



BUSINESS CASE : TARGET SQL

TARGET SQL



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1. Import the dataset and do usual exploratory analysis steps like checking the structure & characteristics of the dataset
 1. Data type of columns in a table
 2. Time period for which the data is given
 3. Cities and States of customers ordered during the given period

CUSTOMER DATA

Q. Untitled 14 ▶ RUN ▶ SAVE ▶ SHARE ▶ SCHEDULE ▶ MORE Query completed.

```
1 # Customers data
2
3 select *
4 from `gcommercetarget.customers`
5 limit 10
```

Query results ▶ SAVE RESULTS ▶ EXPLORE DATA ↕ ✕

JOB INFORMATION RESULTS JSON EXECUTION DETAILS EXECUTION GRAPH PREVIEW

Row	customer_id	customer_unique_id	customer_zip	customer_city	customer_state
1	0735e7e4298a2ebbb4664934...	fc003b1bdc0df64b4d065d9b...	59650	acu	RN
2	903b3d86e3990db01619a4eb...	46824822b15da44e983b021d...	59650	acu	RN
3	38c97666e962d4fea7f66a83e...	b6108acc674ae5c99e29adc10...	59650	acu	RN
4	77c2f46cf580f4874c9a5751c2...	402cce5c0509000eed9e77fec...	63430	ico	CE
5	4d3ef4cfff8ad4767c199c36a...	6ba00666ab7eada5ceec279b2...	63430	ico	CE
6	3000841b86e1f8e9493b52324...	796a0b1a21f997704057184a1...	63430	ico	CE
7	3c325415ccc7e622c66dec4bc...	05d1d2d9f0161c5f997ce7fc77...	63430	ico	CE
8	04f3a7b250e3be964f01bf22bc...	c34585a0276ecc5e4fb03de7f5...	63430	ico	CE
9	894202b8ef01f4719a4691e79...	01a44e5fc00bbdb0b0a4af5a53...	63430	ico	CE
10	9d715b9fb75e9d081c14126c0...	8f999f3b7ece8e6245422c9e1f...	63430	ico	CE

PERSONAL HISTORY PROJECT HISTORY REFRESH ^

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1

select count(*) total_rows

2

from ecommercetarget.customers

Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	total_rows
1	99441

1.

SELLER DATA

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1

Sellers data

2

select *

3

from ecommercetarget.sellers

4

limit 10

Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	seller_id	seller_zip_code	seller_city	seller_state
1	4be2e7f96b4f749d52dff41f8...	69900	rio branco	AC
2	327b89b872c14d1c0be7235ef...	69005	manaus	AM
3	4221a7d464f1fe2955934e30f...	48602	bahia	BA
4	651530bf5c6f7240ccdd89a30...	44600	ipira	BA
5	2b402d5dc42554061f8ea98d1...	44900	irece	BA
6	d03698c2ef04a549382afa66...	45658	ilheus	BA
7	c72de06d72748d1a0f62125b...	46430	guanambi	BA
8	fc59392d66ef99377e50356ee...	40243	salvador	BA
9	b00ef24704019bd2e1b335e70...	40130	salvador	BA
10	eb4e59a06b3948e851a7d7a83...	41820	salvador	BA

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1

select count(*) as total_rows,

2

count(distinct seller_id) total_sellers

3

from ecommercetarget.sellers

Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	total_rows	total_sellers
1	3095	3095

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1

Order items data

2

select *

3

from ecommercetarget.order_items

4

limit 10

Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	order_id	order_item_id	product_id	seller_id	shipping_limit_date	price	freight_value
1	f09e36e25865850b92657ac5...	1	44d53f1240d6332232e4393c0...	b64d51f0435e884e8de03b16...	2018-07-09 13:31:36 UTC	3.0	12.79
2	f9ccaf727670cf076e795b1fa...	1	44d53f1240d6332232e4393c0...	b64d51f0435e884e8de03b16...	2018-08-14 14:04:44 UTC	3.0	15.23
3	c79bd0f01e22288609201ec60...	1	5304ff3fa35856a156e1170a60...	cf6f8bc4df3999b9c6440f124f...	2017-05-12 19:05:20 UTC	3.5	8.72
4	37193e4eb9a46b7f3197762f...	1	98224bfc1eaad3a394ec334c...	ce516e1913288884e7742faac...	2018-06-28 01:30:49 UTC	3.5	7.39
5	95d6357f5e41aa6d2998852a7...	1	98224bfc1eaad3a394ec334c...	ce516e1913288884e7742faac...	2018-06-12 19:15:14 UTC	3.5	18.23
6	95d6357f5e41aa6d2998852a7...	2	98224bfc1eaad3a394ec334c...	ce516e1913288884e7742faac...	2018-06-12 19:15:14 UTC	3.5	18.23
7	95d6357f5e41aa6d2998852a7...	3	98224bfc1eaad3a394ec334c...	ce516e1913288884e7742faac...	2018-06-12 19:15:14 UTC	3.5	18.23
8	95d6357f5e41aa6d2998852a7...	4	98224bfc1eaad3a394ec334c...	ce516e1913288884e7742faac...	2018-06-12 19:15:14 UTC	3.5	18.23
9	95d6357f5e41aa6d2998852a7...	5	98224bfc1eaad3a394ec334c...	ce516e1913288884e7742faac...	2018-06-12 19:15:14 UTC	3.5	18.23
10	d0e967f83e6890167785b684...	1	914323e0d50192310a003435...	2c9e548be18521d1043cde1c5...	2017-10-20 14:50:12 UTC	4.5	11.85

