Second Task: Generate a query that answers a predetermined business question.

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

```
SELECT "NAME", receipts_scanned
FROM (
  SELECT b."NAME",
         (SELECT COUNT(*)
          FROM "trans" AS t, "item" AS i
          WHERE b."BRANDCODE" = i."brandCode"
                AND i."OID" = t."OID"
                AND t."DATESCANNED" >= '2021-01-25 00:00:00-05') AS
receipts_scanned
  FROM "brands" AS b
) AS subquery
WHERE receipts_scanned IS NOT NULL
AND receipts_scanned > 0
ORDER BY receipts_scanned DESC
LIMIT 5;
```

(Here we set the date at t." DATESCANNED" is '2021-01-25 00:00:00-05'. According to the question, the date should be the most recent month. By running the code above, since receipts scanned is set to be greater than 0 and not null, the code can output 5 brands only when the time is set to 2021-01-25 00:00:00-05.)

Result:

NAME	receipts scanned
Kraft	37
Jell-O	14
V8	9
Pepperidge Farm	9
Velveeta	8

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

```
SELECT "NAME", receipts_scanned
FROM (
  SELECT b."NAME",
         (SELECT COUNT(*)
          FROM "trans" AS t, "item" AS i
          WHERE b."BRANDCODE" = i."brandCode"
                AND i."OID" = t."OID"
                AND t."DATESCANNED" >= '2020-12-25 00:00:00-05'
                  AND t."DATESCANNED" < '2021-01-25 00:00:00-05')
AS receipts_scanned
  FROM "brands" AS b
) AS subquery
WHERE receipts_scanned IS NOT NULL
AND receipts_scanned > 0
ORDER BY receipts_scanned DESC
LIMIT 5;
```

(This question wants to output the top 5 brands for the previous month. Based on the setting in the previous question, we set the date here between '2020-12-25 00:00:00-05' and '2021-01-25 00:00:00-05')

Result:

NAME	receipts scanned
Kleenex	88
Pepsi	85
Doritos	77
KNORR	75
Tostitos	23

-- What is greater when considering average spend from receipts with 'rewardsReceiptStatus' of 'FLAGGED' or 'REJECTED'?

```sql
SELECT "rewardsReceiptStatus" AS status, AVG("totalSpent") AS avgSpend
FROM trans
WHERE "rewardsReceiptStatus" IN ('FINISHED', 'REJECTED')
GROUP BY "rewardsReceiptStatus"
```
Result:

status	avgSpend
REJECTED	23.3260563380281690
FINISHED	80.8543050193050193

-- What is greater when considering the total number of items purchased from receipts with 'rewardsReceiptStatus' of 'FLAGGED' or 'REJECTED'?

```sql
SELECT "rewardsReceiptStatus" AS status, SUM("purchasedItemCount") AS totalItemPurchased
FROM trans
WHERE "rewardsReceiptStatus" IN ('FINISHED', 'REJECTED')
GROUP BY "rewardsReceiptStatus";
```

Result:

status	totalItemPurchased
REJECTED	173
FINISHED	8184