Assignment Data Warehouse

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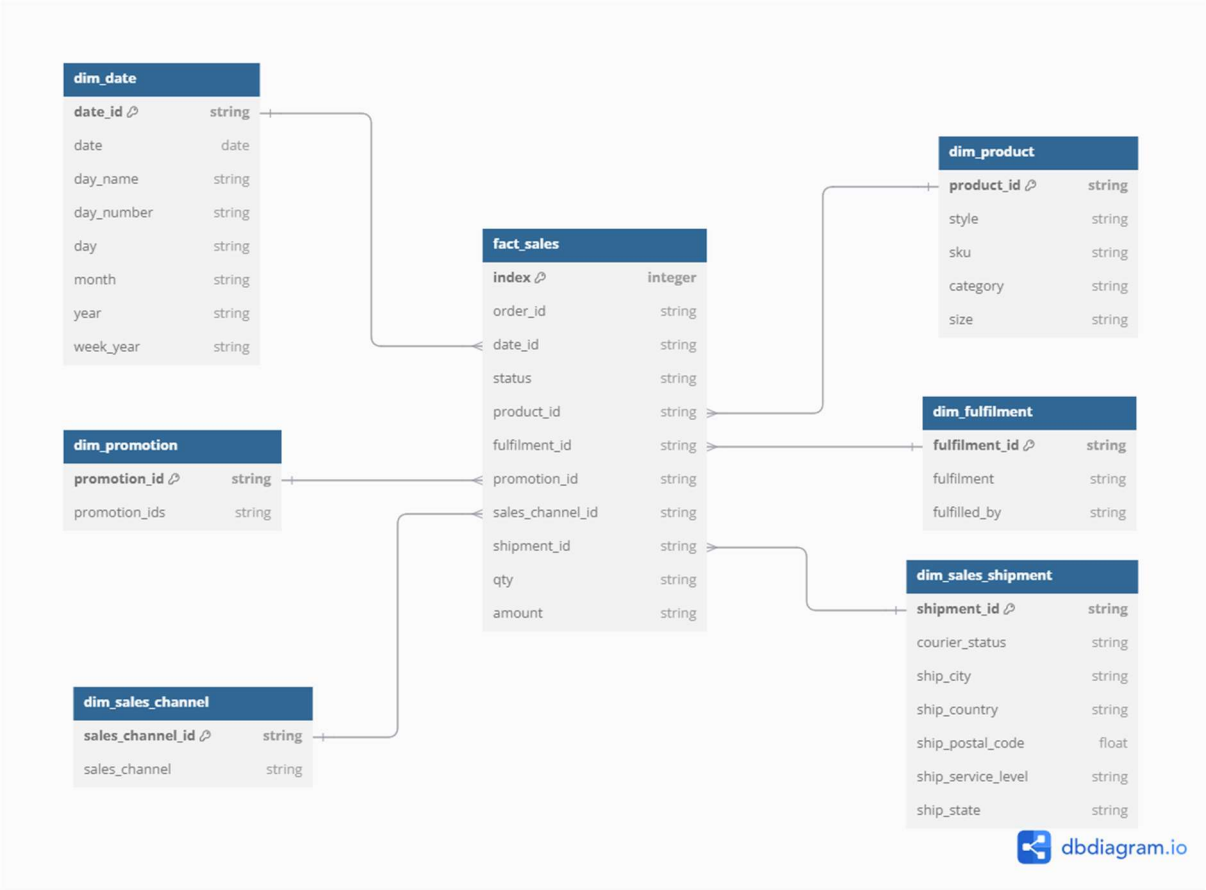
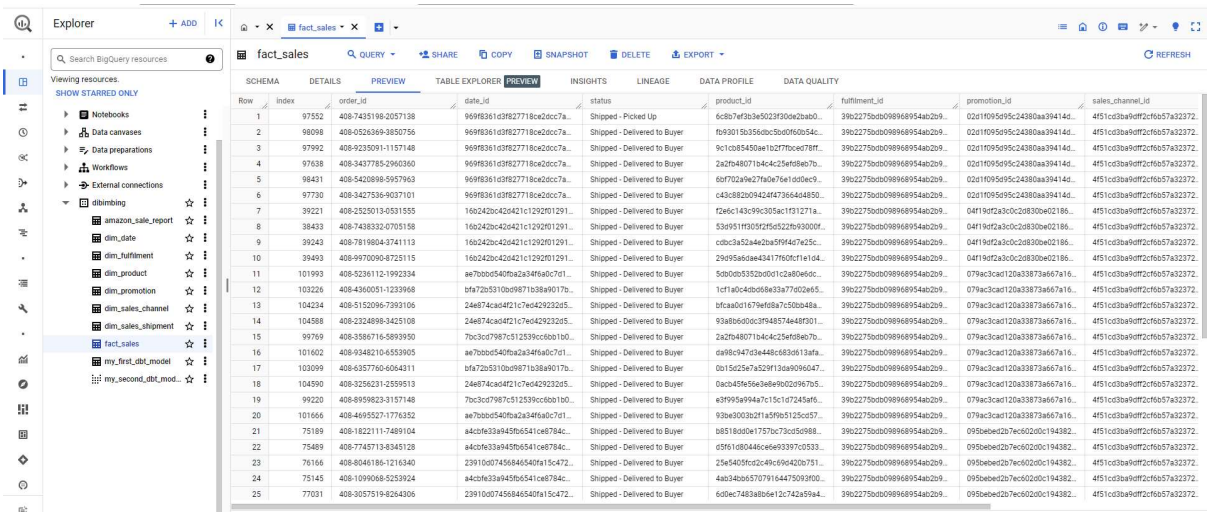
1. ERD (ENTITY-RELATIONSHIP DIAGRAM) STAR SCHEMA

