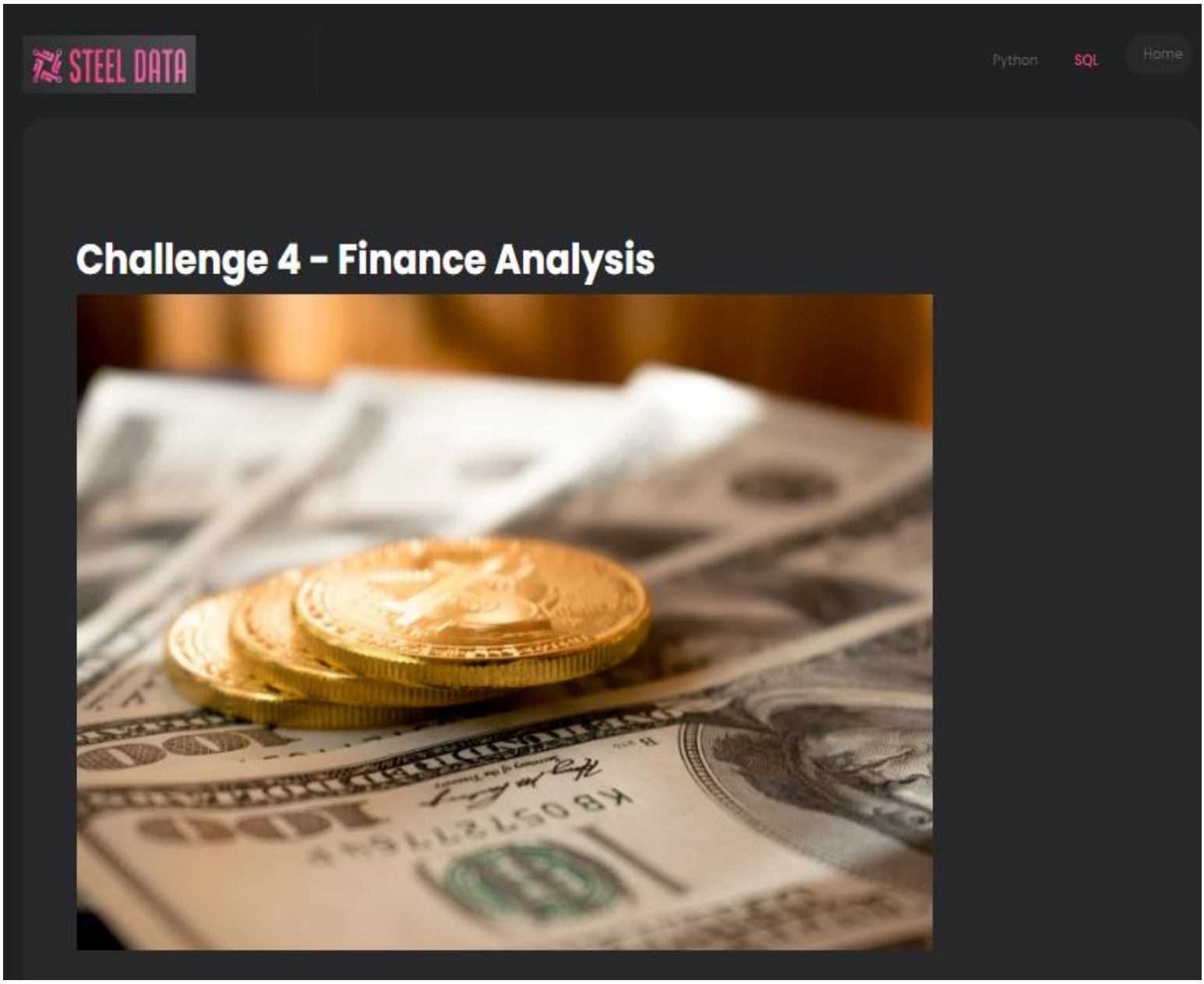


https://steeldata.org.uk/SQL4.html

Introduction

You are a Finance Analyst working for 'The Big Bank'
You have been tasked with finding out about your customers and their banking behavior. Examine the accounts they hold and the type of transactions they make to develop greater insight into your customers.