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RUN

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SCHEDULE

MORE

```
1 select count(*) as total_rows
2 from `ecommercetarget.order_items`
```

Query results

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	total_rows
1	112650

GEOLOCATION DATA

Geolocation data

```
1 # Geolocation data
2 select *
3 from `ecommercetarget.geolocation`
4 limit 10
```

Query results

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	geolocation_zip	geolocation_lat	geolocation_lng	geolocation_city	geolocation_state
1	49010	-10.910514...	-37.052400...	aracaju	SE
2	49047	-10.9268145...	-37.071063...	aracaju	SE
3	49030	-10.970164...	-37.061643...	aracaju	SE
4	49048	-10.940183...	-37.070850...	aracaju	SE
5	49050	-10.927157...	-37.063078...	aracaju	SE
6	49015	-10.923370...	-37.045169...	aracaju	SE
7	49045	-10.930406...	-37.067178...	aracaju	SE
8	49052	-10.922973...	-37.057752...	aracaju	SE
9	49044	-10.992080...	-37.103470...	aracaju	SE
10	49048	-10.940235...	-37.071043...	aracaju	SE

PAYMENTS DATA

PAYMENTS DATA

```
1 # PAYMENTS DATA
2
3 Select *
4 From `ecommercetarget.payments`
5 limit 10
```

Query results

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	order_id	payment_sequence	payment_type	payment_instal	payment_value
1	1a57108394169c0b47d8f876a...	2	credit_card	0	129.94
2	744bade1fc9f93f31d860ace07...	2	credit_card	0	58.69
3	8bcbe01d44d147901c031926...	4	voucher	1	0.0
4	fa65dad1b0e818e3ccc5cb0e3...	14	voucher	1	0.0
5	6ccb433e0d0dae1283cc09561...	4	voucher	1	0.0
6	4637ce19466387e2e539dc09...	1	not_defined	1	0.0
7	00b1cb0320190ca0daa2c88b3...	1	not_defined	1	0.0
8	45ede685398a87c253db47c2d...	3	voucher	1	0.0
9	fa65dad1b0e818e3ccc5cb0e3...	13	voucher	1	0.0
10	c8c528189310eaa44a745b8d9...	1	not_defined	1	0.0

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SCHEDULE

MORE

```
1 Select count(*) total_transaction
2 from `ecommercetarget.payments`
```

Query results

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	total_transaction
1	103886

ORDERS DATA

ORDERS DATA

```
1 # ORDERS DATA
2
3 Select *
4 From `ecommercetarget.orders`
5 Limit 10
```

Query results

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

SAVE RESULTSEXPLORE DATA

Row	order_id	customer_id	order_status	order_purchase_timestamp	order_approved_at	order_delivered_carrier_date	order_delivered_customer_date	order_estimated_delivery_date
1	7a4df5d8ff4090e541401a20a...	725e9c75605414b21f88c8da...	created	2017-11-25 11:10:33 UTC	null	null	null	2017-12-12 00:00:00 UTC
2	35de4050331c6c44cd0c86f4...	4ee4f46fc542546f422da0aeb...	created	2017-12-05 01:07:58 UTC	null	null	null	2018-01-08 00:00:00 UTC
3	b3539909123fa03c50db0c0fe...	438449d4ef8980c1079d04571...	created	2017-12-05 01:07:52 UTC	null	null	null	2018-01-11 00:00:00 UTC
4	dba5062fbd3af4fb3c33b1e04...	964a8df3d9bdf50fe3e7b8bb69...	created	2018-02-09 17:21:04 UTC	null	null	null	2018-03-07 00:00:00 UTC
5	90ab3e7d52544ec7bc3363e82...	7d61b9f4216052ba664722e9c...	created	2017-11-06 13:12:34 UTC	null	null	null	2017-12-01 00:00:00 UTC
6	fa65dad1b0e818e3ccc5cb0e3...	9af2372a1e49340278e7c1ef8...	shipped	2017-04-20 12:45:34 UTC	2017-04-22 09:10:13 UTC	2017-04-24 11:31:17 UTC	null	2017-05-18 00:00:00 UTC
7	1df2775799eeccf9dd8502425...	1240c2e65c4601d8860e3a367...	shipped	2017-07-13 11:03:05 UTC	2017-07-13 11:10:22 UTC	2017-07-18 18:17:30 UTC	null	2017-08-14 00:00:00 UTC
8	6190a4657e1012983x274b8...	5fc4c97dcb63903f996714524...	shipped	2017-07-11 13:36:30 UTC	2017-07-11 13:45:15 UTC	2017-07-13 17:55:46 UTC	null	2017-08-14 00:00:00 UTC
9	58ce513a55c740a3a81e6c8b7...	530d41b47b9ddae9b0c6f31d856...	shipped	2017-07-29 18:05:07 UTC	2017-07-29 18:15:17 UTC	2017-07-31 16:41:59 UTC	null	2017-08-14 00:00:00 UTC
10	088683795a3d30f061152c4f...	58d89f1f863819ff9040734f...	shipped	2017-07-13 10:02:47 UTC	2017-07-14 02:25:54 UTC	2017-07-20 20:02:58 UTC	null	2017-08-14 00:00:00 UTC

