**Second: Write a query that directly answers a predetermined question from a business stakeholder**

**i:** What are the top 5 brands by receipts scanned for most recent month?

SELECT B.Brand\_ID

FROM transactions T

LEFT OUTER JOIN brand B ON T.Brand\_ID = B.Brand\_ID

LEFT OUTER JOIN receipts R ON T.Receipt\_ID = R.Receipt\_ID

WHERE MONTH(Date\_scanned) = (SELECT MONTH(MAX(Date\_scanned))

FROM receipts)

GROUP BY B.Brand\_ID

ORDER BY SUM(Total\_spent) DESC;

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

SELECT B.Brand\_ID

FROM transactions T

LEFT OUTER JOIN brand B ON T.Brand\_ID = B.Brand\_ID

LEFT OUTER JOIN receipts R ON T.Receipt\_ID = R.Receipt\_ID

WHERE MONTH(Date\_scanned) = (SELECT DISTINCT MONTH(Date\_scanned)

FROM receipts

ORDER BY YEAR(Date\_scanned) DESC

LIMIT 2

OFFSET 1)

GROUP BY B.Brand\_ID

ORDER BY SUM(Total\_spent) DESC;

**iii:** When considering average spend from receipts with 'rewardsReceiptStatus’ of ‘Accepted’ or ‘Rejected’, which is greater?

SELECT AVG(Total\_spent)

FROM receipts

WHERE RewardsReceiptStatus = 'Accepted';

SELECT AVG(Total\_spent)

FROM receipts

WHERE RewardsReceiptStatus = 'Rejected';

**iv:** When considering total number of items purchased from receipts with 'rewardsReceiptStatus’ of ‘Accepted’ or ‘Rejected’, which is greater?

SELECT COUNT(PurchasedItemCount)

FROM receipts

WHERE RewardsReceiptStatus = 'Accepted';

SELECT COUNT(PurchasedItemCount)

FROM receipts

WHERE RewardsReceiptStatus = 'Rejected';

**v:** Which brand has the most spend among users who were created within the past 6 months?

SELECT P.Brand\_ID

FROM transactions T

LEFT JOIN product P ON P.Brand\_ID = T.Brand\_ID

LEFT JOIN receipts R ON T.Receipt\_ID = R.Receipt\_ID

WHERE R.Date\_scanned BETWEEN MAX(R.Date\_scanned) AND DATE\_SUB(MAX(R.Date\_scanned), INTERVAL -6 MONTH)

GROUP BY B.Brand\_ID,P.Barcode

ORDER BY SUM(P.Final\_price)

LIMIT 5

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

SELECT P.Brand\_ID

FROM transactions T

LEFT JOIN product P ON P.Brand\_ID = T.Brand\_ID

LEFT JOIN receipts R ON T.Receipt\_ID = R.Receipt\_ID

WHERE R.Date\_scanned BETWEEN MAX(R.Date\_scanned) AND DATE\_SUB(MAX(R.Date\_scanned), INTERVAL -6 MONTH)

GROUP BY P.Brand\_ID

ORDER BY COUNT(R.Receipt\_ID)

LIMIT 5