

SQL Queries

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

With RecentReceipts as(

```
select receipt_id, dateScanned
from receipts
where datepart(month, dateScanned) = (
    select max(datepart(month, dateScanned))
    from receipts
)
and datepart(year, dateScanned) = (
    select max(datepart(year, dateScanned))
    from receipts
)
),
```

```
BrandReceipts as (
    select
        rr.receipt_id,
        i.brand_id
    from RecentReceipts rr
    inner join Transactions t on rr.receipt_id = t.receipt_id
    inner join Items i on t.barcode = i.barcode
)
```

```
select top 5
    b.name AS BrandName,
    count(br.receipt_id) as ReceiptCount
from BrandReceipts br
inner join Brands b on br.brand_id = b.brand_id
group by b.name
order by ReceiptCount desc;
```

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 cte as(

```
select b.name as brandname,
dateadd(month,datediff(month,0,r.dateScanned),0) as sm
```

```

count(r.receipt_id) as rc
dense_rank()over(partition by dateadd(month,datediff(month,0,r.dateScanned),0) order by
count(r.receipt_id) desc ) as br
from brand b
join transaction t on b.brand_id=t.brand_id
join receipts r on r.receipt_id=t.receipt_id
where dateadd(month,datediff(month,0,r.dateScanned),0) in (dateadd(month,datediff(month,0,getdate()),0),
dateadd(month,datediff(month,0,getdate())-1,0)
)

```

```

Group by b.name, dateadd(month,datediff(month,0,r.dateScanned),0)

```

```

)

```

```

select brandname, max(case when sm=dateadd(month,datediff(month,0,getdate()),0) then br end) as
currentmonthrank,
max(case when sm=dateadd(month,datediff(month,0,getdate())-1,0) then br end) as premonthrank
from cte
where br<=5
Group by brandname;

```

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

There was no rewardsReceiptStatus as 'Accepted' in the table. So I'm considering FINISHED as 'Accepted'

With cte as(

```

Select avg(case when rewardsReceiptStatus='FINISHED' then totalSpent Else Null end) as
avgSpentFinished,
avg(case when rewardsReceiptStatus='REJECTED' then totalSpent Else Null end) as avgSpentRejected
from receipts)

```

```

Select case when avgSpentFinished>avgSpentRejected then 'AvgSpentAcceptGreater' else
'AvgSpentRejectGreater' end as output, avgSpentFinished,avgSpentRejected
From cte;

```

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

There was no rewardsReceiptStatus as 'Accepted' in the table. So I'm considering FINISHED as 'Accepted'

With cte(

```
select sum(case when rewardsReceiptStatus='FINISHED' then purchasedItemCount else 0 end ) as  
itempurchasefinished,  
sum(case when rewardsReceiptStatus='REJECTED' then purchasedItemCount else 0 end ) as  
itempurchaserejected  
from receipts  
)
```

```
Select case when itempurchasefinished>itempurchaserejected then 'itempurchasefinishedgreater' else  
'itempurchaserejectedgreater' end as output, itempurchasefinished,itempurchaserejected  
From cte;
```

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

```
select top 1 b.brand_name,sum(r.totalSpent) as TotalSpend  
from user u  
inner join transaction t on u.user_id=t.user_id  
inner join receipts r on t.receipt_id = r. Receipt_id  
inner join brand b on t.brand_id=b.brand_id  
Where u.createdDate>=dateadd(month,-6,getdate())  
Group by b.name  
Order by TotalSpend desc;
```

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

```
select top 1 b.name as brandname,  
count(t.receipt_id) as numoftrans  
From user u  
Inner join transaction t on u.user_id=t.user_id  
inner join brand b on t.brand_id=b.brand_id  
Where u.createdDate>=dateadd(month,-6,getdate())  
Group by b.name  
order by numoftrans desc;
```

