SQL Queries

Q1: What are the top 5 brands by receipts scanned for the most recent month?

Q2: How does the ranking of the top 5 brands by receipts scanned for the recent month compare to the ranking for the previous month?

```sql
WITH temp AS
(SELECT DISTINCT b.name, r.dateScanned, RANK () OVER(ORDER BY
COUNT(b.brand_id) DESC) AS 'ranking'
FROM receipts r
LEFT JOIN Transaction t
ON r.receipts_id = t.receipts_id
LEFT JOIN Brand b
ON t.barcode = b.barcode
GROUP BY b.brand_id, r.dateScanned
HAVING MONTH(dateScanned) = MONTH(CURDATE() - INTERVAL 1 MONTH))
, temp2 AS
(SELECT DISTINCT b.name, r.dateScanned, RANK () OVER(ORDER BY
COUNT(b.brand_id) DESC) AS 'ranking'
FROM receipts r
LEFT JOIN Transaction t
ON r.receipts_id = t.receipts_id
LEFT JOIN Brand b
On t.barcode = b.barcode
GROUP BY b.brand_id, r.dateScanned
HAVING MONTH(dateScanned) = MONTH(CURDATE() - INTERVAL 2 MONTH))
SELECT DISTINCT temp.name AS 'Top5BrandsRecentMonth', temp2.name AS
'Top5BrandsPreviousMonth', temp.ranking
FROM temp, temp2
WHERE temp.ranking <= 5
ORDER BY temp.ranking
```

Q3: When considering *average spending* from receipts with 'rewardsReceiptStatus' of 'Accepted' or 'Rejected', which is greater?

Q4: When considering the *total number of items purchased* from receipts with 'rewardsReceiptStatus' of 'Accepted' or 'Rejected', which is greater?

```
WITH temp AS
(SELECT DISTINCT AVG(r.totalSpent) AS 'AverageSpending', r.rewardsReceiptStatus AS
'ReceiptStatus'
FROM receipts r
GROUP BY r.rewardsReceiptStatus)
, temp2 AS
(SELECT DISTINCT SUM(r.purchasedItemCount) AS 'TotalNumberOfItemPurchased',
r.rewardsReceiptStatus AS 'ReceiptStatus'
FROM receipts r
GROUP BY r.rewardsReceiptStatus)
SELECT DISTINCT temp.ReceiptStatus, temp.AverageSpending,
temp2.TotalNumberOfItemPurchased
FROM temp
LEFT JOIN temp2
ON temp.ReceiptStatus = temp2.ReceiptStatus
```

Q5: Which brand has the most *spending* among users who were created within the past 6 months?

```
WITH temp AS
(SELECT DISTINCT u.userId, b.brand_id, SUM(r.totalSpent) AS 'TotalSpent'
FROM Users u
LEFT JOIN receipts r
ON u.userId = r.userId
LEFT JOIN Transaction t
ON r.receipts_id = t.receipts_id
LEFT JOIN Brand b
ON t.barcode = b.barcode
GROUP BY b.brand_id, u.userId)
SELECT b.name, SUM(temp.TotalSpent) AS 'TotalSpent'
FROM Brand b2
LEFT JOIN temp
ON b2.brand_id - temp.brand_id
WHERE temp.userId IN
        (SELECT userId
        FROM users
        WHERE DATEDIFF(CURDATE(), createDate) <= 300)
GROUP BY b2.name
ORDER BY SUM(temp.TotalSpent) DESC LIMIT 1
```


Q6: Which brand has the most *transactions* among users who were created within the past 6 months?

```
WITH temp AS
(SELECT DISTINCT u.userId, b.brand_id, COUNT(r.receipts_id) AS 'TotalTransaction'
FROM Users u
LEFT JOIN receipts r
ON u.userId = r.userId
LEFT JOIN Transaction t
ON r.receipts_id = t.receipts_id
LEFT JOIN Brands
ON t.barcode = b.barcode
GROUP BY b.brand_id, u.userId)
SELECT b.name, COUNT(temp.TotalTransaction) AS 'TotalTransaction'
FROM Brand b2
LEFT JOIN temp
ON b2.brand_id - temp.brand_id
WHERE temp.userId IN
        (SELECT userId
        FROM users
        WHERE DATEDIFF(CURDATE(), createDate) <= 300)
GROUP BY b.name
ORDER BY COUNT(temp.TotalTransaction) DESC LIMIT 1
```