Question 1: Find the number of orders that have small, medium or large order value (small:0-10 dollars, medium:10-20 dollars, large:20+)

```
with category as (
select Total_Sales,
case when Total_Sales between 0 and 9 then 'Small $0-$9'
when Total_Sales between 10 and 19 then 'Medium $10-$19'
when Total_Sales > 19 then 'Large $20+'
end as Orders_Category
from `e_com.transactions`

)

select Orders_Category, count(Total_Sales) as total_order
from category
where Orders_Category is not null
group by Orders_Category;
```

Query	resu	lts

JOB IN	FORMATION	RESULTS	CHART	JSON
Row	Orders_Category	· /	total_order ▼	//
1	Small \$0-\$9		9917	736
2	Medium \$10-\$19		299	944
3	Large \$20+		152	269

#### Insights:

Most of the orders are from Small category which is between \$0 - \$9.

The order of Medium Category which is between \$10-\$19 are 29944.

The order of Large Category which is between \$20 - \$20+ are 15269.

-- Question 2: Find the number of orders that are small, medium or large order value(small:0-5 dollars, medium:5-10 dollars, large:10+)

```
with category as (
select Total_Sales,
case when Total_Sales between 0 and 4 then 'Small $0 - $4'
when Total_Sales between 5 and 9 then 'Medium $5 - $10'
when Total_Sales > 9 then 'Large $10+'
end as Orders_Category
from `e_com.transactions`
)

select Orders_Category, count(Total_Sales) as total_order
from category
where Orders_Category is not null
group by Orders_Category;
```

JOB IN	IFORMATION	RESULTS	CHART	JSON	EXECUTION DETAILS
Row	Orders_Category	• <u>/</u>	total_order ▼	/	
1	Small \$0 - \$4		80336	0	
2	Medium \$5 - \$10		12230	2	
3	Large \$10+		5683	2	

#### Insights:

Most of the orders are from Small category which is between \$0 - \$4.

The order of Medium Category which is between \$5-\$10 are 122302.

The order of Large Category which is between \$10 - \$10+ are 56832.

# -- Question 3: Find top 3 stores with highest foot traffic for each week (Foot traffic: number of customers transacting)

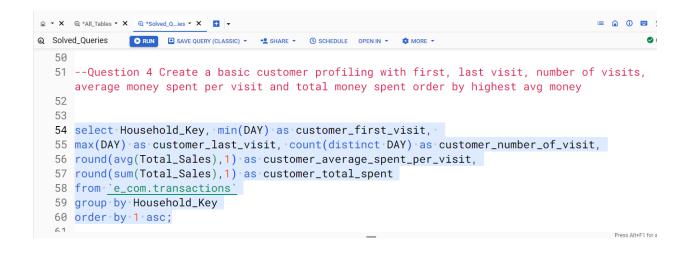
### Query results

JOB IN	FORMATION		RESULTS	CHART	JSON	EXECUTION DETAILS	EXECUTION GRA
Row	Week_No ▼	11	Store_ID ▼	//			
1		1		324			
2		1	32	2004			
3		1		296			
4		2		315			
5		2		375			
6		2		403			
7		3		375			
8		3		367			
9		3		408			
10		4		367			
11		4	33	2004			
12		4		320			
13		4		408			
14		5	33	2004			
15		5		324			
16		5		220			

#### Insights:

The most number of transaction customer done is on the Store with ID 367 followed by Store ID 361 and 357.

--Question 4 Create a basic customer profiling with first, last visit, number of visits, average money spent per visit and total money spent order by highest avg money