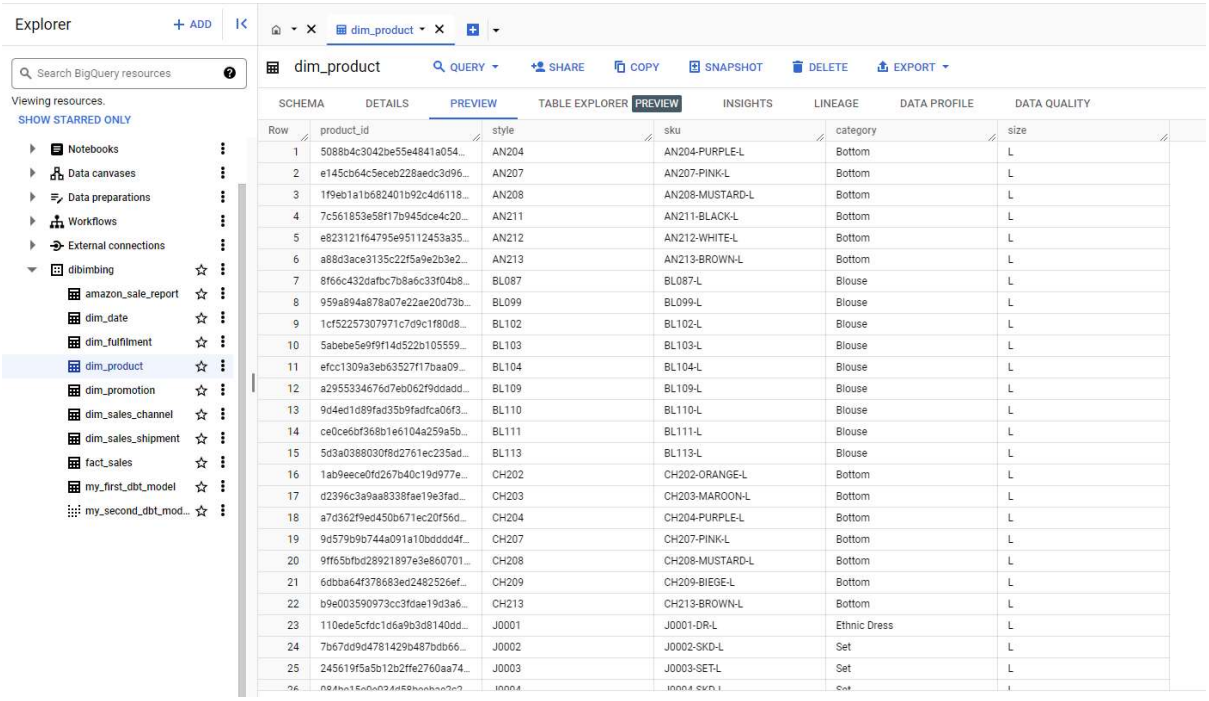


2. BIGQUERY STAR SCHEMA

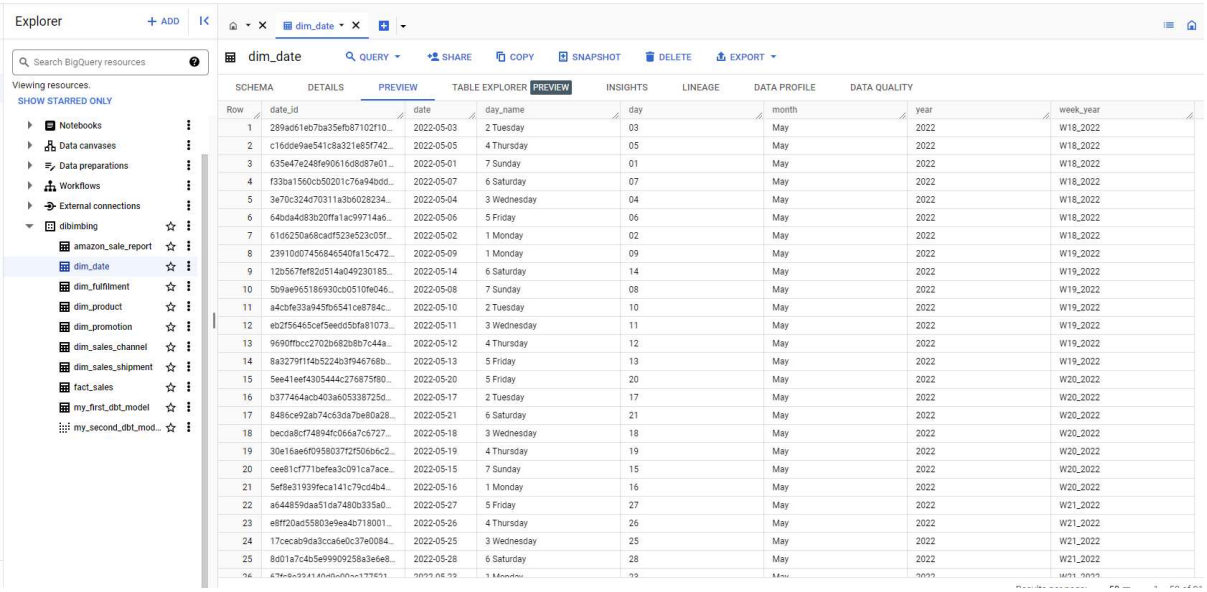
a. Table fact_sales



b. Table dim_product

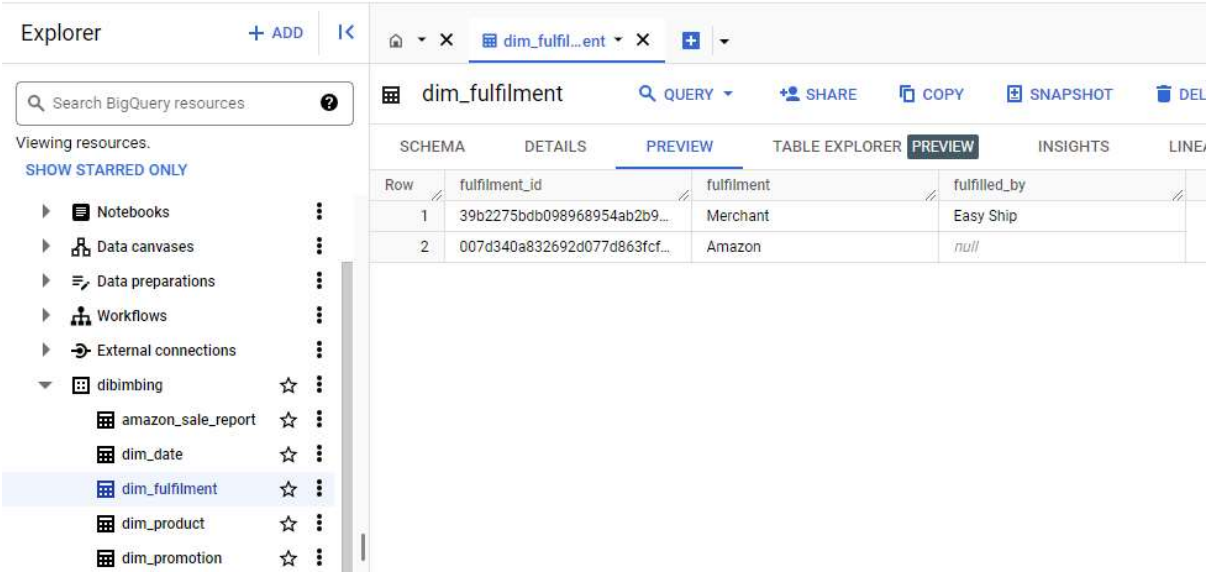


c. Table dim_date



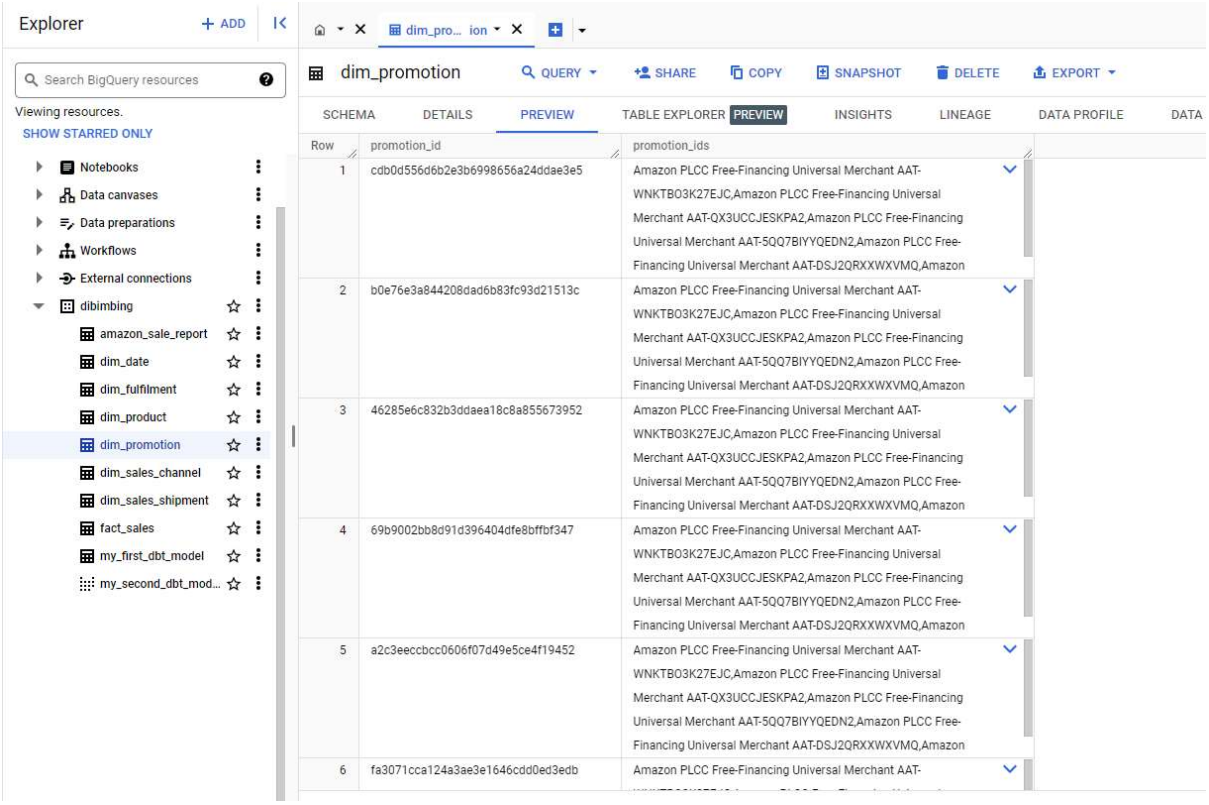
Row	date_id	date	day_name	day	month	year	week_year
1	289ad61eb7ba35efb87102f10...	2022-05-03	2 Tuesday	03	May	2022	W18_2022
2	c16dde9ae541c8a321e85f742...	2022-05-05	4 Thursday	05	May	2022	W18_2022
3	635e47e248fe90616d8d87e01...	2022-05-01	7 Sunday	01	May	2022	W18_2022
4	f33ba1560cb50201c76a94bdd...	2022-05-07	6 Saturday	07	May	2022	W18_2022
5	3e70c324d70311a3b6028234...	2022-05-04	3 Wednesday	04	May	2022	W18_2022
6	64bda4d83b20ffa1ac99714a6...	2022-05-06	5 Friday	06	May	2022	W18_2022