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MORE

```
1 Select count(*) total_orders
2 from `ecommercetarget.orders`
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	total_orders					
1	99441					

REVIEW DATA

Untitled 25

RUN

SAVE

SHARE

SCHEDULE

MORE

```
1 # REVIEW DATA
2
3 Select *
4 From `ecommercetarget.order_reviews`
5 limit 10
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	review_id	order_id	review_score	review_comment_title	review_creation_date	review_answer_timestamp
1	be7e2989673cb2a147b87ba73...	777c67eab7c0712cde8ffbb2...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 07:40:00 UTC
2	e12151267e4594d69eda14a8...	4338a446377f9193d2a03a83a...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 09:04:00 UTC
3	41d614b133efebcd10352001b...	b8aaeda740b17cf925d3e213...	1	null	0001-04-17 00:00:00 UTC	0002-04-17 03:48:00 UTC
4	c950324a42c5796d06f569f77...	b159d0ce7cd881052da94fa16...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 10:24:00 UTC
5	76823ada94c8861ececfc7c...	2a3007ed051b02a0e0dd0709c...	1	null	0001-04-17 00:00:00 UTC	0002-04-17 13:58:00 UTC
6	fe270df0abcb5c39fc7385143...	a39d3db795a5cf4c8b6c9dd05...	1	null	0001-04-17 00:00:00 UTC	0003-04-17 12:49:00 UTC
7	1b71e0b29ec2faa0a029ded43...	0e530ff6e154c9d7e7b12f341...	1	null	0001-04-17 00:00:00 UTC	0010-04-17 12:45:00 UTC
8	efe4020a945ee6fec8e8606694...	264c045399fb02e9f9309f715c2...	1	null	0001-04-17 00:00:00 UTC	0002-04-17 01:16:00 UTC
9	23ee6bc2492808dca0e807e13...	2ba1366baeca3c3536f27546...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 14:34:00 UTC
10	63c6cec8cb9a2d0990b339998...	aaae80f5b6239b09e1b22e9aa...	1	null	0001-04-17 00:00:00 UTC	0004-04-17 12:07:00 UTC

Untitled 25

RUN

SAVE

SHARE

SCHEDULE

MORE

```
1 # REVIEW DATA
2
3 Select *
4 From `ecommercetarget.order_reviews`
5 limit 10
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	review_id	order_id	review_score	review_comment_title	review_creation_date	review_answer_timestamp
1	be7e2989673cb2a147b87ba73...	777c67eab7c0712cde8ffbb2...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 07:40:00 UTC
2	e12151267e4594d69eda14a8...	4338a446377f9193d2a03a83a...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 09:04:00 UTC
3	41d614b133efebcd10352001b...	b8aaeda740b17cf925d3e213...	1	null	0001-04-17 00:00:00 UTC	0002-04-17 03:48:00 UTC
4	c950324a42c5796d06f569f77...	b159d0ce7cd881052da94fa16...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 10:24:00 UTC
5	76823ada94c8861ececfc7c...	2a3007ed051b02a0e0dd0709c...	1	null	0001-04-17 00:00:00 UTC	0002-04-17 13:58:00 UTC
6	fe270df0abcb5c39fc7385143...	a39d3db795a5cf4c8b6c9dd05...	1	null	0001-04-17 00:00:00 UTC	0003-04-17 12:49:00 UTC
7	1b71e0b29ec2faa0a029ded43...	0e530ff6e154c9d7e7b12f341...	1	null	0001-04-17 00:00:00 UTC	0010-04-17 12:45:00 UTC
8	efe4020a945ee6fec8e8606694...	264c045399fb02e9f9309f715c2...	1	null	0001-04-17 00:00:00 UTC	0002-04-17 01:16:00 UTC
9	23ee6bc2492808dca0e807e13...	2ba1366baeca3c3536f27546...	1	null	0001-04-17 00:00:00 UTC	0001-04-17 14:34:00 UTC
10	63c6cec8cb9a2d0990b339998...	aaae80f5b6239b09e1b22e9aa...	1	null	0001-04-17 00:00:00 UTC	0004-04-17 12:07:00 UTC

Untitled 25

RUN

SAVE

SHARE

SCHEDULE

MORE

```
1 Select count(*) total_reviews
2 from `ecommercetarget.order_reviews`
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	total_reviews					
1	99224					

PRODUCTS DATA

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RUN

SAVE

SHARE

SCHEDULE

MORE

```
1 # PRODUCTS DATA
2
3 Select *
4 From `ecommercetarget.products`
5 limit 10
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW			
Row	product_id	product_category	product_name	product_desc	product_photo	product_weight	product_length	product_height	product_width
1	5ee564652db742ff8f28759cd8...	null	null	null	null	null	null	null	null
2	09ff539a621711667c43eba6a...	babies	60	865	3	null	null	null	null
3	27f63ba79d9cd987b2034aaac7...	electronics	45	1198	2	595	8	6	6
4	a69f15dfb803d485e8933a80b...	Watches present	53	506	6	150	11	16	6
5	e1cf687543782b8a78659fc85...	Garden tools	39	524	4	369	26	7	7
6	106392145fca363410d287a81...	bed table bath	58	309	1	2083	12	2	7
7	7e33f41c59f89da30a335b2d...	electronics	51	381	3	1075	22	5	7
8	bc9cc914f9f4963c07be697fc...	HEALTH BEAUTY	55	435	1	75	14	9	7
9	5ae533eac9c0e93b3f89bc9ae...	computer accessories	58	1340	1	83	12	8	8
10	67d1a56495104e195338ec90...	pet Shop	20	2153	1	275	8	13	8

