Apon Bazaar Data Analyst Assessment

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Tools Used: Excel, BigQuery, MySQL, Looker Studio

Question:1:

You were given the 3 sales reports of 3 months of Apon Bazaar. You are asked to prepare a dynamic report to identify the angel customers for Apon for the 4th month who will get the special privilege offer from Apon.

Conditions to prepare the sheet are given below:

The sheet should be dynamic so that your manager can change the criteria of developing the angel list. Criteria are:

a. Customers can purchase any of the 3 months or any 2 months with the 3 months.

b. The purchase amount can be changed based on the or your manager ranging from 1,000 to 20,000+

c. Your manager needs to see for each criterion set, the gender ratio of the angel customers. (You can find the gender data in other sheet named “Apon Main Database Gender Data”)

d. Divide the angel list shop wise considering the master database given separately named “Apon Main Database Gender Data”.

e. Your manager would be highly impressed if you can show any of your results with a graphical presentation.

Question:2:

You were given a previous 6 months sales report month by month of Apon Bazaar. You are asked to prepare

Big block wise dynamic dashboard on margin and sales contribution to see the month by month improvement / degrowth.

A dashboard on Big block wise shop wise margin and sales contribution.

Identify and suggest sub category wise 3 products with high margin to focus on sales.

Identify and suggest sub category wise 3 products with lower margin to remove from sales.

**Note: Item code is the unique identifier of a product among all the sheets. All the additional information related to products is in the product info sheet.

Assessment 1 :

I was given three months of sale data of Apon Bazar and Apon Main DB gender data. My task was to make a dynamic dashboard/report to see Angel customers where the user can change the criteria of Angel customers.

To achieve this task, I had to do some data preprocessing and sorting and then finally visualization. I used my current company's GCP platform which is personally obtained by me. I will briefly describe here how I achieved my goal and source to the Dashboard.

Step 1: Upload data BQ:

At first, I uploaded all four datasets that I have been provided. Here is the snippet.

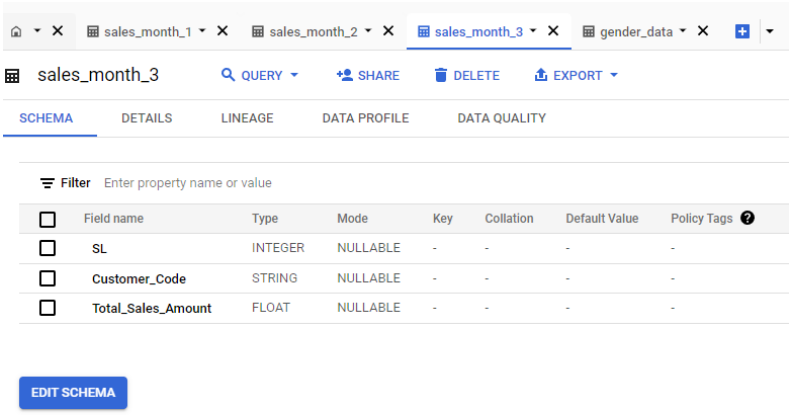


Figure 1 Successfully uploaded datasets.

Step 2: Union three months data into one table:

In this step I unionid all three months' sale data into one table so that it gets easier to manipulate them. And assigned them as Month 1, Month 2, and Month 3

```
CREATE TABLE `tenms-userdb.temp_rrm.combined_sales_data` AS
SELECT
    SL,
    Customer_Code,
    Total_Sales_Amount,
    'Month1' AS Sales_Month
FROM `tenms-userdb.temp_rrm.sales_month_1`
UNION ALL
SELECT
    SL,
    Customer_Code,
    Total_Sales_Amount,
    'Month2'
FROM `tenms-userdb.temp_rrm.sales_month_2`
UNION ALL
SELECT
    SL,
    Customer_Code,
    Total_Sales_Amount,
    'Month3'
FROM `tenms-userdb.temp_rrm.sales_month_3`;
```