7	61d6250a68cadf523e523c05f...	2022-05-02	1 Monday	02	May	2022	W18_2022
8	23910d0745684654 0fa15c472...	2022-05-09	1 Monday	09	May	2022	W19_2022
9	12b567fef82d514a049230185...	2022-05-14	6 Saturday	14	May	2022	W19_2022
10	5b9ae965186930cb0510fe046...	2022-05-08	7 Sunday	08	May	2022	W19_2022
11	a4cbfe33a945fb6541ce8784c...	2022-05-10	2 Tuesday	10	May	2022	W19_2022
12	eb2f56465cef5eedd5bfa81073...	2022-05-11	3 Wednesday	11	May	2022	W19_2022
13	9690ffbcc2702b682b8b7c44a...	2022-05-12	4 Thursday	12	May	2022	W19_2022
14	8a3279f1f4b5224b3f946768b...	2022-05-13	5 Friday	13	May	2022	W19_2022
15	5ee41eef4305444c276875f80...	2022-05-20	5 Friday	20	May	2022	W20_2022
16	b377464acb403a605338725d...	2022-05-17	2 Tuesday	17	May	2022	W20_2022
17	8486ce92ab74c63da7be80a28...	2022-05-21	6 Saturday	21	May	2022	W20_2022
18	becda8cf74894fc066a7c6727...	2022-05-18	3 Wednesday	18	May	2022	W20_2022
19	30e16ae6f0958037f2f506b6c2...	2022-05-19	4 Thursday	19	May	2022	W20_2022
20	cee81cf771befea3c091ca7ace...	2022-05-15	7 Sunday	15	May	2022	W20_2022
21	5ef8e31939feca141c79cd4b4...	2022-05-16	1 Monday	16	May	2022	W20_2022
22	a644859daa51da7480b335a0...	2022-05-27	5 Friday	27	May	2022	W21_2022
23	e8ff20ad55803e9ea4b718001...	2022-05-26	4 Thursday	26	May	2022	W21_2022
24	17cecab9da3cca6e0c37e0084...	2022-05-25	3 Wednesday	25	May	2022	W21_2022
25	8d01a7c4b5e99909258a3e6e8...	2022-05-28	6 Saturday	28	May	2022	W21_2022