```
1 select count(distinct product_category) total_products
2 from `ecommercetarget.products`
```

Query results

Row	total_products
1	73

1. In-depth Exploration:
1. Is there a growing trend on e-commerce in Brazil? How can we describe a complete scenario?
Can we see some seasonality with peaks at specific months?
2. YEAR WISE

```
1 select
2 year,
3 order_volume,
4 round((order_volume-LAG(order_volume) over(order by year))/LAG(order_volume) over(order by year)*100,2) percent_change_order_volume
5 total_sales_currency,
6 round((total_sales_currency-LAG(total_sales_currency)over(order by year))/LAG(total_sales_currency) over(order by year)*100,2) perc
7 from (
8   SELECT
9   year,
10  count(order_id) order_volume,
11  round(sum(payment_value),0) total_sales_currency
12 FROM (
13   SELECT
14   EXTRACT(year FROM order_purchase_timestamp) AS year,
15   EXTRACT(Month FROM order_purchase_timestamp) AS month,
16   O.order_id,
17   payment_value
18 FROM `ecommercetarget.orders` as O INNER JOIN `ecommercetarget.payments` as P
19 ON
20 O.order_id=P.order_id
21 )table_one
22 Group by year
23 order by year
24 )
25 order by year
```

Query results

Row	year	order_volume	percent_change	total_sales_currency	percent_change
1	2016	346	null	59362.0	null
2	2017	47525	13635.55	7249747.0	12112.77
3	2018	56015	17.86	8699763.0	20.0

MONTH WISE ANALYSIS

```
1 select
2 month,
3 order_volume,
4 round((order_volume-LAG(order_volume) over(order by month))/LAG(order_volume) over(order by month)*100,2) percent_change_order_volume,
5 total_sales_currency,
6 round((total_sales_currency-LAG(total_sales_currency)over(order by month))/LAG(total_sales_currency) over(order by month)*100,2) percent_change_sales
7 from (
8   SELECT
9   month,
10  count(order_id) order_volume,
11  round(sum(payment_value),0) total_sales_currency
12 FROM (
13   SELECT
14   EXTRACT(year FROM order_purchase_timestamp) AS year,
15   EXTRACT(Month FROM order_purchase_timestamp) AS month,
16   O.order_id,
17   payment_value
18 FROM `ecommercetarget.orders` O INNER JOIN `ecommercetarget.payments` P
19 ON
20 O.order_id=P.order_id
21 )table_one
22 Group by month
23 order by month
24 )
25 order by month
```

Query results

Row	month	order_volume	percent_change	total_sales_currency	percent_change
1	1	8413	null	1253492.0	null
2	2	8838	5.05	1284371.0	2.46
3	3	10349	17.1	1609516.0	25.32
4	4	9780	-5.5	1578574.0	-1.92
5	5	11079	13.28	1746901.0	10.66
6	6	9855	-11.05	1535157.0	-12.12
7	7	10824	9.83	1658924.0	8.06
8	8	11248	3.92	1696822.0	2.28

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1 # Finding minimum and maximum data
2
3 select
4 max(order_volume) maximum_orders, min(order_volume) minimum_orders,
5 max(total_sales_currency) as max_sales, min(total_sales_currency) as min_sales
6 from(
7 select
8 month, order_volume,
9 round((order_volume-LAG(order_volume) over(order by month))/LAG(order_volume) over(order by month)*100,2) percent_change_order_volume, total_sales_currency,
10 round((total_sales_currency-LAG(total_sales_currency) over(order by month))/LAG(total_sales_currency) over(order by month)*100,2) percent_change_sales
11 from(
12 select
13 month, count(order_id) order_volume,
14 round(sum(payment_value),0) total_sales_currency
15 from(
16 select
17 EXTRACT(year from order_purchase_timestamp) as year,
18 EXTRACT(month from order_purchase_timestamp) as month,
19 O.order_id,
20 payment_value
21 from `ecommercetarget.orders` O inner join `ecommercetarget.payments` P
22 ON
23 O.order_id=P.order_id
24)table_one
25 group by month
26 order by month)
27 order by month)

1. What time do Brazilian customers tend to buy (Dawn, Morning, Afternoon or Night)?

