



SQL CASE STUDY

FINANCE ANALYSIS (CHALLENGE-4)

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OVERVIEW

- ❖ I am a Finance Analyst working for 'The Big Bank.'
- ❖ I have been tasked with finding out about our customers and their banking behaviour.
- ❖ I am going to examine the accounts they hold and the type of transactions they make to develop greater insight into our customers.

TABLES

There are total 4 tables involved:

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



1. WHAT ARE THE NAMES OF ALL THE CUSTOMERS WHO LIVE IN NEW YORK?

```
Select  
CustomerID,  
Concat(FirstName,' ',LastName) as  
CustomerName,  
City  
From datacoach.customers  
Where city='New York';
```

CustomerID	Customer Name	City
1	John Doe	New York
2	Jane Doe	New York



FINANCE DATA ANALYSIS

2. WHAT IS THE TOTAL NUMBER OF ACCOUNTS IN THE ACCOUNTS TABLE?

```
Select  
Count(*) As TotalAccount  
From  
datacoach.accounts;
```

TotalAccount
15



3. WHAT IS THE TOTAL BALANCE OF ALL CHECKING ACCOUNTS?

```
Select
AccountType,
Sum(Balance) As TotalBalance
From
datacoach.accounts
Where AccountType='Checking';
```

AccountType	TotalBalance
Checking	31000.00



FINANCE DATA ANALYSIS

4. WHAT IS THE TOTAL BALANCE OF ALL ACCOUNTS ASSOCIATED WITH CUSTOMERS WHO LIVE IN LOS ANGELES?

```
Select  
C.City,  
Sum(A.Balance) As TotalBalance  
From  
datacoach.accounts A  
Join datacoach.customers C On  
A.CustomerID = C.CustomerID  
Where C.City = 'Los Angeles';
```

City	TotalBalance
Los Angeles	75000.00



FINANCE DATA ANALYSIS

5. WHICH BRANCH HAS THE HIGHEST AVERAGE ACCOUNT BALANCE?

```
Select  
A.BranchID , B.BranchName,  
Round(avg(A.Balance)) as  
AverageBalance  
From datacoach.accounts A  
Join datacoach.branches B On  
A.BranchID = B.BranchID  
Group by A.BranchID, B.BranchName  
Order by AverageBalance DESC  
Limit 1;
```

BranchID	BranchName	Average Balance
14	North Beach	30000



6. WHICH CUSTOMER HAS THE HIGHEST CURRENT BALANCE IN THEIR ACCOUNTS?

```
Select  C.CustomerID,  
Concat(FirstName,' ',LastName) As  
CustomerName,  
Max(A.Balance) as  
HighestCurrentBalance  
From  datacoach.customers C  
Join  datacoach.Accounts a  
On C.CustomerID = A.CustomerID  
group by c.CustomerID,CustomerName  
Order by HighestCurrentBalance desc  
Limit 1;
```

CustomerID	Customer Name	Highest Current Balance
5	Michael Lee	50000.00



FINANCE DATA ANALYSIS

7. WHICH CUSTOMER HAS MADE THE MOST TRANSACTIONS IN THE TRANSACTIONS TABLE?

```
Select C.CustomerID,  
Concat(C.FirstName,' ',C.LastName) As  
CustomerName,  
Count(T.TransactionID) as  
NumberOfTransactions  
From datacoach.transactions T  
Join datacoach.accounts A On  
T.AccountID = A.AccountID  
Join datacoach.customers C On  
A.CustomerID= C.CustomerID  
Group by C.CustomerID,CustomerName  
Order by NumberOfTransactions DESC  
Limit 1;
```

CustomerID	Customer Name	Number of Transactions
2	Jane Doe	4



8.WHICH BRANCH HAS THE HIGHEST TOTAL BALANCE ACROSS ALL OF ITS ACCOUNTS?

```
Select A.BranchID, bBBranchName,  
Sum(A.Balance) As TotalBalance  
From datacoach.accounts A  
Join datacoach.branches B On  
A.BranchID=B.BranchID  
Group by A.BranchID,  
B.BranchName  
Order by TotalBalance DESC  
Limit 1;
```

BranchID	BranchName	Average Balance
14	North Beach	60000.00



9. WHICH CUSTOMER HAS THE HIGHEST TOTAL BALANCE ACROSS ALL OF THEIR ACCOUNTS, INCLUDING SAVINGS AND CHECKING ACCOUNTS?

```
Select C.CustomerID,  
Concat(C.FirstName,' ',C.LastName) As  
CustomerName,  
Sum(a.Balance) As TotalBalance  
From datacoach.customers A  
Join datacoach.accounts A On  
C.CustomerID = A.CustomerID  
Where A.AccountType in  
('Savings','Checking')  
Group by CustomerID,CustomerName  
Order by TotalBalance DESC  
Limit 1;
```

BranchID	BranchName	Average Balance
5	Michael Lee	60000.00



FINANCE DATA ANALYSIS

10. WHICH BRANCH HAS THE HIGHEST NUMBER OF TRANSACTIONS IN THE TRANSACTIONS TABLE?

```
Select B.BranchID,B.BranchName,  
B.City,Count(T.TransactionID) As  
NumberofTransactions  
From datacoach.branches B  
Join datacoach.accounts A on  
B.BranchID = A.BranchID  
Join datacoach.transactions T on  
A.AccountID = T.AccountID  
Group by  
B.BranchID,B.BranchName,b.city  
Order by NumberofTransactions desc  
Limit 1;
```

BranchID	Branch Name	City	Number of Transactions
1	Main	New York	4

**** ORGANISED BY DATACOACH & MATTHEW STEEL**

THANKS

