

Task 5 Rakamin

Bank Muamalat Business Intelligence Analyst

Presented by
Reza Donsika Putra



Reza Donsika Putra

About You

Final year student in Telkom University, passionate and enthusiast in programming, business and data environment.

My Experience

- Practice Assistant in Informatics Lab, Telkom University (Feb - Jun 2023)
- Data Analyst Internship in Jabar Digital Service, Bandung (Jul - Agu 2023)
- Data Engineer Internship in Jabar Digital Service, Bandung (Agu - Sep 2023)

Case Study

Create a Dashboard from raw data

Task 1

Tentukan masing-masing primary key pada 4 dataset penjualan

1. Primary key tabel Customer : CustomerID
2. Primary key tabel Products : ProdNumber
3. Primary key tabel Orders : OrderID
4. Primary key tabel ProductCategory : CategoryID

Task 1 - Set PK

Rakamin - Task 1 ...Key

Rakamin - Tas...

RUN

SAVE QUERY

SHARE

SCHEDULE

MORE

Query co...

```
1 ALTER TABLE `dono-rakamin-bi-analyst.bi_analyst.customers` ADD PRIMARY KEY (CustomerID) NOT ENFORCED;  
2 ALTER TABLE `dono-rakamin-bi-analyst.bi_analyst.orders` ADD PRIMARY KEY (OrderID) NOT ENFORCED;  
3 ALTER TABLE `dono-rakamin-bi-analyst.bi_analyst.productcategory` ADD PRIMARY KEY (CategoryID) NOT ENFORCED;  
4 ALTER TABLE `dono-rakamin-bi-analyst.bi_analyst.products` ADD PRIMARY KEY (ProdNumber) NOT ENFORCED;
```

Press Alt+F1 for Accessibility Options.

All results

Elapsed time

3 sec

Statements processed

4

Job status

✓ SUCCESS

| Status | End time | SQL | | Stages completed | Bytes processed | Action |
|--------|------------------|---------------------------------------|---|------------------|-----------------|------------------------------|
| ✓ | 4:53 PM [1:1] | ALTER TABLE `dono-rakamin-bi-analy... | ✓ | 0 | 0 B | VIEW RESULTS |
| ✓ | 4:53 PM [2:1] | ALTER TABLE `dono-rakamin-bi-analy... | ✓ | 0 | 0 B | VIEW RESULTS |
| ✓ | 4:53 PM [3:1] | ALTER TABLE `dono-rakamin-bi-analy... | ✓ | 0 | 0 B | VIEW RESULTS |
| ✓ | 4:53 PM [4:1] | ALTER TABLE `dono-rakamin-bi-analy... | ✓ | 0 | 0 B | VIEW RESULTS |

Task 1 - Result

customers QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFILE

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collation |
|--------------------------|---------------------------------|---------|----------|-----|-----------|
| <input type="checkbox"/> | CustomerID | INTEGER | NULLABLE | PK | |
| <input type="checkbox"/> | FirstName | STRING | NULLABLE | | |
| <input type="checkbox"/> | LastName | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerEmail | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerPhone | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerAddress | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerCity | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerState | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerZip | INTEGER | NULLABLE | | |

productcategory QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFILE

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collation |
|--------------------------|--------------------------------------|---------|----------|-----|-----------|
| <input type="checkbox"/> | CategoryID | INTEGER | NULLABLE | PK | |
| <input type="checkbox"/> | CategoryName | STRING | NULLABLE | | |
| <input type="checkbox"/> | CategoryAbbreviation | STRING | NULLABLE | | |

orders QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFILE

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collation |
|--------------------------|----------------------------|---------|----------|-----|-----------|
| <input type="checkbox"/> | OrderID | INTEGER | NULLABLE | PK | |
| <input type="checkbox"/> | Date | DATE | NULLABLE | | |
| <input type="checkbox"/> | CustomerID | INTEGER | NULLABLE | | |
| <input type="checkbox"/> | ProdNumber | STRING | NULLABLE | | |
| <input type="checkbox"/> | Quantity | INTEGER | NULLABLE | | |

products QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFILE

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collation |
|--------------------------|----------------------------|---------|----------|-----|-----------|
| <input type="checkbox"/> | ProdNumber | STRING | NULLABLE | PK | |
| <input type="checkbox"/> | ProdName | STRING | NULLABLE | | |
| <input type="checkbox"/> | Category | INTEGER | NULLABLE | | |
| <input type="checkbox"/> | Price | FLOAT | NULLABLE | | |

Task 2

Tentukan relationship dari ke-4 table tersebut

Task 2 - Relation

Rakamin - Task 2 ...hip

Rakamin - Task 2 Set Relationship

RUN

SAVE QUERY

SHARE

SCHEDULE

MORE

```
1 ALTER TABLE `dono-rakamin-bi-analyst.bi_analyst.orders` ADD FOREIGN KEY (CustomerID) REFERENCES
  `dono-rakamin-bi-analyst.bi_analyst.customers` (CustomerID) NOT ENFORCED;
2 ALTER TABLE `dono-rakamin-bi-analyst.bi_analyst.orders` ADD FOREIGN KEY (ProdNumber) REFERENCES
  `dono-rakamin-bi-analyst.bi_analyst.products` (ProdNumber) NOT ENFORCED;
3 ALTER TABLE `dono-rakamin-bi-analyst.bi_analyst.products` ADD FOREIGN KEY (Category) REFERENCES
  `dono-rakamin-bi-analyst.bi_analyst.productcategory` (CategoryID) NOT ENFORCED;
```

Press Alt+F1 for Accessibility Options.