```
1 #What time do Brazilian customers tend to buy (Dawn, Morning, Afternoon or Night)?
2
3 select
4 timings,
5 count(order_id) order_volume
6 from
7 (
8   select
9     order_id,
10    case
11      when purchase_hours>=0 and purchase_hours<6 then "dawn"
12      when purchase_hours>=6 and purchase_hours<12 then "morning"
13      when purchase_hours>=12 and purchase_hours<18 then "afternoon"
14      when purchase_hours>=18 and purchase_hours<=23 then "night"
15    end as timings
16  from(
17    select
18      order_id,
19      extract(hour from order_purchase_timestamp) as purchase_hours
20    from 'ecommercetarget.orders'
21  )
22 )
23 group by timings
24 order by order_volume;
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	timings	order_volume				
1	dawn	4740				
2	morning	22240				
3	night	34100				
4	afternoon	38361				

1. Evolution of E-commerce orders in the Brazil region:
1. Get month on month orders by states

2. Distribution of customers across the states in Brazil

1

#Evolution of E-commerce orders in the Brazil region:

2

3

#Get month on month orders by states

4

5

select

6

month,

7

customer_state,

8

count(order_id) order_count

9

from(

10

select

11

order_id,

12

EXTRACT(month from O.order_delivered_customer_date) month,

13

O.customer_id,

14

customer_state

15

from 'ecommercetarget.orders' O inner join 'ecommercetarget.customers' C

16

on

17

O.customer_id=C.customer_id)

18

group by month,customer_state

19

order by month desc

20

limit 10

Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	month	customer_state	order_count
1	12	PR	358
2	12	RJ	875
3	12	AC	4
4	12	PA	62
5	12	PE	108
6	12	SP	3076
7	12	MT	64
8	12	BA	216
9	12	MG	1003
10	12	RS	363

1. Impact on Economy: Analyze the money movement by e-commerce by looking at order prices, freight and others.
 1. Get % increase in cost of orders from 2017 to 2018 (include months between Jan to Aug only)
- You can use "payment_value" column in payments table
 2. Mean & Sum of price and freight value by customer state

```
1 #Impact on Economy: Analyze the money movement by e-commerce by looking at order prices, freight and others.
2
3 #Get % increase in cost of orders from 2017 to 2018 (include months between Jan to Aug only) - You can use "payment_value" column in payments table
4
5 select
6 year,
7 round((total_sales_currency-LAG(total_sales_currency)over(order by year))/LAG(total_sales_currency)over(order by year)*100,2)percent_change_sales
8 from(
9 select
10 year,
11 count(order_id) order_volume,
12 round(sum(payment_value),0) total_sales_currency
13 from(
14 select
15 EXTRACT(year from order_purchase_timestamp) as year,
16 EXTRACT(month from order_purchase_timestamp) as month,
17 O.order_id,
18 payment_value
19 from `ecommercetarget.orders` O inner join `ecommercetarget.payments` P
20 on
21 O.order_id=P.order_id
22 )table_one
23 where year in (2017,2018)
24 group by year
25 order by year
26 )
27 order by year
```

Query results

JOB INFORMATION	RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	year	total_sales_currency	percent_change		
1	2017	7249747.0	null		
2	2018	8699763.0	20.0		

```
1
2 # Month wise analysis
3
4
5 select
6 year,
7 month,
8 total_sales_currency,
9 round((total_sales_currency-LAG(total_sales_currency)over(order by month))/LAG(total_sales_currency)over(order by month)*100,2)percent_change_sales
10 from(
11 select
12 year,
13 month,
14 round(sum(payment_value),0) total_sales_currency
15 from(
16 select
17 EXTRACT(year from order_purchase_timestamp) as year,
18 EXTRACT(month from order_purchase_timestamp) as month,
19 O.order_id,
20 payment_value
21 from `ecommercetarget.orders` O inner join `ecommercetarget.payments` P
22 on
23 O.order_id=P.order_id
24 )table_one
25 group by year,month
26 order by year,month
27 )
28 where year = 2017 and month between 1 and 8
29 order by month
```

Query results

JOB INFORMATION	RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	year	month	total_sales_currency	percent_change	
1	2017	1	138488.0	null	
2	2017	2	251908.0	110.78	
3	2017	3	449864.0	54.11	
4	2017	4	417788.0	-7.13	
5	2017	5	592919.0	41.92	
6	2017	6	511276.0	-13.77	
7	2017	7	592383.0	15.86	
8	2017	8	674396.0	13.84	

```
1 select
2 year,
3 month,
4 total_sales_currency,
5 round((total_sales_currency-LAG(total_sales_currency)over(order by month))/LAG(total_sales_currency)over(order by month)*100,2)percent_change_sales
6 from(
7 select
8 year,
9 month,
10 round(sum(payment_value),0) total_sales_currency
11 from(
12 select
13 EXTRACT(year from order_purchase_timestamp) as year,
14 EXTRACT(month from order_purchase_timestamp) as month,
15 O.order_id,
16 payment_value
17 from `ecommercetarget.orders` O inner join `ecommercetarget.payments` P
18 on
19 O.order_id=P.order_id
20 )table_one
21 group by year,month
22 order by year,month
23 )
24 where year = 2018 and month between 1 and 8
25 order by month
```

