

Data Warehouse Modeling

Assignment – Ratih Malini – DE 8

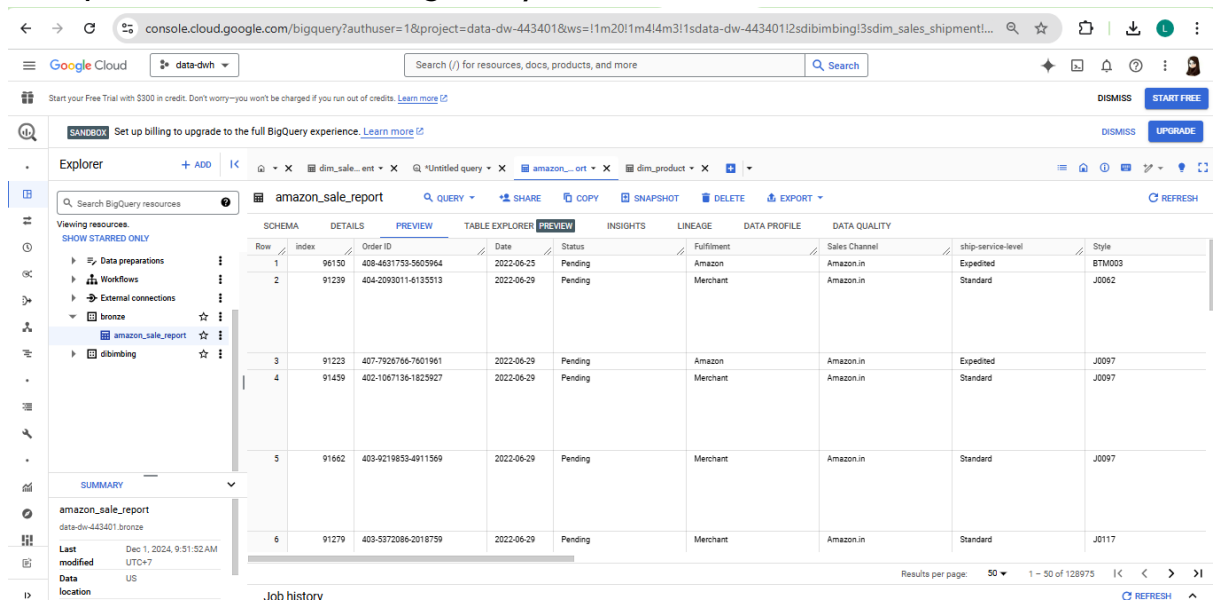
Data Engineer Bootcamp

Periode Pembelajaran

Data Warehouse

Exercise Questions:

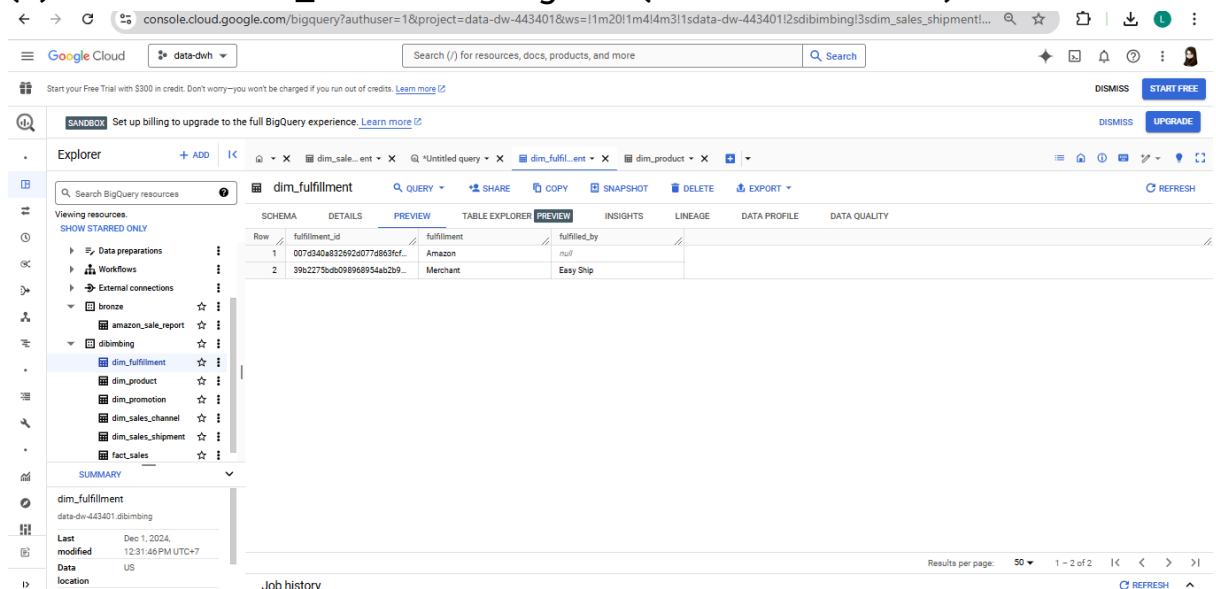
1. (0) Upload the data into BigQuery Table (Hands on: Exercise)



