

Finance Analysis: SQL Challenge

Tables Used:

Customers

CustomerID	FirstName	LastName	City	State
1	John	Doe	New York	NY
2	Jane	Doe	New York	NY
3	Bob	Smith	San Francisco	CA
4	Alice	Johnson	San Francisco	CA
5	Michael	Lee	Los Angeles	CA
6	Jennifer	Wang	Los Angeles	CA

Accounts

AccountID	CustomerID	BranchID	AccountType	Balance
1	1	5	Checking	1000
2	1	5	Savings	5000
3	2	1	Checking	2500
4	2	1	Savings	####
5	3	2	Checking	7500
6	3	2	Savings	####
7	4	8	Checking	5000
8	4	8	Savings	####
9	5	14	Checking	####
10	5	14	Savings	####
11	6	2	Checking	5000
12	6	2	Savings	####
13	1	5	Credit Card	-500
14	2	1	Credit Card	-1000
15	3	2	Credit Card	-2000

Transactions

TransactionID	AccountID	TransactionDate	Amount
1	1	2022-01-01	-500
2	1	2022-01-02	-250
3	2	2022-01-03	1000
4	3	2022-01-04	-1000
5	3	2022-01-05	500
6	4	2022-01-06	1000
7	4	2022-01-07	-500
8	5	2022-01-08	-2500
9	6	2022-01-09	500
10	6	2022-01-10	-1000
11	7	2022-01-11	-500
12	7	2022-01-12	-250
13	8	2022-01-13	1000
14	8	2022-01-14	-1000
15	9	2022-01-15	500

Branches

BranchID	BranchName	City	State
1	Main	New York	NY
2	Downtown	San Francisco	CA
3	West LA	Los Angeles	CA
4	East LA	Los Angeles	CA
5	Uptown	New York	NY
6	Financial District	San Francisco	CA
7	Midtown	New York	NY
8	South Bay	San Francisco	CA
9	Downtown	Los Angeles	CA
10	Chinatown	New York	NY
11	Marina	San Francisco	CA
12	Beverly Hills	Los Angeles	CA
13	Brooklyn	New York	NY
14	North Beach	San Francisco	CA
15	Pasadena	Los Angeles	CA

Q1. What are the names of all the customers who live in New York?

Query :

Query SQL •

```
1 select FirstName, LastName from Customers  
2 where city = 'New York' ;
```

Result :

FirstName	LastName
John	Doe
Jane	Doe

Q2. What is the total number of accounts in the Accounts table?

Query :

Query SQL •

```
1 select count(AccountID) from Accounts;
```

Result :

count(AccountID)
15

Q3. What is the total balance of all checking accounts?

Query :

Query SQL

```
1 select sum(Balance) from Accounts  
2 where AccountType = 'Checking';
```

Result :

sum(Balance)
31000.00

Q4. What is the total balance of all accounts associated with customers who live in Los Angeles?

Query :

Query SQL •

```
1 select sum(Accounts.Balance) as Total_Balance
2 from Accounts
3 Join Customers on Customers.CustomerID = Accounts.CustomerID
4 where city = 'Los Angeles';
5
```

Result :

Total_Balance
75000.00

Q5. Which branch has the highest average account balance?

Query :

Query SQL

```
1 select BranchName, avg(balance) as highest_avg_balance
2 from Branches b join Accounts a
3 on a.BranchID = b.BranchID
4 group by BranchName
5 order by highest_avg_balance
6 limit 1;
```

Result :

BranchName	highest_avg_balance
Uptown	1833.333333

Q6. Which customer has the highest current balance in their accounts?

Query :

Query SQL •

```
1 select concat(FirstName, ' ', LastName) as Customer_Name, sum(balance) as  
  Current_balance  
2 from Customers c join Accounts a  
3 on c.CustomerID = a.CustomerID  
4 group by Customer_Name  
5 order by Current_balance desc  
6 Limit 1;  
7
```

Result :

Customer_Name	Current_balance
Michael Lee	60000.00

Q7. Which customer has made the most transactions in the Transactions table?

Query :

Query SQL •

```
1 select concat.FirstName, ' ', LastName as Customer_Name, count(TransactionID) as
   Total_transactions
2 From Accounts as a
3 join Transactions using (AccountID)
4 Join Customers using (CustomerID)
5 Group by Customer_Name
6 Order by Total_transactions Desc
7 limit 1;
```

Result :

Customer_Name	Total_transactions
Alice Johnson	4

Q8. Which branch has the highest total balance across all of its accounts?

Query :

Query SQL ●

```
1 select BranchName, sum(Balance) as Total_Balance  
2 From Accounts as a  
3 join Branches using (BranchID)  
4 Group by BranchName  
5 Order by Total_Balance Desc  
6 limit 1;
```

Result :

BranchName	Total_Balance
North Beach	60000.00

Q9. Which customer has the highest total balance across all of their accounts, including savings and checking accounts?

Query :

Query SQL •

```
1 select concat(FirstName, ' ', LastName) as Customer_Name, sum(Balance) as
   Total_Balance
2 From Accounts as a
3 join Customers using (CustomerID)
4 Group by Customer_Name
5 Order by Total_Balance Desc
6 limit 1;
```

Result :

Customer_Name	Total_Balance
Michael Lee	60000.00

Q10. Which branch has the highest number of transactions in the Transactions table?

Query :

Query SQL

```
1 select BranchName, count(TransactionID) as Total_transactions  
2 From Transactions as t  
3 join Accounts using (AccountID)  
4 Join Branches using (BranchID)  
5 Group by BranchName  
6 Order by Total_transactions Desc  
7 limit 1;
```

Result :

BranchName	Total_transactions
Main	4