Problem Statement

Key datasets for this case study:

- accounts
- branches
- customers
- transactions

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

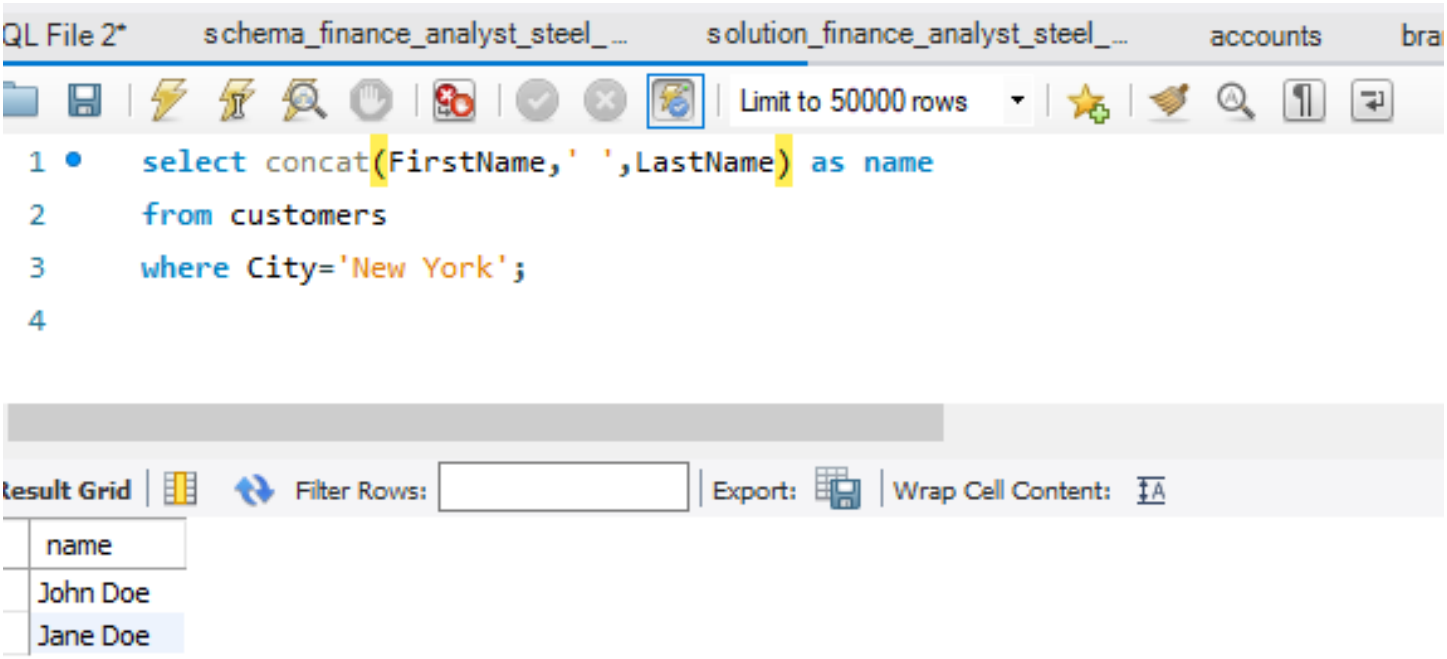
TransactionID	AccoutID	TransactionDate	Amount
1	1	2022-01-01	-500
2	1	2022-01-02	-250
3	2	2022-01-03	1000
4	3	2022-01-04	-1000
5	3	2022-01-05	500
6	4	2022-01-06	1000
7	4	2022-01-07	-500
8	5	2022-01-08	-2500
9	6	2022-01-09	500
10	6	2022-01-10	-1000
11	7	2022-01-11	-500
12	7	2022-01-12	-250
13	8	2022-01-13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