The screenshot shows the Google Cloud BigQuery console interface. The 'amazon_sale_report' table is selected in the Explorer panel. The table details are displayed, including a preview of the data. The table has 6 rows and 10 columns: Row, Index, Order ID, Date, Status, Fulfillment, Sales Channel, ship-service-level, and Style.

Row	Index	Order ID	Date	Status	Fulfillment	Sales Channel	ship-service-level	Style
1	96130	408-4691733-5605964	2022-06-25	Pending	Amazon	Amazon.in	Expedited	BTM003
2	91239	404-2093011-6135513	2022-06-29	Pending	Merchant	Amazon.in	Standard	J0062
3	91223	407-7926766-7601961	2022-06-29	Pending	Amazon	Amazon.in	Expedited	J0097
4	91439	402-1067136-1825927	2022-06-29	Pending	Merchant	Amazon.in	Standard	J0097
5	91662	403-9219853-4911569	2022-06-29	Pending	Merchant	Amazon.in	Standard	J0097
6	91279	403-5372086-2018759	2022-06-29	Pending	Merchant	Amazon.in	Standard	J0117

2. (0) Build table dim_fulfilment using DBT (Hands on: Exercise)



The screenshot shows the Google Cloud BigQuery console interface. The 'dim_fulfilment' table is selected in the Explorer panel. The table details are displayed, including a preview of the data. The table has 2 rows and 3 columns: Row, fulfillment_id, and fulfilled_by.

Row	fulfillment_id	fulfilled_by
1	007d340a832692d077d663f...	Amazon
2	39b2273bd098968954ab2b9...	Merchant

3. (0) Build table dim_product using DBT (Hands on: Exercise)

console.cloud.google.com/bigquery?authuser=1&project=data-dw-443401&ws=11m2011m4l4m311sdata-dw-44340112sdibimbingl3sdm_sales_shipmentl...

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Explorer + ADD

dim_product QUERY SHARE COPY SNAPSHOT DELETE EXPORT

Viewing resources. SHOW STARTED ONLY

Schema DETAILS PREVIEW TABLE EXPLORER PREVIEW INSIGHTS LINEAGE DATA PROFILE DATA QUALITY

Row	product_id	style	sku	category	size
1	5088b4c3042be55e4841a054...	AN204	AN204-PURPLE-L	Bottom	L
2	e145cb64c5eceb228edc3995...	AN207	AN207-PINK-L	Bottom	L
3	1f9eb1a1b682401b92c4d6118...	AN208	AN208-MUSTARD-L	Bottom	L
4	7c561853e58f17b945dc4c20...	AN211	AN211-BLACK-L	Bottom	L
5	e823121f4795e95112453a35...	AN212	AN212-WHITE-L	Bottom	L
6	a684c4324efc7b6a5c39f4b8...	AN213	AN213-BROWN-L	Bottom	L
7	8f66c4324efc7b6a5c39f4b8...	BL087	BL087-L	Blouse	L
8	959a894a878a7c22a20c73...	BL099	BL099-L	Blouse	L
9	1cf5223730771c79c180d8...	BL102	BL102-L	Blouse	L
10	5abebe5e9f1ad522b103559...	BL103	BL103-L	Blouse	L
11	efcc1309a3eb65527f17baa09...	BL104	BL104-L	Blouse	L
12	a295334676a7eb0629dadd...	BL109	BL109-L	Blouse	L
13	9d4ed1d89fad33b9facfa08f3...	BL110	BL110-L	Blouse	L
14	ce0e6bf368b1e0104a259a5b...	BL111	BL111-L	Blouse	L
15	5d3a03880308d2761ec235ad...	BL113	BL113-L	Blouse	L
16	1ab9eece0f6267b40c19d977e...	CH202	CH202-ORANGE-L	Bottom	L
17	d239c63a9a8338fae19e9fad...	CH203	CH203-MAROON-L	Bottom	L
18	a7d9629ed450b671ec20f56d...	CH204	CH204-PURPLE-L	Bottom	L