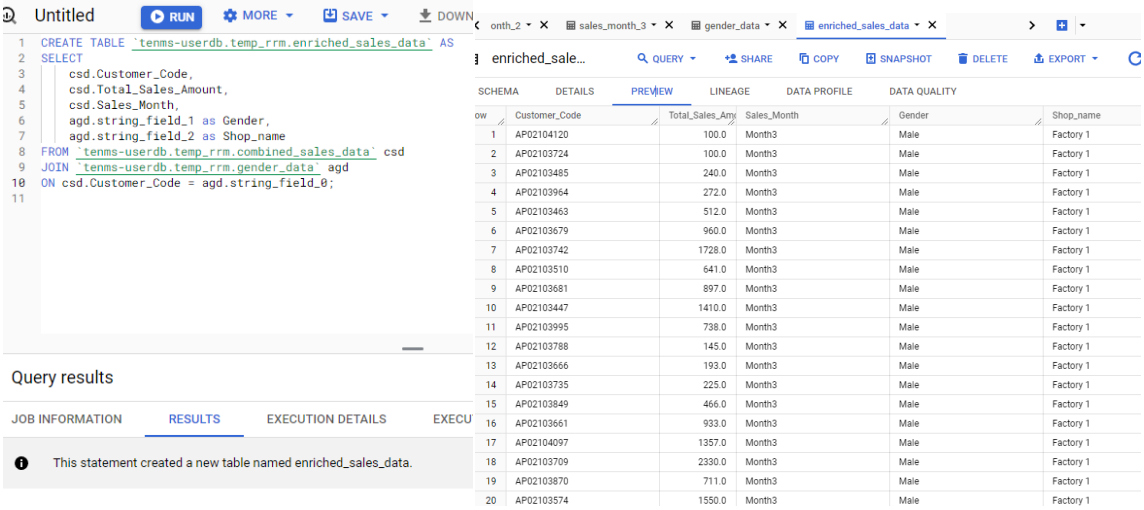
combined_sales_data QUERY SHARE COPY SNAPSHOT DELETE

SCHEMA DETAILS PREVIEW LINEAGE DATA PROFILE DATA QUALITY

Row	SL	Customer_Code	Total_Sales_Amount	Sales_Month
1	225	AP01900989	7.0	Month1
2	6968	AP02201651	8.0	Month1
3	7415	AP02300118	10.0	Month1
4	9274	AP00311575	10.0	Month1
5	7586	AP02302270	10.0	Month1
6	380	AP02001968	10.0	Month1
7	9303	AP00311648	10.0	Month1
8	433	AP02001730	10.0	Month1
9	7454	AP02300346	10.0	Month1
10	7731	AP02305543	10.0	Month1
11	559	AP02002098	10.0	Month1

Step 3: enriched Sale Data:

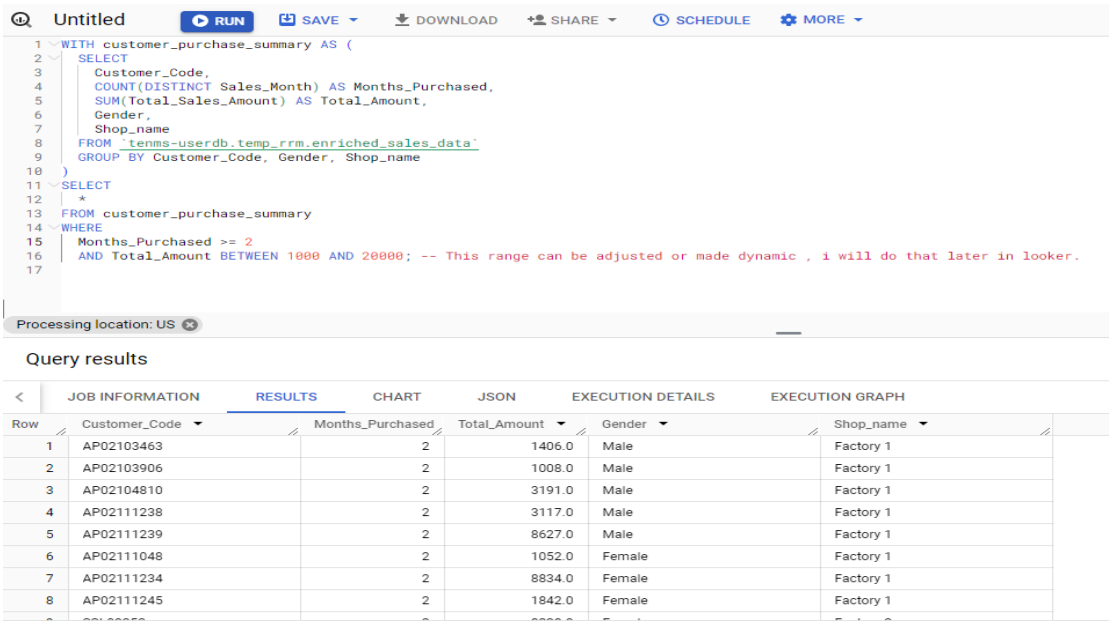
This is a crucial part, here I joined my combined 3months sale data with the gender data and joined them on customer code and apon code.