d. Table dim_fulfilment

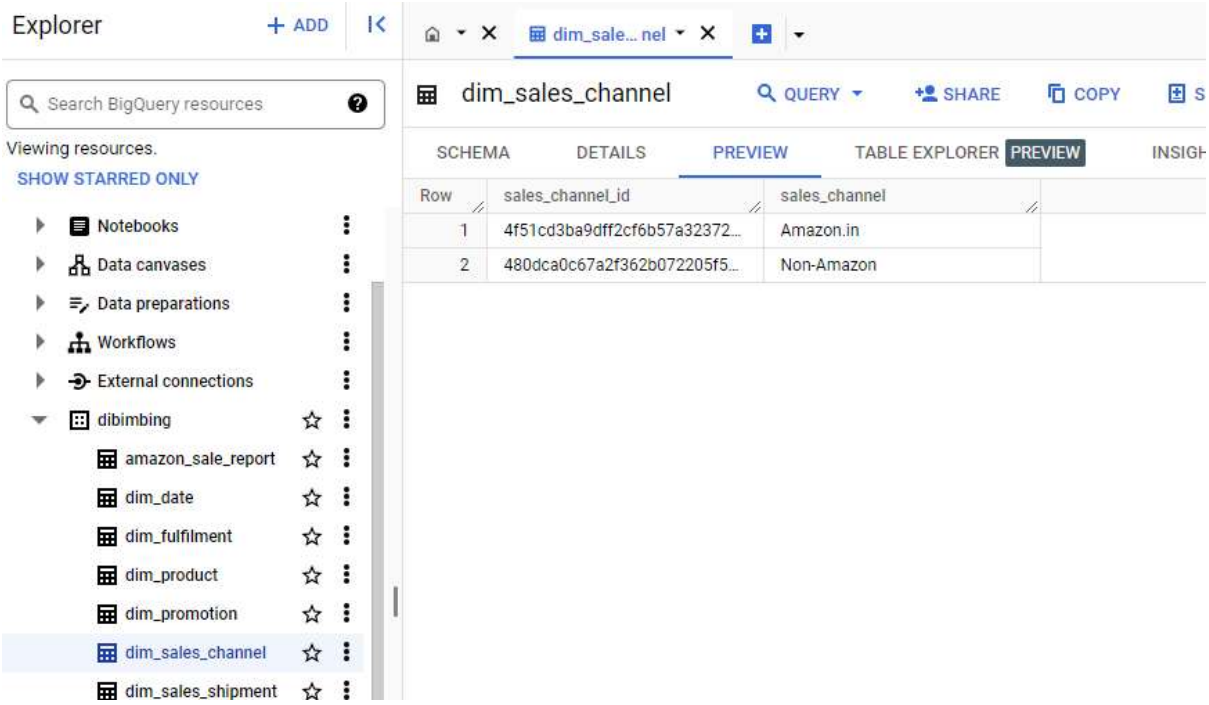


Row	fulfilment_id	fulfilment	fulfilled_by
1	39b2275bdb098968954ab2b9...	Merchant	Easy Ship
2	007d340a832692d077d863fcf...	Amazon	null