Results per page: 50 1 - 50 of 7195

Job history

4. (10) Build table dim_promotion using DBT

console.cloud.google.com/bigquery?authuser=1&project=data-dw-443401&ws=11m2011m4l4m311sdata-dw-44340112sdibimbingl3sdm_sales_shipmentl...

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Explorer + ADD

dim_promotion QUERY SHARE COPY SNAPSHOT DELETE EXPORT

Viewing resources. SHOW STARTED ONLY

Schema DETAILS PREVIEW TABLE EXPLORER PREVIEW INSIGHTS LINEAGE DATA PROFILE DATA QUALITY

Row	promotion_id	promotion_ids
1	ea5c4c93d9be9685e10b426f...	Amazon PLCC Free-Financing Universal Merchant AAT: WNKTB03K27EJC, Amazon PLCC Free-Financing
2	b27846a8e32ff5ea39feac956...	Amazon PLCC Free-Financing Universal Merchant AAT: WNKTB03K27EJC, Amazon PLCC Free-Financing
3	82d638555f640e66e2b7190c...	Amazon PLCC Free-Financing Universal Merchant AAT: WNKTB03K27EJC, Amazon PLCC Free-Financing
4	16d9bec2f20969f543910a6ff...	Amazon PLCC Free-Financing Universal Merchant AAT: WNKTB03K27EJC, Amazon

Results per page: 50 1 - 50 of 578

Job history

5. (10) Build table dim_sales_shipment using DBT

console.cloud.google.com/bigquery?authuser=1&project=data-dw-443401&ws=1m201m4l4m3l1sdata-dw-443401l2sdbimbingl3sdim_sales_shipment!...

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Explorer + ADD |< X dim_sale...ent X *Untitled query X dim_fulfil...ent X dim_pro... ion X

Search BigQuery resources

Viewing resources. SHOW STARRED ONLY

- Data Preparations
- Workflows
- External connections
- bronze
 - amazon_sale_report
- dbimbing
 - dim_fulfillment
 - dim_product
 - dim_promotion
 - dim_sales_channel
 - dim_sales_shipment
 - fact_sales

SUMMARY

dim_sales_shipment
data-dw-443401.dbimbing

Last modified Dec 1, 2024, 12:32:32 PM UTC+7

Data location US

dim_sales_shipment

SCHEMA DETAILS PREVIEW TABLE EXPLORER PREVIEW INSIGHTS LINEAGE DATA PROFILE DATA QUALITY

Row	sales_shipment_id	ship_service_level	courier_status	ship_city	ship_state	ship_postal_code	ship_country
1	f9ea1fa255db0ca42d3bba7e0c...	Standard	Shipped	null	null	null	null
2	59adcae6030c94ba930cb3c41...	Standard	null	null	null	null	null
3	11889f333ab7b14d1ce8314b...	Expedited	Shipped	null	null	null	null
4	db812c77713a2c0ba3f32452...	Expedited	Cancelled	null	null	null	null
5	2d742a0d2a6e75d7b5797ce5...	Expedited	Unshipped	null	null	null	null
6	471d80847e5313a816587263...	Expedited	Shipped	ITANAGAR	AR	791113	IN
7	8a3e32b63a58f8fbc94ed993...	Expedited	Shipped	DIMAPUR	NL	797116	IN
8	cae13cc139d94709477f71af...	Expedited	Shipped	ZIRA	PB	142044	IN
9	3981584111b2d5d7954e7271af...	Standard	Shipped	JAIPUR	RJ	302029	IN
10	2a788dc0e6103aab656f7115...	Standard	Shipped	JOCHPUR	RJ	342009	IN
11	b47b683081e475669fa5f6f2...	Expedited	Cancelled	APD	APD	959121	IN
12	935ab60f102a9364917b0c6f8...	Standard	Shipped	Goa	GOA	403110	IN
13	31511f6b11509ae7a8dd2c2ba...	Standard	null	Goa	GOA	403110	IN
14	5bd370b02d3b198a65b5613...	Expedited	Shipped	BAGA	GOA	403516	IN
15	097c993e256f7a2120792c0f8b...	Expedited	Shipped	ONDA	GOA	403530	IN
16	c243938f9644172c9d9890ca9...	Standard	Shipped	ONDA	GOA	403530	IN
17	b0ee63623d53f8634c4b5460...	Expedited	Shipped	RAIA	GOA	403720	IN
18	9e890058c0facc14e1fa30a...	Standard	null	RAIA	GOA	403720	IN