All results

| | | |
|--------------|----------------------|------------|
| Elapsed time | Statements processed | Job status |
| 3 sec | 3 | ✓ SUCCESS |

| Status | End time | SQL | Stages completed | Bytes processed | Action |
|--------|------------------|---|------------------|-----------------|--------------|
| ✓ | 8:35 PM [1:1] | ALTER TABLE `dono-rakamin-bi-analyst.bi_anal... | 0 | 0 B | VIEW RESULTS |
| ✓ | 8:35 PM [2:1] | ALTER TABLE `dono-rakamin-bi-analyst.bi_anal... | 0 | 0 B | VIEW RESULTS |
| ✓ | 8:35 PM [3:1] | ALTER TABLE `dono-rakamin-bi-analyst.bi_anal... | 0 | 0 B | VIEW RESULTS |

Task 2 - Result

customers

QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA PRO

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collat |
|--------------------------|---------------------------------|---------|----------|-----|--------|
| <input type="checkbox"/> | CustomerID | INTEGER | NULLABLE | PK | |
| <input type="checkbox"/> | FirstName | STRING | NULLABLE | | |
| <input type="checkbox"/> | LastName | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerEmail | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerPhone | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerAddress | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerCity | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerState | STRING | NULLABLE | | |
| <input type="checkbox"/> | CustomerZip | INTEGER | NULLABLE | | |

productcateg...

QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFI

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collat |
|--------------------------|--------------------------------------|---------|----------|-----|--------|
| <input type="checkbox"/> | CategoryID | INTEGER | NULLABLE | PK | |
| <input type="checkbox"/> | CategoryName | STRING | NULLABLE | | |
| <input type="checkbox"/> | CategoryAbbreviation | STRING | NULLABLE | | |

orders

QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA P

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collation |
|--------------------------|----------------------------|---------|----------|-----|-----------|
| <input type="checkbox"/> | OrderID | INTEGER | NULLABLE | PK | |
| <input type="checkbox"/> | Date | DATE | NULLABLE | | |
| <input type="checkbox"/> | CustomerID | INTEGER | NULLABLE | FK | |
| <input type="checkbox"/> | ProdNumber | STRING | NULLABLE | FK | |
| <input type="checkbox"/> | Quantity | INTEGER | NULLABLE | | |

products

QUERY SHARE COPY

SCHEMA DETAILS PREVIEW LINEAGE DATA PROI

Filter Enter property name or value

| <input type="checkbox"/> | Field name | Type | Mode | Key | Collation |
|--------------------------|----------------------------|---------|----------|-----|-----------|
| <input type="checkbox"/> | ProdNumber | STRING | NULLABLE | PK | |
| <input type="checkbox"/> | ProdName | STRING | NULLABLE | | |
| <input type="checkbox"/> | Category | INTEGER | NULLABLE | FK | |
| <input type="checkbox"/> | Price | FLOAT | NULLABLE | | |

Task 3

Sebagai BI Analyst PT Sejahtera Bersama, kita akan membuat sebuah table master yang berisikan informasi :

- CustomerEmail (cust_email)
- CustomerCity (cust_city)
- OrderDate (order_date)
- OrderQty (order_qty)
- ProductName (product_name)
- ProductPrice (product_price)
- ProductCategoryName (category_name)
- TotalSales (total_sales)

Task 3 - Query

Rakamin - Task 3 Table M...ter

RUN

SAVE QUERY

SHARE

SCHEDULE

MORE

This query will process 256.24 KB when run.

```
1 SELECT o.Date AS order_date, pc.CategoryName AS category_name, p.ProdName AS product_name, p.Price AS product_price, o.Quantity AS order_qty, p.Price * o.Quantity AS total_sales, c.  
   CustomerEmail AS cust_email, c.CustomerCity AS cust_city  
2 FROM `dono-rakamin-bi-analyst.bi_analyst.orders` AS o  
3 JOIN `dono-rakamin-bi-analyst.bi_analyst.customers` AS c  
4   ON o.CustomerID = c.CustomerID  
5 JOIN `dono-rakamin-bi-analyst.bi_analyst.products` AS p  
6   ON o.ProdNumber = p.ProdNumber  
7 JOIN `dono-rakamin-bi-analyst.bi_analyst.productcategory` AS pc  
8   ON p.Category = pc.CategoryID  
9 GROUP BY o.Date, pc.CategoryName, p.ProdName, p.Price, o.Quantity, c.CustomerEmail, c.CustomerCity  
10 ORDER BY o.Date, o.Quantity;
```

