

## FINANCE ANALYSIS CHALLENGE

--> What are the names of all the customers who live in New York?

```
SELECT FIRSTNAME, LASTNAME
FROM CUSTOMERS_TBL
WHERE CITY = 'NEW YORK'
GROUP BY FIRSTNAME, LASTNAME
```

--> What is the total number of accounts in the Accounts table?

```
SELECT COUNT(ACCOUNTID) AS TOTAL_ACCOUNTS FROM ACCOUNTS
```

--> What is the total balance of all checking accounts?

```
SELECT SUM(BALANCE) AS TOTAL_BALANCE
FROM ACCOUNTS
WHERE ACCOUNTTYPE = 'CHECKING'
```

--> What is the total balance of all accounts associated with customers who live in Los Angeles?

```
SELECT SUM(A.BALANCE) AS TOTAL_BALANCE
FROM ACCOUNTS AS A
JOIN CUSTOMERS_TBL AS C
ON A.CUSTOMERID = C.CUSTOMERID
WHERE C.CITY = 'LOS ANGELES'
```

--> Which branch has the highest average account balance?

```
SELECT TOP 1 B.BRANCHID, B.BRANCHNAME, ROUND(AVG(A.BALANCE),0.1) AS AVG_BALANCE
FROM BRANCHES AS B
JOIN ACCOUNTS AS A
ON B.BRANCHID = A.BRANCHID
GROUP BY B.BRANCHID, B.BRANCHNAME
ORDER BY AVG_BALANCE DESC
```

--> Which customer has the highest current account balance in their accounts?

```
SELECT C.CUSTOMERID, C.FIRSTNAME, C.LASTNAME, SUM(T.AMOUNT) AS TOTAL_BALANCE
FROM TRANSACTIONS AS T
JOIN ACCOUNTS AS A
ON A.ACCOUNTID = T.ACCOUNTID
JOIN CUSTOMERS_TBL AS C
ON C.CUSTOMERID = A.CUSTOMERID
GROUP BY C.CUSTOMERID, C.FIRSTNAME, C.LASTNAME
ORDER BY TOTAL_BALANCE DESC
```

--> Which customer has made the most transactions in the Transactions table?

```
WITH CTE1 AS
(SELECT C.CUSTOMERID, C.FIRSTNAME, C.LASTNAME, COUNT(T.ACCOUNTID) AS TOTAL_TRANSACTIONS,DENSE_RANK() OVER(ORDER BY COUNT(T.ACCOUNTID) DESC) AS RK
FROM TRANSACTIONS AS T
JOIN ACCOUNTS AS A
ON T.ACCOUNTID = A.ACCOUNTID
JOIN CUSTOMERS_TBL AS C
ON A.CUSTOMERID = C.CUSTOMERID
GROUP BY C.CUSTOMERID, C.FIRSTNAME, C.LASTNAME )
SELECT * FROM CTE1 WHERE RK=1
```

--> Which branch has the highest total balance across all of its accounts?

```
SELECT TOP 1 B.BRANCHID, B.BRANCHNAME, SUM(A.BALANCE) AS TOTAL_BALANCE
FROM BRANCHES AS B
JOIN ACCOUNTS AS A
ON B.BRANCHID = A.BRANCHID
GROUP BY B.BRANCHID, B.BRANCHNAME
ORDER BY TOTAL_BALANCE DESC
```

--> Which customer has the highest total balance across all of their accounts, including savings and checking accounts?

```
SELECT TOP 1 C.CUSTOMERID, C.FIRSTNAME, C.LASTNAME,SUM(A.BALANCE) AS TOTAL_BALANCE
FROM CUSTOMERS_TBL AS C
JOIN ACCOUNTS AS A
ON C.CUSTOMERID = A.CUSTOMERID
GROUP BY C.CUSTOMERID, C.FIRSTNAME, C.LASTNAME
ORDER BY TOTAL_BALANCE DESC
```

--> Which branch has the highest number of transactions in the Transactions table?

```
SELECT * FROM (
SELECT B.BRANCHID, B.BRANCHNAME, COUNT(A.ACCOUNTID) AS TOTAL_TRANSACTIONS, DENSE_RANK() OVER(ORDER BY COUNT(A.ACCOUNTID)DESC) AS RANKING
FROM BRANCHES AS B
JOIN ACCOUNTS AS A
ON A.BRANCHID = B.BRANCHID
JOIN TRANSACTIONS AS T
ON A.ACCOUNTID = T.ACCOUNTID
GROUP BY B.BRANCHID, B.BRANCHNAME ) AS SUBQUERY
WHERE RANKING =1
```