

Final Task

Bank Muamalat Business Intelligence Analyst
Virtual Internship

Presented by
Rayhan Fakhri Mardana Putra



Rayhan Fakhriza Mardana Putra

About You

I currently working as an Intern at Bank Muamalat Indonesia in the Operation Strategy & Development Unit. My work includes analyzing data regarding with the Operational KPI and Productivity using SQL, manage several program and engagement, and manage planning and strategy within the company operation.

My Experience

- Intern – PT Bank Muamalat Indonesia
Operation Strategy & Development Division
(May 2023 - Present)
- Member - Theoretical Physics Research
Group, Universitas Airlangga, Indonesia
(August 2020 – October 2022)
- General Secretary – Himpunan Mahasiswa
Fisika Universitas Airlangga, Indonesia
(January 2020 – January 2021)

Case Study

Goal : Create data analysis from PT Sejahtera Bersama sales tables

Customers

CustomerID	FirstName	LastName	CustomerEmail	CustomerPhone	CustomerAddress	CustomerCity	CustomerState	CustomerZip
1	Grazia	Rasmus	grasmusas@i2i.jp#mailto:gra: (202) 577-2595		628 Buhler Junction	Washington	District of Columbia	20029
2	Bunny	Trevar	btrevanmj@wordpress.org#in 917-903-2827		52 Cascade Drive	Jamaica	New York	11436
3	Tracie	Grayston	tgrayston7k@pagesperso-ora 404-868-2391		672 Comanche Way	Atlanta	Georgia	30343
4	Amerigo	Garrelts	agarrelts6e@oalc.gov.aufma 415-190-3290		8252 Village Green Hill	San Francisco	California	94177
5	Shea	Stronghill	sstronghillc1@google.nl#mail 432-775-7828		542 3rd Point	Midland	Texas	79705

Orders

OrderID	Date	CustomerID	ProdNumber	Quantity
1	01/01/2020	1866	EB514	2
2	01/01/2020	1567	RS706	3
3	01/01/2020	2064	TV804	6
4	01/01/2020	287	DK203	1
5	01/01/2020	422	EB517	5

Products Category

CategoryID	CategoryName	CategoryAbbreviation
1	Blueprints	BP
2	Drone Kits	DK
3	Drones	DS
4	eBooks	EB
5	Robot Kits	RK

Products

ProdNumber	ProdName	Category	Price
BP101	All Eyes Drone Blueprint	1	9.99
BP102	Bsquare Robot Blueprint	1	8.99
BP104	Cat Robot Blueprint	1	4.99
BP105	Creature Robot Arms Blueprint	1	12.00
BP106	Hexacopter Drone Blueprint	1	8.99

1st Task

Goal : Find the Primary Key of each table

Primary key of Customers
Table is **CustomerID**

CustomerID	FirstName	LastName	CustomerEmail	CustomerPhone	CustomerAddress	CustomerCity	CustomerState	CustomerZip
1	Grazia	Rasmus	grasmusas@i2i.jp#mailto:gra	(202) 577-2595	628 Buhler Junction	Washington	District of Columbia	20029
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5	Shea	Stronghill	sstronghillc1@google.nl#mail	432-775-7828	542 3rd Point	Midland	Texas	79705

Primary key of Orders Table is
OrderID

OrderID	Date	CustomerID	ProdNumber	Quantity
1	01/01/2020	1866	EB514	2
2	01/01/2020	1567	RS706	3
3	01/01/2020	2064	TV804	6
4	01/01/2020	287	DK203	1
5	01/01/2020	422	EB517	5

Primary key of Product
Category Table is **CategoryID**

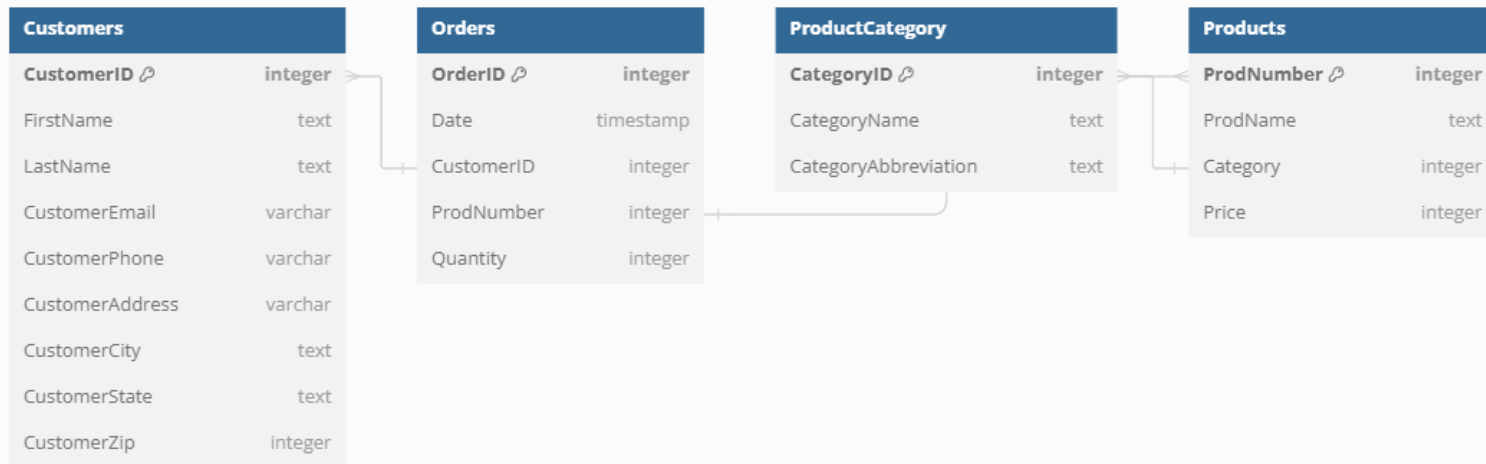
CategoryID	CategoryName	CategoryAbbreviation
1	Blueprints	BP
2	Drone Kits	DK
3	Drones	DS
4	eBooks	EB
5	Robot Kits	RK