Branches

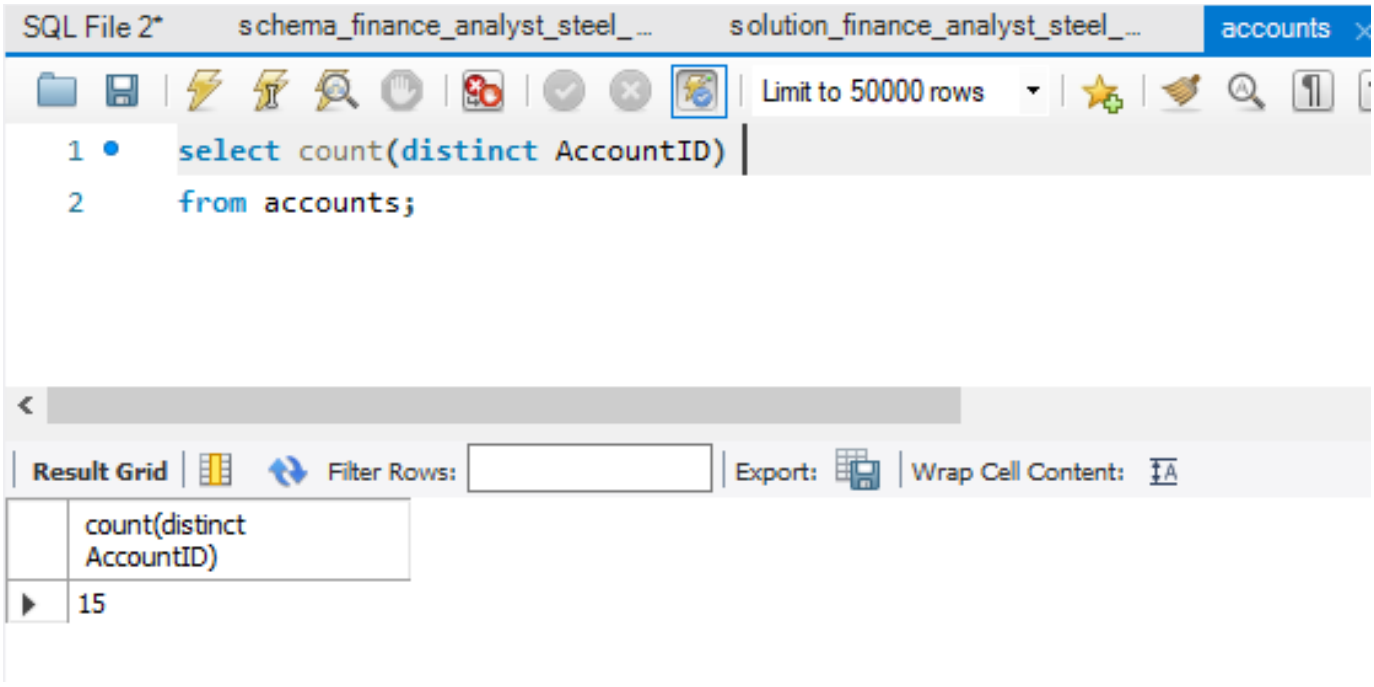
BranchID	BranchName	City	State
1	Main	New York	NY
2	Downtown	San Francisco	CA
3	West LA	Los Angeles	CA
4	East LA	Los Angeles	CA
5	Uptown	New York	NY
6	Financial District	San Francisco	CA
7	Midtown	New York	NY
8	South Bay	San Francisco	CA
9	Downtown	Los Angeles	CA
10	Chinatown	New York	NY
11	Marina	San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