Query results

JOB INFORMATION	RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	year	month	total_sales_currency	percent_change	
1	2018	1	1115004.0	null	
2	2018	2	992463.0	-10.99	
3	2018	3	1159652.0	16.85	
4	2018	4	1160785.0	0.1	
5	2018	5	1153982.0	-0.59	
6	2018	6	1023880.0	-11.27	
7	2018	7	1066541.0	4.17	
8	2018	8	1022425.0	-4.14	

```
1 #Mean & Sum of price and freight value by customer state
2
3 select
4 C.customer_state,
5 round(sum(OI.price),2) total_cost_state,
6 round(sum(OI.freight_value),2) total_freight_value_state,
7 round(avg(OI.price),2) average_cost,
8 round(avg(OI.freight_value),2) average_freight_cost
9 from `ecommercetarget.orders` O inner join `ecommercetarget.order_items` OI
10 ON
11 O.order_id=OI.order_id
12 Inner join `ecommercetarget.customers` C
13 ON
14 O.customer_id=C.customer_id
15 GROUP BY C.customer_state
16 order by average_cost desc, average_freight_cost desc
17
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH	PREVIEW
Row	customer_state	total_cost_state	total_freight_value	average_cost	average_freight		
1	PB	115268.08	25719.73	191.48	42.72		
2	AL	80314.81	15914.59	180.89	35.84		
3	AC	15982.95	3686.75	173.73	40.07		
4	RO	46140.64	11417.38	165.97	41.07		
5	PA	178947.81	38699.3	165.69	35.83		
6	AP	13474.3	2788.5	164.32	34.01		
7	PI	86914.08	21218.2	160.36	39.15		
8	TO	49621.74	11732.68	157.53	37.25		
9	RN	83034.98	16860.1	156.97	35.65		
10	CE	227254.71	48351.59	153.76	32.71		
11	SE	58920.85	14111.47	153.04	36.65		
12	RR	7829.43	2235.19	150.57	42.98		
13	MT	156453.53	29715.43	148.3	28.17		
14	PE	262788.03	59449.66	145.51	32.92		
15	MA	119648.22	31523.77	145.2	38.26		

PERSONAL HISTORY PROJECT HISTORY