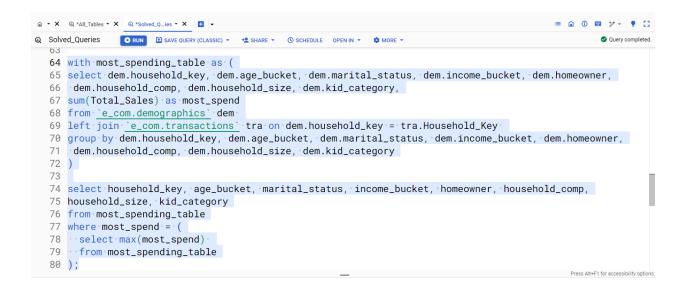
#### Query results

JOB IN	FORMATION		RESULTS CH	ART JSON	EXECUTION DETA	AILS EXECUTI	ON GRAPH
Row	Household_Key	٠,	customer_first_visit	customer_last_visit	customer_number_o	customer_average_s	customer_total_spen
1		1	2000-02-20	2001-12-06	72	2.9	2473.2
2		2	2000-04-12	2001-10-29	44	3.5	1235.7
3		3	2000-04-22	2001-12-03	45	3.9	1789.0
4		4	2000-04-13	2001-09-18	29	4.6	693.5
5		5	2000-03-25	2001-12-03	29	4.3	477.3
6		6	2000-04-27	2001-12-07	201	3.7	3358.3
7		7	2000-01-23	2001-12-09	56	3.1	1996.3
8		8	2000-03-05	2001-12-06	102	3.4	3380.3
9		9	2000-04-13	2001-11-19	18	4.5	496.5
10	1	0	2000-04-23	2001-11-15	5	3.6	125.9
11	1	1	2000-04-19	2001-02-15	5	2.8	25.4
12	1	2	2000-03-12	2001-05-18	5	3.1	138.4
13	1	3	2000-04-10	2001-12-09	166	6.3	7362.3
14	1	4	2000-01-04	2001-12-04	83	3.7	1719.1

#### Insights:

The query is extraction the customer ID which is Household Key and what was the first visit, last visit, how many times he/she visits, the average amount he/she spend whenever he/she visits the store and the total amount he/she spends.

-- Question 5: Do a single customer analysis selecting most spending customer for whom we have demographic information(because not all customers in transaction data are present in demographic table)(show the demographic as well as total spent)





#### Insights:

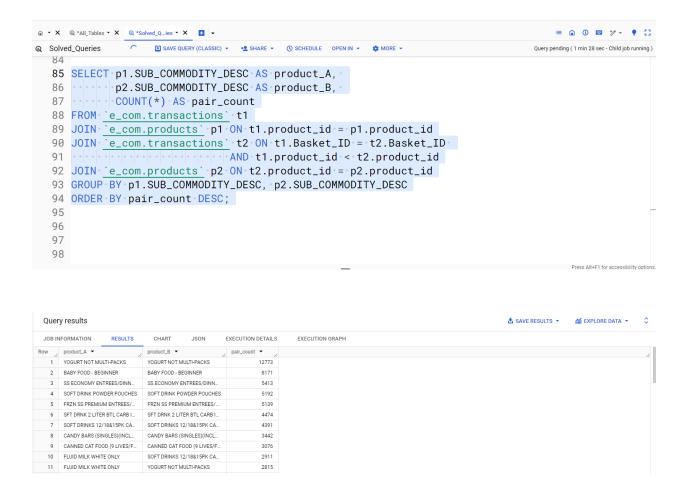
The customer who spent most amount is with the household key 1609 and we can see there demographics.

They are in the age bucket of 45-54, married.

There income is between \$125 - \$149.

They are a homeowner.

-- Question 6: Find products(product table : SUB\_COMMODITY\_DESC) which are most frequently bought together and the count of each combination bought together. do not print a combination twice (A-B / B-A)

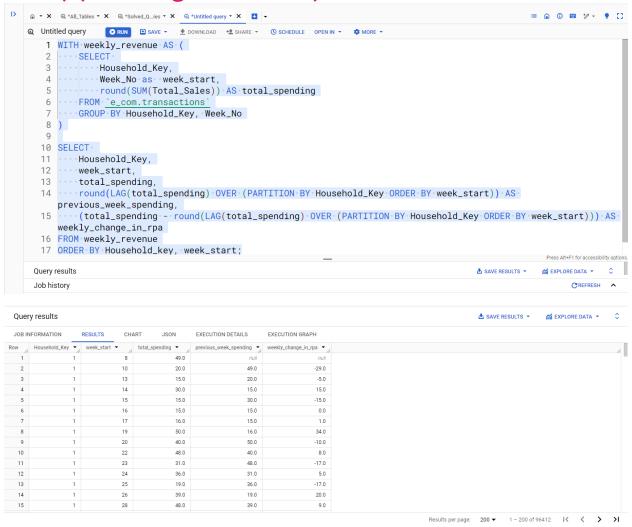


#### Insights:

The above query output shows which product is brought together frequently and how much time it was purchased by the customer.

These output we can use to increase the number of products in our inventory which is highest and medium selling.

-- Question 7: Find the weekly change in Revenue Per Account (RPA) (difference in spending by each customer compared to last week)(use lag function)



#### Insights:

The above query shows the weekly change in revenue per account.

For every customer which is household key we can see the revenue changing weekly which we can use for the inventory stocks.

How much revenue is generated each week, what percentage of revenue we incline or decline every week.

## **Recommendation:**

- 1. Most of the products are sold within the category of small, so we need to focus of medium and large category of products as well.
- 2. We can combine the bundle of small with medium and small with large and then we can sell, so that the inventory will not have any expired products.
- 3. The top revenue we generate are from store Id 367, 361 and 357. we need to focus more on this stores because they capture a large number of customers.
- 4. The average amount customer spent whenever they visit the store is between \$ 4 \$ 5 and customer visit the store frequently.
- 5. The total amount a customer spent on an average is between \$1500 to \$2000.