Step 4: Making the Final report:

This is the final report that has been connected to the dashboard. Important thing to notice here is for Months_Purchased >= 2

AND Total_Amount BETWEEN 1000 AND 20000; which indicates the question where I was said that Angel customer has to buy more than 1 month and their total amount has to more than 1000 and less than 20000.



Step 5: Dashboard:

I then connected the final report with Looker Studio to make the interactive dynamic dashboard where viewer can see Angel customer and most importantly they can change the criteria as mentioned in the question.

Dashboard Link : https://lookerstudio.google.com/reporting/78ff8ce2-cb4d-49e3-a189-68d338fdd369

Insights:

1. Total_amount slider can be changed to fix any amount of price from 1000 to 20000
2. Months purchased dropdown can be used to select last two months
3. Pie chart here shows that Men are most like to be the potential customers who buy the products.
4. The bar chart shows that Factory 5 had the most customers.
5. Total amount score card shows the total sale amount, customer_code score card shows total customer and shop_name score card shows total shops or factories.
6. All the data in the dashboard are interactive means if the user clicks any specific data, the dashboard will automatically sort to show that type of data, what I mean is, from the pie chart if the user clicks on 'Men' then the dashboard will show data that has been related to that value of the Gender

   N.B: That was the assessment answer for Question 1. Question 2 answer starts from next page.

Assessment 2 :

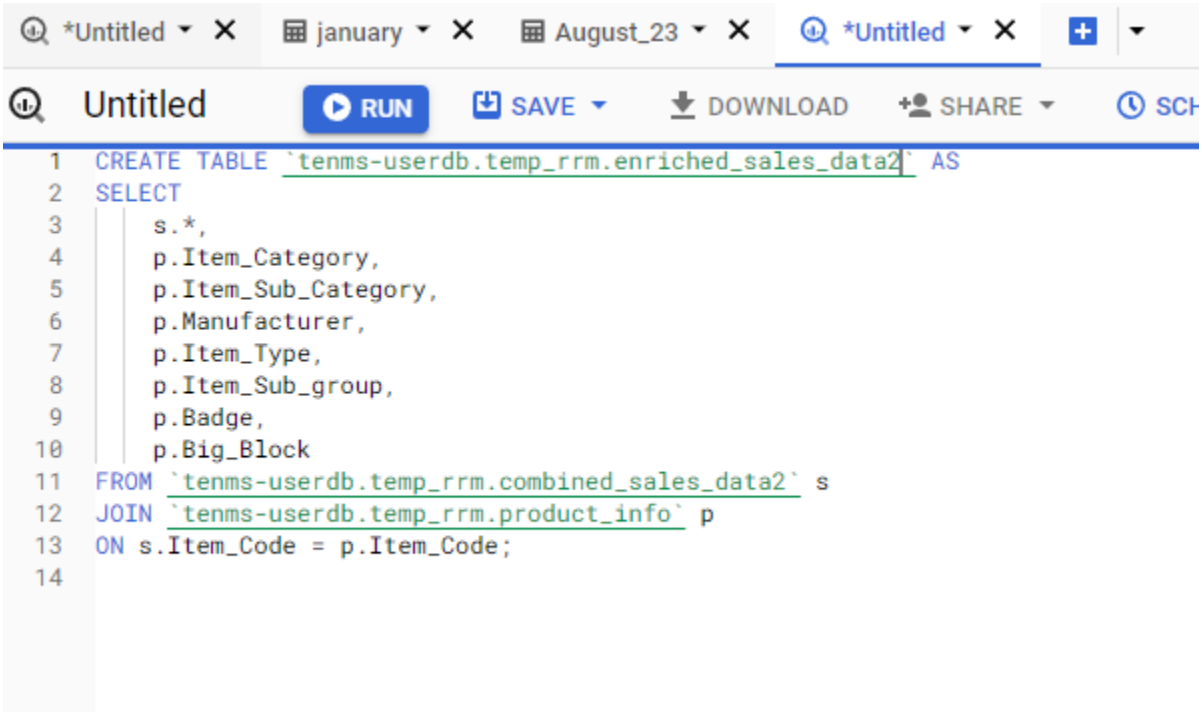
Second part of the assessment required more visualization and calculation knowledge.

Step 1: Data cleaning, preprocessing and uploading on BQ

In this section I had clean all the data and checked all the data from 6 months sale, because the name was more than 600k. I uploaded them on BQ, unioned into one table and assigned there months.