Results per page: 50 1 - 50 of 32738 REFRESH

Job history

6. (10) Build table dim_sales_channel using DBT

console.cloud.google.com/bigquery?authuser=1&project=data-dw-443401&ws=1m201m4l4m3l1sdata-dw-443401l2sdbimbingl3sdim_sales_channel!1...

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Explorer + ADD |< X dim_sale...nel X *Untitled query X dim_fulfil...ent X dim_pro... ion X

Search BigQuery resources

Viewing resources. SHOW STARRED ONLY

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 - dim_fulfillment
 - dim_product
 - dim_promotion
 - dim_sales_channel
 - dim_sales_shipment
 - fact_sales

SUMMARY

dim_sales_channel
data-dw-443401.dbimbing

Last modified Dec 1, 2024, 12:31:58 PM UTC+7

Data location US

dim_sales_channel

SCHEMA DETAILS PREVIEW TABLE EXPLORER PREVIEW INSIGHTS LINEAGE DATA PROFILE DATA QUALITY

Row	sales_channel_id	sales_channel
1	480dca0c67a2f962b072209f5...	Non-Amazon
2	4f51cd3ba9df2c6b57a32372...	Amazon.in

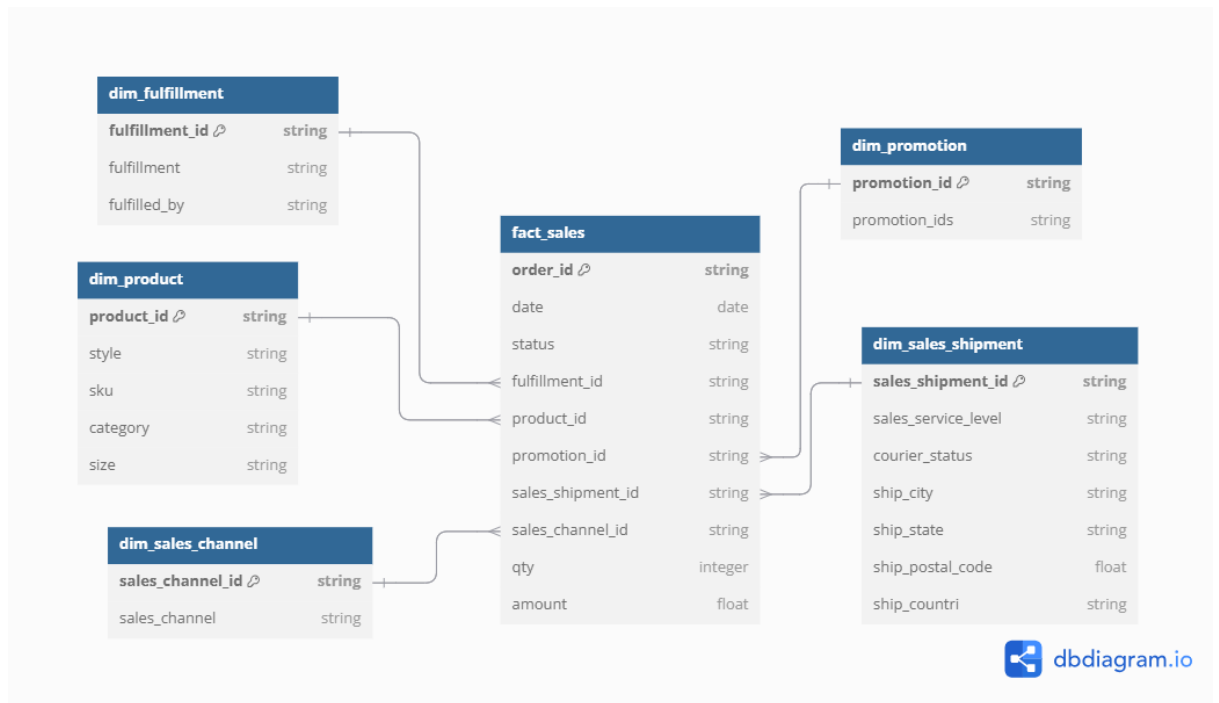
Results per page: 50 1 - 2 of 2 REFRESH

Job history

7. (30) Build table fact_salesorder using DBT

The screenshot displays the Google Cloud BigQuery console interface. At the top, there's a navigation bar with the Google Cloud logo, a search bar, and user account details. Below this, a banner promotes a free trial. The main area is divided into an 'Explorer' sidebar on the left and a central workspace. The sidebar lists various resources, including 'fact_sales' which is currently selected. The central workspace shows the 'fact_sales' table in the 'Preview' tab, displaying 18 rows of data with columns for order details, status, product information, fulfillment, promotion, sales channel, and shipment details. The bottom of the console shows a 'Job history' section and a 'Data' section with location and refresh options.

8. (30) Create an ERD for the Star Schema.



9. (10) Create an Analysis using Star Schema ex Top Selling Products etc.

a. Top Selling Product

