti Jawa Tengah dan Jawa Barat.

## 3. Optimasi Pengalaman Pelanggan

- Fokus pada cabang dengan rating gap tinggi. Lakukan pelatihan layanan pelanggan dan feedback survei real-time.

## 4. Fokus pada Produk Unggulan dengan Margin Tinggi

- Jadikan produk seperti KF953, KF977 sebagai andalan promosi, upsell, dan bundling.

## 5. Diskon Selektif Berdasarkan Margin

- Terapkan diskon hanya pada produk yang sudah terbukti tetap menguntungkan.

## 6. Reposition Produk Rendah Penjualan yang Bernilai

- Edukasi pelanggan dan tingkatkan visibilitas produk yang kurang populer namun bernilai.

## 7. Evaluasi dan Redistribusi Produk Secara Regional

- Perbaiki distribusi produk berdasarkan permintaan aktual tiap wilayah dan kapasitas cabang.

## 8. Tambahkan Dashboard Retensi dan Segmentasi Lanjutan

- Gunakan analitik lanjutan untuk memantau lifecycle pelanggan dan segmentasi berbasis perilaku.

# Terima Kasih

link :



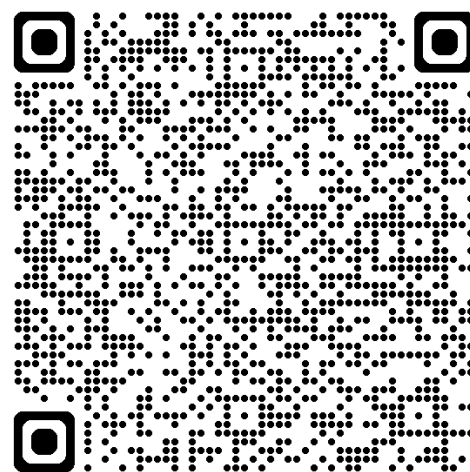
[https://console.cloud.google.com/bigquery?hl=en&inv=1&inv=Ab2FIA&project=internship-462214&ws=!1m5!1m4!4m3!1sinternship-462214!2sKimia\\_Farma!3skf\\_analisa\\_transaksi](https://console.cloud.google.com/bigquery?hl=en&inv=1&inv=Ab2FIA&project=internship-462214&ws=!1m5!1m4!4m3!1sinternship-462214!2sKimia_Farma!3skf_analisa_transaksi)



<https://github.com/dea1505>



<https://lookerstudio.google.com/s/haJpB1GYw3A>



Link Video:

[https://drive.google.com/drive/folders/13ssqfhjMPwySya8PMI2R9y-qAS3doYx1?usp=drive\\_link](https://drive.google.com/drive/folders/13ssqfhjMPwySya8PMI2R9y-qAS3doYx1?usp=drive_link)