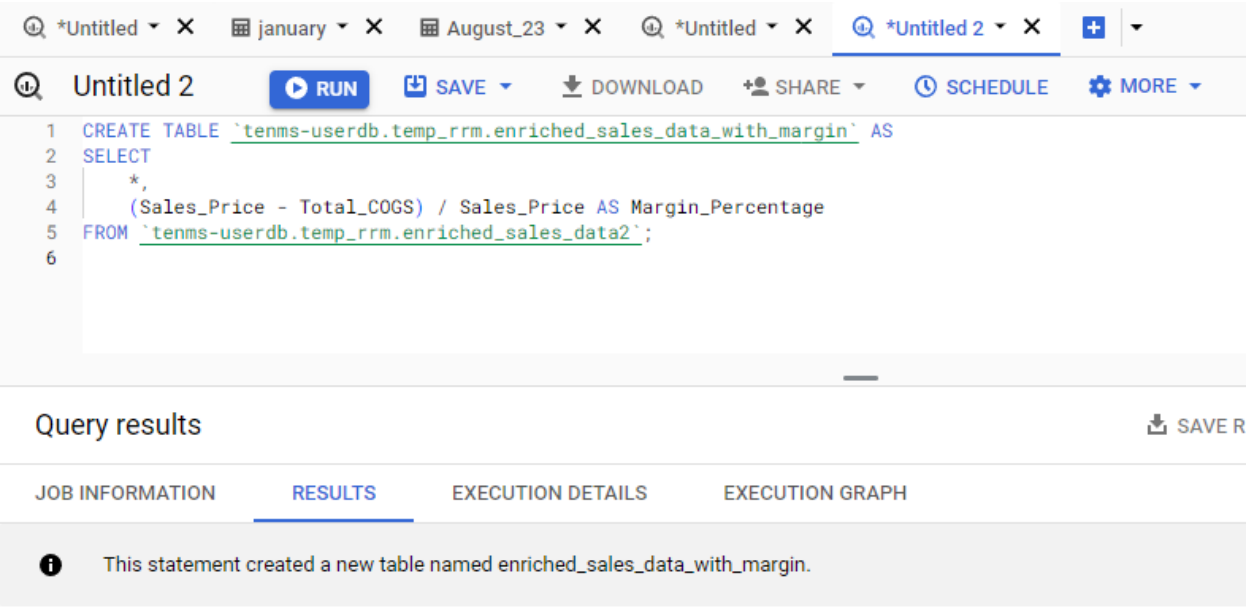
Step 2: Enriched Sale data with product info:

In this part I made a table called enriched sale data where I joined the combined table I created before with product info table on their Item code



Step 3: Margin calculation:

For calculating the margin percentage, I used a calculation and then stored everything in a table for final table creation,

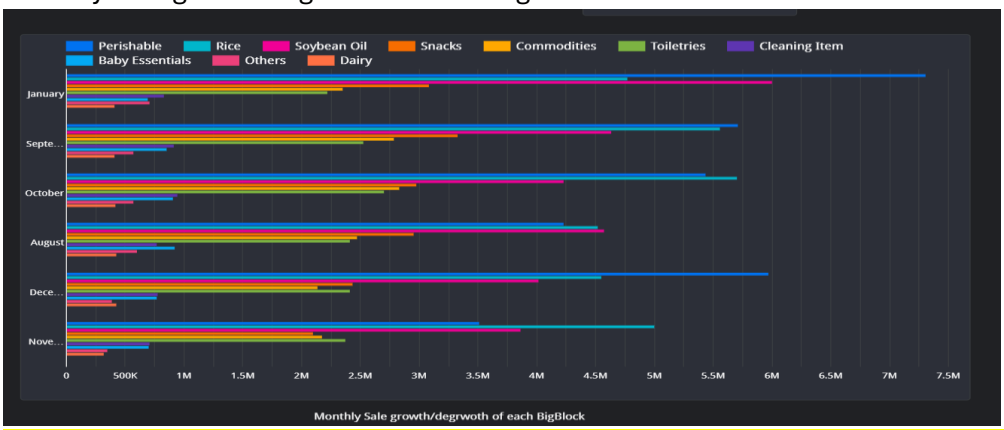


Step 4: Dashboard:

Link: https://lookerstudio.google.com/reporting/78ff8ce2-cb4d-49e3-a189-68d338fdd369/page/p_izu8no7ifd/edit , 2nd page