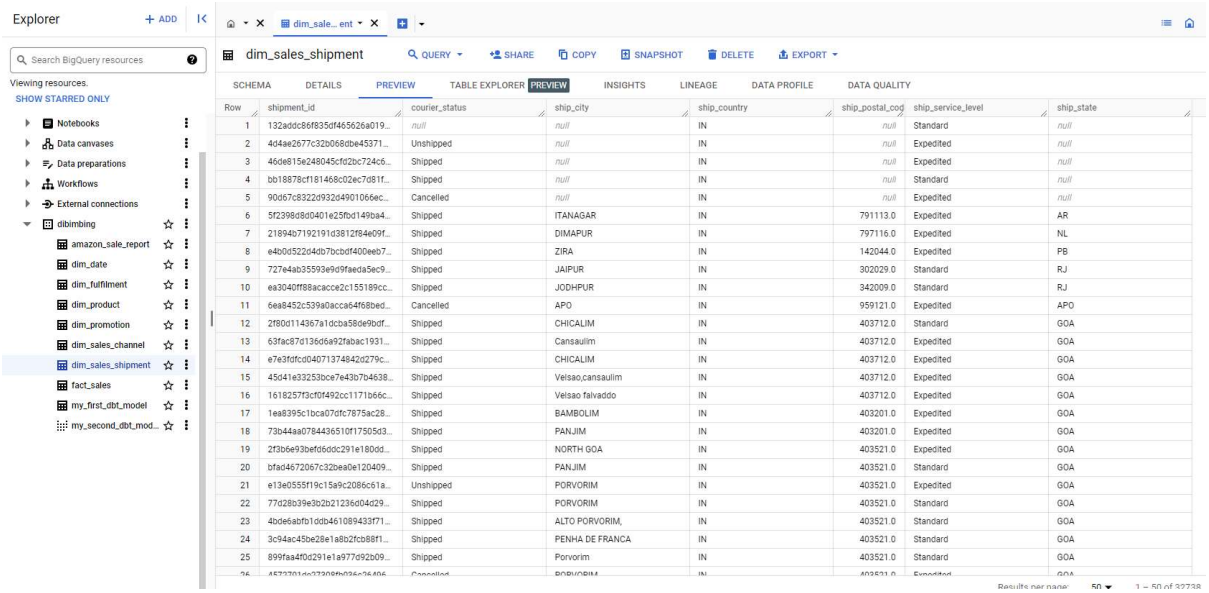
e. Table dim_promotion



f. Table dim_sales_channel



g. Table dim_sales_shipment



Row	shipment_id	courier_status	ship_city	ship_country	ship_postal_cod	ship_service_level	ship_state
1	132addc86f835df465626a019...	null	null	IN	null	Standard	null
2	4d4ae2677c32b068dbe45371...	Unshipped	null	IN	null	Expedited	null
3	46de815e248045cfd2bc724c6...	Shipped	null	IN	null	Expedited	null
4	bb18878cf181468c02ec7d81f...	Shipped	null	IN	null	Standard	null
5	90d67c8322d932d4901066ec...	Cancelled	null	IN	null	Expedited	null
6	5f2398d8d0401e25fbd149ba4...	Shipped	ITANAGAR	IN	791113.0	Expedited	AR
7	21894b7192191d3812f84e09f...	Shipped	DIMAPUR	IN	797116.0	Expedited	NL
8	e4b0d522d4db7bcbdf400eeb7...	Shipped	ZIRA	IN	142044.0	Expedited	PB
9	727e4ab35593e9d9faeda5ec9...	Shipped	JAIPUR	IN	302029.0	Standard	RJ
10	ea3040ff88acacce2c155189cc...	Shipped	JODHPUR	IN	342009.0	Standard	RJ
11	6ea8452c539a0acca64f68bed...	Cancelled	APO	IN	959121.0	Expedited	APO
12	2f80d114367a1dcba58de9bdf...	Shipped	CHICALIM	IN	403712.0	Standard	GOA
13	63fac87d136d6a92fabac1931...	Shipped	Cansaulim	IN	403712.0	Expedited	GOA
14	e7e3fdfcd0407137484 2d279c...	Shipped	CHICALIM	IN	403712.0	Expedited	GOA
15	45d41e33253bce7e43b7b4638...	Shipped	Velsao,cansaulim	IN	403712.0	Expedited	GOA
