

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

```
Select A.brandcode, count(A.brandcode) as count_occ
from rewardsreceiptitemlist A
left join receipt B
on A.receipt_id = B.receipt_id
where month(B.datescanned) in (select month(max(datescanned)) from receipt)
group by A.brandcode
order by count(A.brandcode) desc
limit 5
```

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

With recent_top as (

```
Select A.brandcode, count(A.brandcode) as count_occ,
row_number over(order by count(A.brandcode) desc) as rank
from rewardsreceiptitemlist A
left join receipt B
on A.receipt_id = B.receipt_id
where month(B.datescanned) in (select month(max(datescanned)) from receipt)
group by A.brandcode
order by count(A.brandcode) desc),
```

previous_top as (

```
Select A.brandcode, count(A.brandcode) as count_occ,
row_number over(order by count(A.brandcode) desc) as rank
from rewardsreceiptitemlist A
left join receipt B
on A.receipt_id = B.receipt_id
where month(B.datescanned) in (select month(max(datescanned)) from receipt)
order by datescanned desc offset 1 limit 1)
group by A.brandcode
order by count(A.brandcode) desc),
```

output as (

```
Select A.*, B.rank as rank_older_month, A.rank - B.rank as rank_diff
from recent_top A
Left join previous_top B on
A.brandcode=B.brandcode) select * from output
```

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

```
Select rewardsreceiptstatus, avg(totalspend) as average
from receipts
where rewardsreceiptstatus in ("Accepted","Rejected")
group by rewardsreceiptstatus
order by avg(totalspend) desc;
```

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

```
Select C.rewardsreceiptstatus, sum(quantity) as total_qty
from (
    Select A.receipt_id, A.rewardsreceiptstatus, B.quantitypurchased from
    receipt A
    Left join rewardsreceiptitemlist B
    on A.receipt_id = B.receipt_id
    where rewardsreceiptstatus in ("Accepted","Rejected")
) as C
group by 1
order by 2 desc;
```

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

```
Select B.brandname, sum(A.totalspent) as total_spend
from receipts A
Left join rewardsreceiptitemlist B
on a.receipt_id = b.receipt_id
where a.user_id in (
    Select distinct user id
    from users
    where createdate > dateadd( month,-6,(select max(date)
    from users))
) and b.brandcode is not null
group by 1
order by 2 desc limit 1
```

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

```
Select B.brandname, count(A.receipt_id) as total_spend
from receipts A
Left join rewardsreceiptitemlist B
on a.receipt_id = b.receipt_id
where a.user_id in (
                    Select distinct user id
                    from users
                    where createdate > dateadd( month,-6,(select max(date)
                    from users))
) and b.brandcode is not null
group by 1
order by 2 desc limit 1
```