```
1 #Mean & Sum of price and freight value by customer state
2
3 select
4 C.customer_state,
5 round(sum(OI.price),2) total_cost_state,
6 round(sum(OI.freight_value),2) total_freight_value_state,
7 round(avg(OI.price),2) average_cost,
8 round(avg(OI.freight_value),2) average_freight_cost
9 from `ecommercetarget.orders` O inner join `ecommercetarget.order_items` OI
10 ON
11 O.order_id=OI.order_id
12 Inner join `ecommercetarget.customers` C
13 ON
14 O.customer_id=C.customer_id
15 GROUP BY C.customer_state
16 order by average_cost desc, average_freight_cost desc
17
```

Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH	PREVIEW
Row	customer_state	total_cost_state	total_freight_value	average_cost	average_freight		
13	MT	156453.53	29715.43	148.3	28.17		
14	PE	262788.03	59449.66	145.51	32.92		
15	MA	119648.22	31523.77	145.2	38.26		
16	MS	116812.64	19144.03	142.63	23.37		
17	AM	22356.84	5478.89	135.5	33.21		
18	BA	511349.99	100156.68	134.6	26.36		
19	GO	294591.95	53114.98	126.27	22.77		
20	DF	302603.94	50625.5	125.77	21.04		
21	RJ	1824092.67	305589.31	125.12	20.96		
22	SC	520553.34	89660.26	124.65	21.47		
23	ES	275037.31	49764.6	121.91	22.06		
24	MG	1585308.03	270853.46	120.75	20.63		
25	RS	750304.02	135522.74	120.34	21.74		
26	PR	683083.76	117851.68	119.0	20.53		
27	SP	5202955.05	718723.07	109.65	15.15		

PERSONAL HISTORY PROJECT HISTORY

Analysis on sales, freight and delivery time

1. Calculate days between purchasing, delivering and estimated delivery

1

#5. Analysis on sales, freight and delivery time

2

#part 1 - Calculate days between purchasing, delivering and estimated delivery

3

4

select

5

order_id,

6

date_diff(order_delivered_customer_date,order_purchase_timestamp,day) as no_days_delivery,

7

date_diff(order_estimated_delivery_date,order_purchase_timestamp,day) as no_days_estimated,

8

date_diff(order_estimated_delivery_date,order_delivered_carrier_date,day) as no_days_delivery_estimated,

9

from `ecommerce.target_orders`

10

where order_delivered_customer_date is not null

11

order by no_days_delivery, no_days_estimated;

Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	order_id	no_days_delivery	no_days_estimated	no_days_delivery_estimated
1	d5fbedcd85190ba88580d6f82...	0	8	8
2	79e324907160caa526f0b94...	0	9	9
3	e65f1eeee1f52024ad1dc0034...	0	10	10
4	1d893dd7ca5f77ebf5f59f0d20...	0	10	10
5	b70a8d75313560b4acfd07739...	0	10	10
6	d3ca7882c92281700e5ca211...	0	12	12
7	f3c6775ba3d2d9fa2826f93b71...	0	12	12
8	21a8ffca6650c7a1087d31751...	0	12	12
9	f349c0b262f9c3fae5c4d7d3f3...	0	13	13
10	38c1e3d4ed6a13cd0cf612d4c...	0	17	16
11	434cecee7d1a65fc65358a632...	0	20	20
12	bb5a519e352b45b714192a02f...	0	26	26
13	8339b608be0b084fca9d8da68b...	0	28	27
14	1cc11190e21902e3e78c9c2a2...	1	2	2
15	da8831dfb089ea60128840224...	1	2	1
16	56a88710573842db37ac692a...	1	2	2

PERSONAL HISTORY

PROJECT HISTORY

1

#5. Analysis on sales, freight and delivery time

2

#part 1 - Calculate days between purchasing, delivering and estimated delivery

3

4

select

5

order_id,

6

date_diff(order_delivered_customer_date,order_purchase_timestamp,day) as no_days_delivery,

7

date_diff(order_estimated_delivery_date,order_purchase_timestamp,day) as no_days_estimated,

8

date_diff(order_estimated_delivery_date,order_delivered_carrier_date,day) as no_days_delivery_estimated,

9

from `ecommerce.target_orders`

10

where order_delivered_customer_date is not null

11

order by no_days_delivery, no_days_estimated;

Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	order_id	no_days_delivery	no_days_estimated	no_days_delivery_estimated
35	cebd81d91393b014d64df92a9...	1	2	1
36	da3b31201f9eb351160956d5a...	1	2	2
37	7996367b7140c04370be2d7e...	1	2	2
38	5e981569f5835c9e4b288363...	1	2	1
39	62b4063077164817444ed917...	1	2	1
40	be672f99f61bb90b0430f407ba...	1	2	2
41	91ba8089d2fac808ba2eebac6...	1	2	1
42	fe3790cafada5a792820631d...	1	2	1
43	01d9a9aa7feccdaf99f7ea832b...	1	2	1
44	c2cc8d0823730be302a4ebe1d...	1	2	2
45	5e0d84280f9a96b37d0228b21...	1	2	2
46	d8f92d7e898a1027a0957b82f...	1	2	1
47	e0889e0656d981add4b6c940...	1	2	1
48	b14970227d9071f5930ab1774...	1	2	2
49	0c47aeb0b91c17647935a2b53...	1	2	1
50	ffc0249fed109d5d056d7c79b7...	1	2	2

PERSONAL HISTORY

PROJECT HISTORY

- Find time_to_delivery & diff_estimated_delivery. Formula for the same given below:
 - time_to_delivery = order_purchase_timestamp-order_delivered_customer_date
 - diff_estimated_delivery = order_estimated_delivery_date-order_delivered_customer_date

1	#Find time_to_delivery & diff_estimated_delivery. Formula for the same given below:
2	
3	#time_to_delivery = order_purchase_timestamp-order_delivered_customer_date
4	
5	#diff_estimated_delivery = order_estimated_delivery_date-order_delivered_customer_date
6	
7	select
8	C.customer_state,
9	round(avg(OI.freight_value),2) avg_freight_state,
10	round(avg(date_diff(0.order_delivered_customer_date,0.order_purchase_timestamp,day)),2) as no_days_delivery,
11	round(avg(date_diff(0.order_estimated_delivery_date,0.order_delivered_carrier_date,day)),2) as diff_estimatedA_delivery
12	FROM `ecommercetarget.orders` O inner join `ecommercetarget.customers` C
13	On
14	O.customer_id= C.customer_id
15	inner join `ecommercetarget.order_items` OI
16	On
17	O.order_id=OI.order_id
18	group by C.customer_state
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2	
3	#time_to_delivery = order_purchase_timestamp-order_delivered_customer_date
4	
5	#diff_estimated_delivery = order_estimated_delivery_date-order_delivered_customer_date
6	
7	select
8	C.customer_state,
9	round(avg(OI.freight_value),2) avg_freight_state,
10	round(avg(date_diff(0,order_delivered_customer_date,0,order_purchase_timestamp,day)),2) as no_days_delivery,
11	round(avg(date_diff(0,order_estimated_delivery_date,0,order_delivered_carrier_date,day)),2) as diff_estimatedA_delivery
12	FROM `ecommercetarget.orders` O inner join `ecommercetarget.customers` C
13	On
14	O.customer_id= C.customer_id
15	inner join `ecommercetarget.order_items` OI
16	On
17	O.order_id=OI.order_id
18	group by C.customer_state
19	order by avg_freight_state desc
20	limit 5

Query results				
JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS
				EXECUTION GRAPH
				PREVIEW
Row	customer_state	avg_freight_state	no_days_delivery	diff_estimatedA_delivery
1	RR	42.98	27.83	40.75
2	PB	42.72	20.12	28.92
3	RO	41.07	19.28	35.86
4	AC	40.07	20.33	37.3
5	PI	39.15	18.93	26.67

1. Top 5 states where delivery is really fast/ not so fast compared to estimated date