16	1618257f3cf0f492cc1171b66c...	Shipped	Velsao falvaddo	IN	403712.0	Expedited	GOA
17	1ea8395c1bca07dfc7875ac28...	Shipped	BAMBOLIM	IN	403201.0	Expedited	GOA
18	73b44aa078443651 0f17505d3...	Shipped	PANJIM	IN	403201.0	Expedited	GOA
19	2f3b6e93befd6ddc291e180dd...	Shipped	NORTH GOA	IN	403521.0	Expedited	GOA
20	bfad4672067c32bea0e120409...	Shipped	PANJIM	IN	403521.0	Standard	GOA
21	e13e0555f19c15a9c2086c61a...	Unshipped	PORVORIM	IN	403521.0	Expedited	GOA
22	77d28b39e3b2b21236d04d29...	Shipped	PORVORIM	IN	403521.0	Standard	GOA
23	4bde6abfb1ddb46108943f71...	Shipped	ALTO PORVORIM,	IN	403521.0	Standard	GOA
24	3c94ac45be28e1a8b2fcb88f1...	Shipped	PENHA DE FRANCA	IN	403521.0	Standard	GOA
25	899faa4f0d291e1a977d92b09...	Shipped	Porvorim	IN	403521.0	Standard	GOA
26	4572701dc27309fb036c26406...	Cancelled	PORVORIM	IN	403521.0	Expedited	GOA

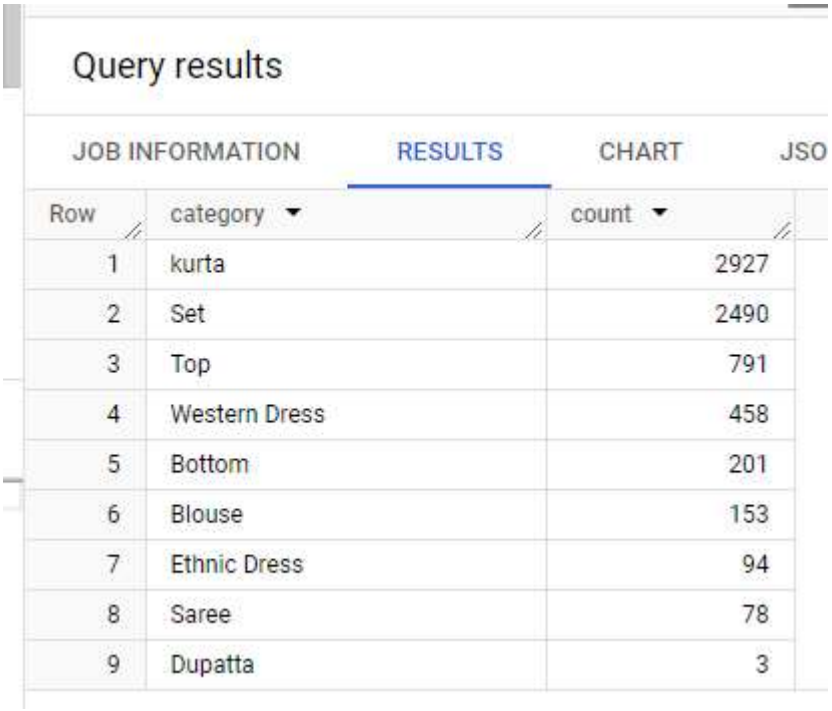
Results per page: 50 1 – 50 of 32738

3. ANALYSIS

a. Top 10 Best Selling Product in Most Favorite Category

Find the most favourite product category

```
-- Most Favorite Category
SELECT
  `category`,
  COUNT(`product_id`) AS count
FROM
  `dedibimbing.dibimbing.dim_product`
-- WHERE `category` = 'kurta'
GROUP BY `category`
ORDER BY count DESC;
```