console.cloud.google.com/bigquery?authuser=1&project=data-dw-443401&ws=!1m25!1m4!4m3!1sdata-dw-443401!2sdbin

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Explorer + ADD < |

fact_sales x *Untitled query x dim_fulfil...ent x dim_pro... ion x *Untitled query x

Search BigQuery resources

Viewing resources. SHOW STARRED ONLY

- Workflows
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 - amazon_sale_report
- dibimbing
 - dim_fulfillment
 - dim_product
 - dim_promotion
 - dim_sales_channel
 - dim_sales_shipment
 - fact_sales

SUMMARY

Nothing currently selected

Untitled query RUN SAVE DOWNLOAD SHARE SCHEDULE OPEN IN MORE

```
1 SELECT category, SUM(qty) jumlah
2 FROM `data-dw-443401.dibimbing.fact_sales` s
3 LEFT JOIN `dibimbing.dim_product` p ON s.product_id = p.product_id
4 GROUP BY 1
5 ORDER BY 2 DESC
6 LIMIT 11
```

Query results

JOB INFORMATION		RESULTS	CHART	JSON	EXECUTION DETAILS	EXECUTION GRAPH
Row	category	jumlah				
1	Set	45289				
2	kurta	45045				
3	Western Dress	13943				
4	Top	9903				
5	Ethnic Dress	1053				
6	Blouse	863				
7	Bottom	398				
8	Saree	152				
9	Dupatta	3				

b. The Most Often Canceled Products

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Explorer + ADD < |

fact_sales x *Untitled query x dim_fulfil...ent x dim_sale...nel x *Untitled query x dim_product x

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 - dim_product
 - dim_promotion
 - dim_sales_channel
 - dim_sales_shipment
 - fact_sales

SUMMARY

Nothing currently selected

Untitled query RUN SAVE DOWNLOAD SHARE SCHEDULE OPEN IN MORE

```
1 SELECT p.category, COUNT(s.status) banyak_cancel
2 FROM `data-dw-443401.dibimbing.fact_sales` s
3 LEFT JOIN `dibimbing.dim_product` p ON s.product_id = p.product_id
4 WHERE s.status = 'Cancelled'
5 GROUP BY p.category
6 ORDER BY banyak_cancel DESC
```

Query results

JOB INFORMATION		RESULTS	CHART	JSON	EXECUTION DETAILS	EXECUTION GRAPH
Row	category	banyak_cancel				
1	Set	7336				
2	kurta	7253				
3	Western Dress	2122				
4	Top	1276				
5	Ethnic Dress	145				
6	Blouse	116				
7	Bottom	60				
8	Saree	21				