```
2
3 #time_to_delivery = order_purchase_timestamp-order_delivered_customer_date
4
5 #diff_estimated_delivery = order_estimated_delivery_date-order_delivered_customer_date
6
7 select
8 C.customer_state,
9 round(avg(OI.freight_value),2) avg_freight_state,
10 round(avg(date_diff(0,order_delivered_customer_date,0,order_purchase_timestamp,day)),2) as no_days_delivery,
11 round(avg(date_diff(0,order_estimated_delivery_date,0,order_delivered_carrier_date,day)),2) as diff_estimatedA_delivery
12 FROM `ecommercetarget.orders` O inner join `ecommercetarget.customers` C
13 On
14 O.customer_id= C.customer_id
15 inner join `ecommercetarget.order_items` OI
16 On
17 O.order_id=OI.order_id
18 group by C.customer_state
19 order by diff_estimatedA_delivery asc
20 limit 5
```

Press Alt+F1 for accessibility options

Query results

SAVE RESULTS

EXPLORE DATA

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	customer_state	avg_freight_state	no_days_delivery	diff_estimatedA_delivery		
1	SP	15.15	8.26	15.68		
2	DF	21.04	12.5	20.88		
3	MG	20.63	11.52	21.0		
4	PR	20.53	11.48	21.06		
5	ES	22.06	15.19	21.8		

2

#time_to_delivery = order_purchase_timestamp-order_delivered_customer_date

3

4

#diff_estimated_delivery = order_estimated_delivery_date-order_delivered_customer_date

5

6

7

select

8

C.customer_state,

9

round(avg(OI.freight_value),2) avg_freight_state,

10

round(avg(date_diff(0,order_delivered_customer_date,0,order_purchase_timestamp,day)),2) as no_days_delivery,

11

round(avg(date_diff(0,order_estimated_delivery_date,0,order_delivered_carrier_date,day)),2) as diff_estimatedA_delivery

12

FROM `ecommercetarget.orders` O inner join `ecommercetarget.customers` C

13

On

14

O.customer_id= C.customer_id

15

inner join `ecommercetarget.order_items` OI

16

On

17

O.order_id=OI.order_id

18

group by C.customer_state

19

order by diff_estimatedA_delivery desc

20

limit 5

Press Alt+F1 for accessibility options

Query results

SAVE RESULTS

EXPLORE DATA

Job information

RESULTS

JSON

EXECUTION DETAILS

EXECUTION GRAPH

PREVIEW

Row	customer_state	avg_freight_state	no_days_delivery	diff_estimatedA_delivery
1	AM	33.21	25.96	42.29
2	AP	34.01	27.75	42.0
3	RR	42.98	27.83	40.75
4	AC	40.07	20.33	37.3
5	RO	41.07	19.28	35.86

6. Payment type analysis:

1. Month over Month count of orders for different payment types
2. Count of orders based on the no. of payment installments

```
1 # Payment type analysis:
2 #Month over Month count of orders for different payment types
3
4 select
5 payment_type,month,count(order_id) order_count
6 from(
7   select
8     P.payment_type,
9     Extract(month from O.order_purchase_timestamp) month,
10    P.order_id
11   from _ecommercetarget.payments` P Inner join `ecommercetarget.orders` O
12   ON
13    P.order_id=O.order_id)
14 Group by payment_type,month
15 order by payment_type,month
```

Query results

JOB INFORMATION RESULTS JSON EXECUTION DETAILS EXECUTION GRAPH PREVIEW

Row	payment_type	month	order_count
1	UPI	1	1715
2	UPI	2	1723
3	UPI	3	1942
4	UPI	4	1783
5	UPI	5	2035
6	UPI	6	1807
7	UPI	7	2074
8	UPI	8	2077
9	UPI	9	903
10	UPI	10	1056

```
1 # Payment type analysis:
2 #Month over Month count of orders for different payment types
3
4 select
5 payment_type,month,count(order_id) order_count
6 from(
7     select
8     P.payment_type,
9     Extract(month from 0.order_purchase_timestamp) month,
10    P.order_id
11    from `ecommercetarget.payments` P Inner join `ecommercetarget.orders` O
12    ON
13    P.order_id=O.order_id)
14 Group by payment_type,month
15 order by payment_type,month
```

Press Alt+F1 for accessibility options.

Query results

SAVE RESULTSEXPLORE DATA

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	payment_type	month	order_count
37	not_defined	8	2
38	not_defined	9	1
39	voucher	1	477
40	voucher	2	424
41	voucher	3	591
42	voucher	4	572
43	voucher	5	613
44	voucher	6	563
45	voucher	7	645
46	voucher	8	589
47	voucher	9	302
48	voucher	10	318
49	voucher	11	387
50	voucher	12	294

Results per page: 501 - 50 of 50

PERSONAL HISTORYPROJECT HISTORY

REFRESH

```
1 #Count of orders based on the no. of payment installments
2
3 select
4 payment_installments,
5 count(order_id) order_volume
6 from `ecommercetarget.payments`
7 group by payment_installments
```

Press Alt+F1 for accessibility options.

Query results

SAVE RESULTSEXPLORE DATA

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	payment_installments	order_volume
1	0	2
2	1	52546
3	2	12413
4	3	10461
5	4	7098
6	5	5239
7	6	3920
8	7	1626
9	8	4268
10	9	644
11	10	5328
12	11	23
13	12	133
14	13	16
15	14	15
16	15	74
17	16	5
18	17	8

Results per page: 501 - 24 of 24

PERSONAL HISTORYPROJECT HISTORY

REFRESH

```
1 #Count of orders based on the no. of payment installments
2
3 select
4 payment_installments,
5 count(order_id) order_volume
6 from `ecommercetarget.payments`
7 group by payment_installments
```

Press Alt+F1 for accessibility options.

Query results

SAVE RESULTSEXPLORE DATA

JOB INFORMATIONRESULTSJSONEXECUTION DETAILSEXECUTION GRAPHPREVIEW

Row	payment_installments	order_volume
7	6	3920
8	7	1626
9	8	4268
10	9	644
11	10	5328
12	11	23
13	12	133
14	13	16
15	14	15
16	15	74
17	16	5
18	17	8
19	18	27
20	20	17
21	21	3
22	22	1
23	23	1
24	24	18

Results per page: 501 - 24 of 24

PERSONAL HISTORYPROJECT HISTORY

REFRESH