Query results

JOB INFORMATION | RESULTS | CHART | JSO

Row	category	count
1	kurta	2927
2	Set	2490
3	Top	791
4	Western Dress	458
5	Bottom	201
6	Blouse	153
7	Ethnic Dress	94
8	Saree	78
9	Dupatta	3

We found Kurta is the most favourite product category, then we analyze deeper 10 best selling product in Category Kurta.

```
-- Top 10 Best Selling in Kurta
  dp.sku AS sku,
  SUM(fs.qty) AS sales_volume
FROM `dedibimbing.dibimbing.fact_sales` fs
LEFT JOIN `dedibimbing.dibimbing.dim_product` dp ON fs.product_id
=  dp.product_id
WHERE `category` = 'kurta'
GROUP BY sku
ORDER BY sales_volume DESC
LIMIT 10
;
```

Query results

JOB INFORMATION | RESULTS | CHART | JSO

Row	sku	sales_volume
1	JNE3405-KR-L	485
2	JNE3405-KR-S	399
3	JNE3405-KR-M	344
4	JNE3567-KR-M	291
5	JNE3399-KR-M	262
6	JNE3373-KR-XXXL	259
7	JNE3405-KR-XXXL	235
8	JNE3405-KR-XS	220
9	JNE3373-KR-XXL	209
10	JNE3368-KR-XXL	208

Those are Top 10 best selling products in Most Favourite Category, indeed those products contribute highest revenue

b. Top 5 most interesting promo

```
SELECT
    COALESCE(dp.promotion_ids, 'no promo') AS promo_id,
    SUM(fs.qty) AS sales_volume
FROM `dedibimbing.dibimbing.fact_sales` fs
LEFT JOIN `dedibimbing.dibimbing.dim_promotion` dp ON fs.promotion_id =
dp.promotion_id
WHERE dp.promotion_ids IS NOT NULL
GROUP BY 1
ORDER BY 2 DESC
LIMIT 5;
```

Query results

JOB INFORMATION | RESULTS | CHART | JSON

Row	promo_id	sales_volume
1	IN Core Free Shipping 2015/04...	45974
2	Duplicated A12RHGVGRWOT3...	488
3	Amazon PLCC Free-Financing Universal Merchant AAT-WNKTBO3K27EJC,Amazon PLCC Free-Financing	460
4	Duplicated AYTJSBA8ZOP16 1...	433
5	Amazon PLCC Free-Financing Universal Merchant AAT-WNKTBO3K27EJC,Amazon PLCC Free-Financing	316

There is high possibility that those 5 promos give high impact to sales

c. Difference in Amount Sales between Weekday and Weekend

```
WITH sales_by_day AS (
  SELECT
    dd.day_number AS day_number_no,  -- Ganti alias tanpa karakter khusus
    dd.day_name AS day,
    ROUND(SUM(fs.amount), 0) AS sales_amount
  FROM `dedibimbing.dibimbing.fact_sales` fs
  LEFT JOIN `dedibimbing.dibimbing.dim_date` dd ON fs.date_id = dd.date_id
  GROUP BY day_number_no, day  -- Sesuaikan dengan alias baru
  ORDER BY day_number_no ASC  -- Sesuaikan dengan alias baru
)

SELECT sbd.day, sbd.sales_amount FROM sales_by_day sbd;
```

Query results

JOB INFORMATION | RESULTS | CHART | JSON

Row	day	sales_amount
1	Monday	11318441.0
2	Tuesday	11491626.0
3	Wednesday	11249823.0
4	Thursday	10358594.0
5	Friday	10805395.0
6	Saturday	11339358.0
7	Sunday	12029441.0

We can conclude that Weekend has daily sales higher than Weekday, even though the amount is not significantly different.