Primary key of Product Table is
ProdNumber

ProdNumber	ProdName	Category	Price
BP101	All Eyes Drone Blueprint	1	9.99
BP102	Square Robot Blueprint	1	8.99
BP104	Cat Robot Blueprint	1	4.99
BP105	Creature Robot Arms Blueprint	1	12.00
BP106	Hexacopter Drone Blueprint	1	8.99

2nd Task

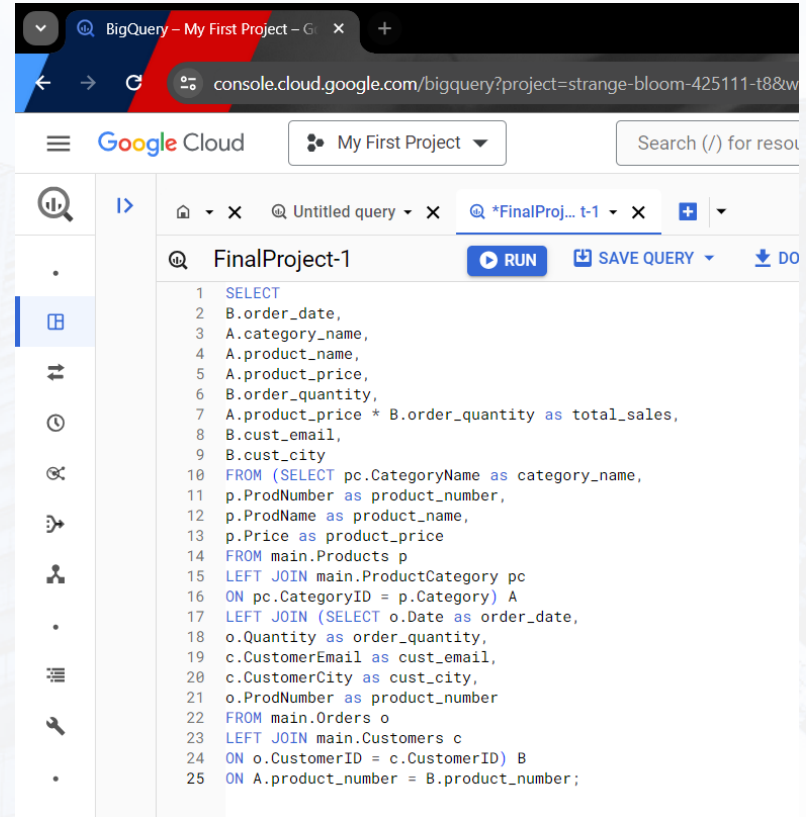
Goal : Figure out the relationship among tables



3rd Task

Goal : Create master table that contains

1. CustomerEmail
2. CustomerCity
3. OrderDate
4. OrderQty
5. ProductName
6. ProductPrice
7. ProductCategoryName
8. TotalSales



The screenshot shows the Google Cloud BigQuery console interface. The browser tab is 'BigQuery - My First Project'. The URL is 'console.cloud.google.com/bigquery?project=strange-bloom-425111-t8&w'. The 'Google Cloud' logo and 'My First Project' dropdown are visible. The 'FinalProject-1' query is selected, and the 'RUN' button is highlighted. The SQL query is as follows:

```
1 SELECT
2   B.order_date,
3   A.category_name,
4   A.product_name,
5   A.product_price,
6   B.order_quantity,
7   A.product_price * B.order_quantity as total_sales,
8   B.cust_email,
9   B.cust_city
10  FROM (SELECT pc.CategoryName as category_name,
11            p.ProdNumber as product_number,
12            p.ProdName as product_name,
13            p.Price as product_price
14         FROM main.Products p
15        LEFT JOIN main.ProductCategory pc
16              ON pc.CategoryID = p.Category) A
17  LEFT JOIN (SELECT o.Date as order_date,
18            o.Quantity as order_quantity,
19            c.CustomerEmail as cust_email,
20            c.CustomerCity as cust_city,
21            o.ProdNumber as product_number
22         FROM main.Orders o
23        LEFT JOIN main.Customers c
24              ON o.CustomerID = c.CustomerID) B
25  ON A.product_number = B.product_number;
```