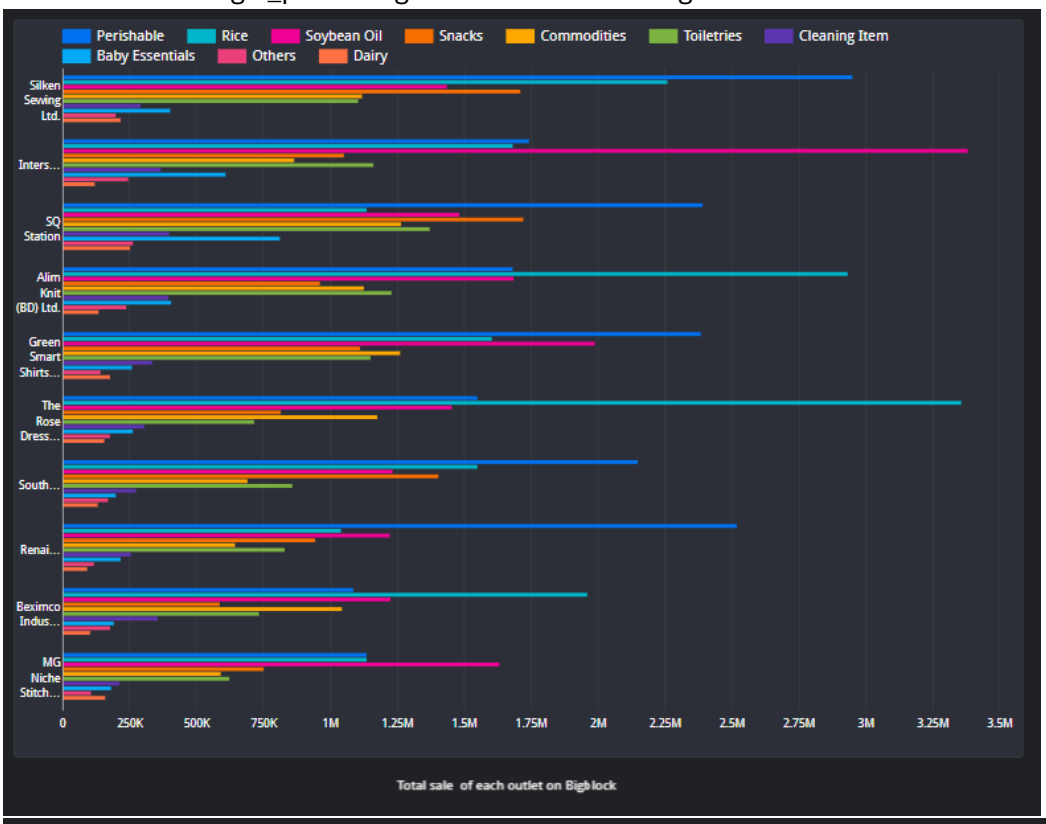
This is the main section of the report where I landed on some decisions:

1. Monthly Sale growth/degrwoth of each BigBlock:



According to the visualization we can see that in January Perishable Bigblock has the highest number of sales and in November Dairy BigBlock has the lowest amount of sale. This report is fully interactive.

2. Total sale and Margin_percantage of each outlet on Bigblock:



	Big_Block	Outlet	Total_Sales_Amount	Margin_Percentage
1.	Soybean Oil	Interstoff Apparels Ltd.	3,381,426	-710.79
2.	Rice	The Rose Dresses Limited	3,355,909.56	-58,804.84
3.	Perishable	Dekko Designs Limited	3,330,576.5	-2,024.46
4.	Perishable	Silken Sewing Ltd.	2,951,993.22	-2,670.71
5.	Rice	Alim Knit (BD) Ltd.	2,932,933.44	-46,614.31
6.	Perishable	Renaissance Apparels Ltd.	2,519,124.48	-4,543.06
7.	Perishable	SQ Station	2,391,653.22	-13,628.43
8.	Perishable	Green Smart Shirts Ltd.	2,383,017.28	-6,583.11
9.	Rice	Silken Sewing Ltd.	2,259,155.62	-35,432.94
10.	Perishable	Southern Garments Ltd.	2,150,922	-134.58
11.	Soybean Oil	Green Smart Shirts Ltd.	1,987,348.5	-147.6

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Total sale and Margin_percantage of each outlet on Bigblock

From this report we can see Intersoft apparels has highest amount off sale from all the outlets . This table can be switched to ascending/descending order for both total sales amount and margin percentage

3. Top and Least 3 items by margin percentage:

I found this very important for business perspective as we can see fruits sub category and inside fruits sub category, Apple, Orange and Dates Tunisia has the highest margin percentage

And in Rice and Egg Half Bowel Rice, BR-28 Rice and Local Egg FC has the lowest Margin percentage

All the infographics in this dashboard are interactive, and since my report has few more columns, there are a lot other analytical scopes are there from the data that has been provided to me, but I only performed those analysis that has been asked in the assessment questions.