

Queries for questions from the business stakeholder:

1. What are the top 5 brands by receipts scanned for most recent month?

NOTE: I am considering 2021-01-01 as the latest month for this query.

```
1 WITH recent_month AS (  
2     SELECT  
3         '2021-01-01'::timestamp AS recent_month  
4 )  
5 SELECT  
6     brands.brandCode AS brandName,  
7     COUNT(DISTINCT receipts.receiptId) AS receipts_scanned,  
8     DENSE_RANK() OVER (ORDER BY COUNT(DISTINCT receipts.receiptId) DESC) AS rank  
9 FROM Fetchrewards.receipts  
10 JOIN Fetchrewards.items ON receipts.receiptId = items.receiptId  
11 JOIN Fetchrewards.brands ON items.brandCode = brands.brandCode  
12 CROSS JOIN recent_month  
13 WHERE receipts.dateScanned >= recent_month.recent_month -- For recent month  
14     AND receipts.dateScanned < recent_month.recent_month + INTERVAL '1 month'  
15     AND brands.brandCode IS NOT NULL -- Exclude NULL brandCode  
16     AND brands.brandCode != '' -- Exclude empty brandCode  
17     AND brands.brandCode != 'NaN' -- Exclude 'NaN' brandCode  
18 GROUP BY brands.brandCode  
19 ORDER BY rank  
20 LIMIT 5;
```

Data Output Messages Notifications

	brandname character varying (255)	receipts_scanned bigint	rank bigint
1	KLEENEX	17	1
2	PEPSI	16	2
3	KNORR	15	3
4	KRAFT	14	4

- How does the ranking of the top 5 brands by receipts scanned for the recent month compared to the ranking for the previous month?

NOTE: I am considering 2021-01-01 as the latest month for this query

Query Query History

```
33 JOIN Fetchrewards.items ON receipts.receiptid = items.receiptid
34 JOIN Fetchrewards.brands ON items.brandCode = brands.brandCode
35 CROSS JOIN recent_month
36 WHERE receipts.dateScanned <= recent_month.recent_month -- For previous month
37       AND receipts.dateScanned > recent_month.recent_month - INTERVAL '1 month'
38       AND brands.brandCode IS NOT NULL -- Exclude NULL brandCode
39       AND brands.brandCode != '' -- Exclude empty brandCode
40       AND brands.brandCode != 'NaN' -- Exclude 'NaN' brandCode
41 GROUP BY brands.brandCode
42 ORDER BY rank
43
44 )
45 -- Final query to left join recent_ranking and previous_ranking
46 SELECT *
47 FROM recent_ranking
48 LEFT JOIN previous_ranking
49     ON recent_ranking.brandName = previous_ranking.brandName;
50
51
52
```

Data Output Messages Notifications



	brandname character varying (255)	receipts_scanned bigint	rank bigint	brandname character varying (255)	receipts_scanned bigint	rank bigint
1	KRAFT	14	4	[null]	[null]	[null]
2	KNORR	15	3	[null]	[null]	[null]
3	KLEENEX	17	1	[null]	[null]	[null]
4	PEPSI	16	2	[null]	[null]	[null]
5	RICE-A-RONI	12	5	[null]	[null]	[null]

3. When considering average spend from receipts with 'rewardsReceiptStatus' of 'Accepted' or 'Rejected', which is greater?

[Query](#) [Query History](#)

```
1  SELECT rewardsReceiptStatus,
2         AVG(totalSpent) AS average_spend
3  FROM Fetchrewards.receipts
4  --Considered "FINISHED" as completed
5  WHERE rewardsReceiptStatus IN ('FINISHED', 'REJECTED')
6  GROUP BY rewardsReceiptStatus;
```

[Data Output](#) [Messages](#) [Notifications](#)

	rewardsreceiptstatus character varying (255)	average_spend numeric
1	REJECTED	27.5114035087719298
2	FINISHED	59.8252439024390244

4. When considering total number of items purchased from receipts with 'rewardsReceiptStatus' of 'Accepted' or 'Rejected', which is greater?

```
1  SELECT receipts.rewardsReceiptStatus,  
2         SUM(purchasedItemCount) AS total_items  
3  FROM Fetchrewards.receipts  
4  JOIN Fetchrewards.items ON receipts.receiptId = items.receiptId  
5  WHERE receipts.rewardsReceiptStatus IN ('FINISHED', 'REJECTED')  
6  GROUP BY receipts.rewardsReceiptStatus;
```

Data Output Messages Notifications

	rewardsreceiptstatus character varying (255)	total_items numeric
1	REJECTED	232.00
2	FINISHED	746720.00

5. Which brand has the most spend among users who were created within the past 6 months?

```
1 SELECT * FROM (
2     SELECT
3         items.brandCode,
4         SUM(receipts.totalSpent) as summedTotalSpent
5     FROM Fetchrewards.receipts
6     INNER JOIN Fetchrewards.items ON receipts.receiptId = items.receiptId
7     WHERE receipts.userId IN (
8         SELECT userId
9         FROM Fetchrewards.users
10        WHERE createdAt > (
11            SELECT MAX(createdAt) - INTERVAL '6 months'
12            FROM Fetchrewards.users
13        )
14    )
15    AND items.brandCode != 'NaN' -- Excluding NaN values
16    AND items.brandCode IS NOT NULL -- Excluding NULL values
17    GROUP BY items.brandCode
18 )
19 ORDER BY summedTotalSpent DESC
20 LIMIT 3;
```

Data Output Messages Notifications

	brandcode character varying (255)	summedtotalspent numeric
1	BEN AND JERRYS	197337.68
2	KROGER	189181.47
3	HY-VEE	178692.88

6. Which brand has the most transactions among users who were created within the past 6 months?

```
1  SELECT * FROM (  
2      SELECT  
3          items.brandCode,  
4          COUNT(items.receiptId) as transaction_count  
5      FROM Fetchrewards.receipts  
6      INNER JOIN Fetchrewards.items ON receipts.receiptId = items.receiptId  
7      WHERE receipts.userId IN (  
8          SELECT userId  
9          FROM Fetchrewards.users  
10         WHERE createdDate > (  
11             SELECT MAX(createdDate) - INTERVAL '6 months'  
12             FROM Fetchrewards.users  
13         )  
14     )  
15     AND items.brandCode != 'NaN' -- Excluding NaN values  
16     AND items.brandCode IS NOT NULL -- Excluding NULL values  
17     GROUP BY items.brandCode  
18 )  
19 ORDER BY transaction_count DESC  
20 LIMIT 3;  
21
```

Data Output Messages Notifications



	brandcode character varying (255)	transaction_count bigint
1	HY-VEE	291
2	BEN AND JERRYS	100
3	PEPSI	74