3rd Task

Query results

[SAVE RESULTS](#)[EXPLORE DATA](#)

JOB INFORMATION

RESULTS

CHART

JSON

EXECUTION DETAILS

EXECUTION GRAPH

Row	order_date	category_name	product_name	product_price	order_quantity	total_sales	cust_email	cust_city
1	2021-01-15	Blueprints	All Eyes Drone Blueprint	9.99	1	9.99	fkolodziejskie@about.com#ma...	Chicago
2	2020-03-26	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	mphysickms@vistaprint.com#...	Boise
3	2020-05-06	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	ysabathe34@wired.com#mailt...	Huntington
4	2020-08-25	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	bcumberpatchjr@auda.org.au #mailto:bcumberpatchjr@auda.org.au#	Birmingham
5	2020-10-10	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	wdenmead7q@go.com#mailto...	New Orleans
6	2021-01-14	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	brapperl4@va.gov#mailto:brap...	Buffalo
7	2021-01-14	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	sbrando88@cpanel.net#mailto...	San Diego
8	2021-03-11	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	kjdurdjevicim@harvard.edu#m...	Mobile
9	2021-09-07	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	ijohanningrq@t-online.de#mailt...	Kansas City
10	2021-11-21	Blueprints	All Eyes Drone Blueprint	9.99	2	19.98	achesnaymo@ebay.com#mailt...	Battle Creek

[Load more](#)

4th Task

Goal : Create Visualization from the Master Data which contains:

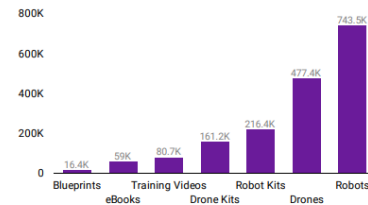
1. Total of Sales
2. Total of Sales per Product Category
3. Total of Quantity per Product Category
4. Total of Sales per City
5. Total of Quantity per City
6. Top 5 Highest Sales per Product Category
7. Top 5 Highest Quantity per Product Category

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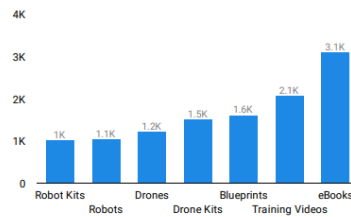
Total of Sales

\$1,754,750.57

Total Sales per Product Category



Total Quantity per Product Category



Total Sales and Quantity per City

City	Total Sales	Order Quantity
1. Washington	55.4K	308
2. Houston	33.8K	249
3. Sacramento	33.4K	153
4. San Diego	29.2K	203
5. Albany	25.4K	109
6. Springfield	25.1K	149
7. Miami	24.8K	138
8. El Paso	24.5K	137
9. Phoenix	24.1K	124
10. Philadelphia	23.8K	139
11. Birmingham	23.2K	127
12. Denver	20.2K	141
13. Dallas	20.1K	84
14. Trenton	20K	86
15. Madison	19.6K	111
16. Louisville	19.2K	101
17. Atlanta	19K	153
18. San Antonio	18.9K	140
19. Des Moines	17.9K	104
20. Saint Louis	17.5K	100

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[Link Final Task BI Analyst - Rayhan Fakhriza](#)

5th Task

Goal : Give recommendation from the Results



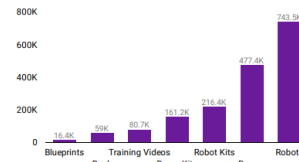
Focus on Product Sales

Some products have high sales but low quantity. Focus on product with higher sales should generate more income.

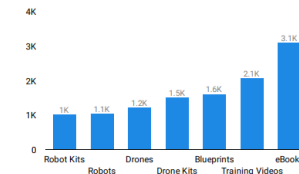
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5th Task

Goal : Give recommendation from the Results



Maintain Product Quality

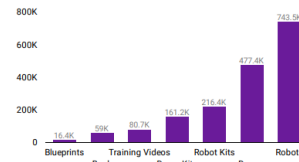
Customer lives in different city should receive the same product quality. Simplify the business process to maintain the product quality.

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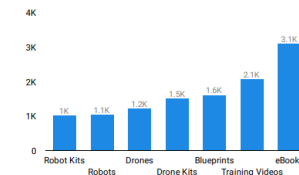
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Final Task Link



[BigQuery](#)



[LookerStudio](#)



[GitHub](#)

Presentation Video



[Link Video](#)



The thumbnail features a blue background with a faint architectural pattern of skyscrapers. At the top left, the logos for Rakamin Academy and Bank Muamalat (Pertama Murni Syariah) are displayed. A large orange circle is positioned on the right side. The text 'Final Task' is prominently displayed in the center. Below it, the text 'Bank Muamalat Business Intelligence Analyst Virtual Internship' is shown. Further down, it says 'Presented by Rayhan Fakhri Mardana Putra'. In the bottom right corner, there is a small inset photo of a man with short dark hair and a mustache, wearing a dark shirt.

 **Rakamin**
Academy

 **Bank Muamalat**
Pertama Murni Syariah

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Thank You



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