Query results

SAVE RESULTS

EXPLORE DATA

| JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS | CHART | PREVIEW | 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 | fvasierqt@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 Moines |
| 5 | 2020-01-01 | eBooks | Spherical Robots | 16.75 | 5 | 83.75 | lfromonte9@de.vu#mailto:lfro... | Birmingham |
| 6 | 2020-01-01 | Training Videos | Drone Video Techniques | 37.99 | 6 | 227.94 | gstiggersdd@eventbrite.com# mailto:gstiggersdd@eventbrit e.com# | Saint Petersburg |
| 7 | 2020-01-02 | Trainino Videos | Understanding Automation | 44.95 | 1 | 44.95 | ksteersho@ameblo.io#mailto:k... | San Diego |

Task 4

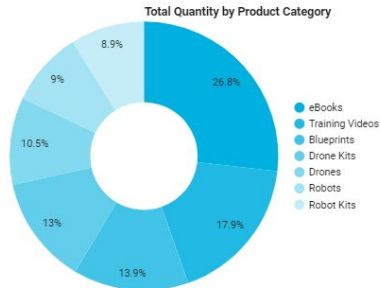
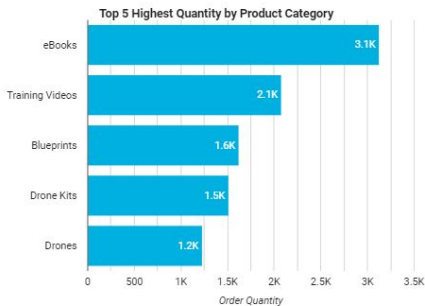
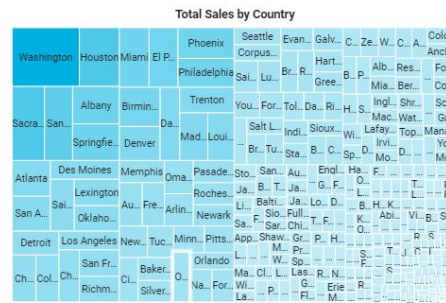
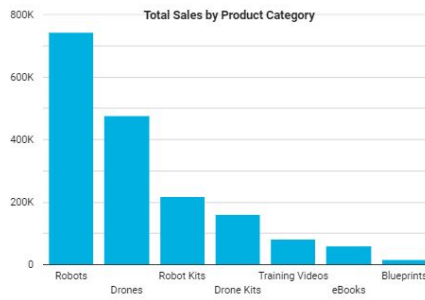
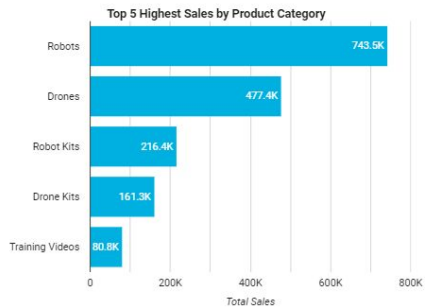
Dari hasil tabel yang dibuat pada soal nomor 3, simpanlah hasilnya dalam bentuk CSV. Dengan menggunakan Looker Studio, buatlah visualisasi yang menampilkan data penjualan tersebut. Visualisasi tersebut harus berisi minimal :

- Total keseluruhan sales
- Total keseluruhan sales berdasarkan kategori produk
- Total keseluruhan qty berdasarkan kategori produk
- Total sales berdasarkan kota
- Total qty berdasarkan kota
- Top 5 kategori produk yang paling tinggi salesnya
- Top 5 kategori produk yang paling tinggi qtynya

Task 4 - Chart

PT. SEJAHTERA BERSAMA DASHBOARD

Total Sales
1.8M



Task 5 - Result

Sebagai BI analyst PT Sejahtera Bersama, apa yang bisa anda usulkan untuk mempertahankan penjualan ataupun menaikkan penjualan dengan tabel transaksi detail yang sudah ada?

- Saran atau usulan dari saya sendiri yaitu menaikkan kuantitas dari kategori produk yaitu Robots dikarenakan total penjualan dari kategori produk Robots sangat signifikan, serta meningkatkan kualitas dari penjualan eBooks dikarenakan memiliki penjualan produk yang sangat tinggi, namun memiliki harga yang rendah

Drive Link

<https://drive.google.com/drive/folders/192jYwu0gJijBFmr7Xn4EdHKz7UVC9QDg?usp=sharing>

GitHub Link

https://github.com/fallennnn/rakamin_bi_analyst_pbi

Video Presentation

<https://youtu.be/f9afFYRXmVo>

Thank You