Case Study Questions

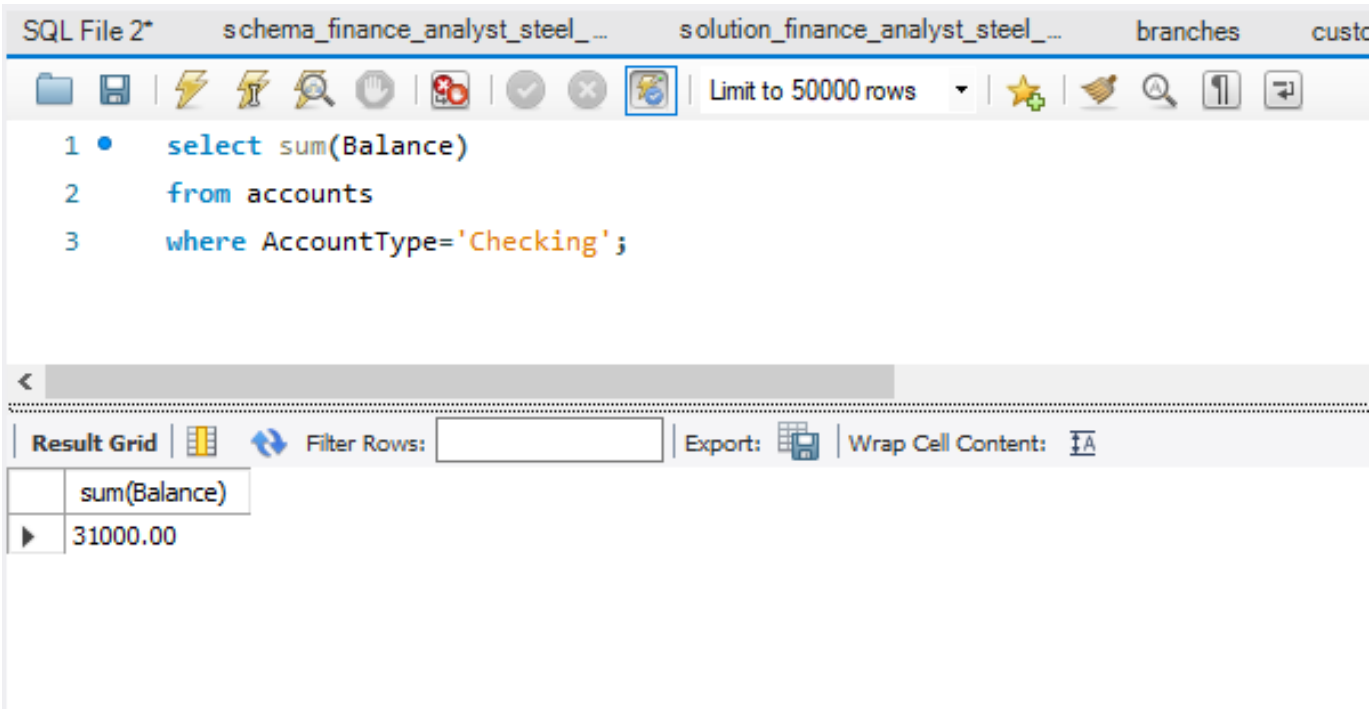
1. What are the names of all the customers who live in New York?



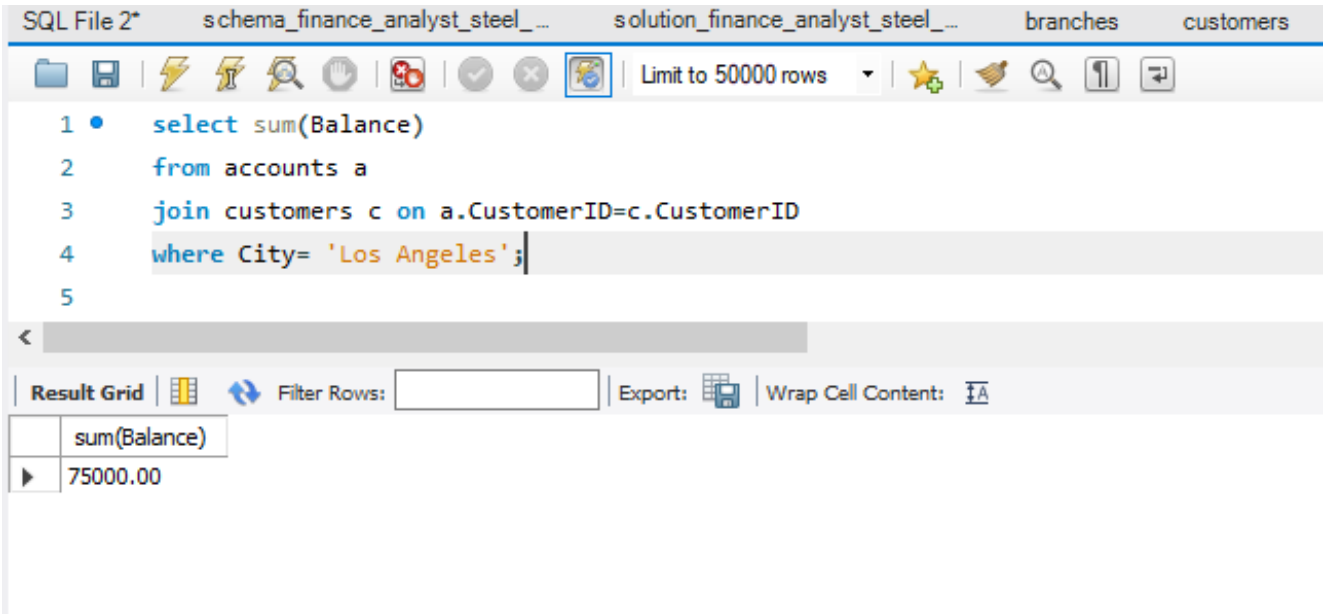
2. What is the total number of accounts in the Accounts table?



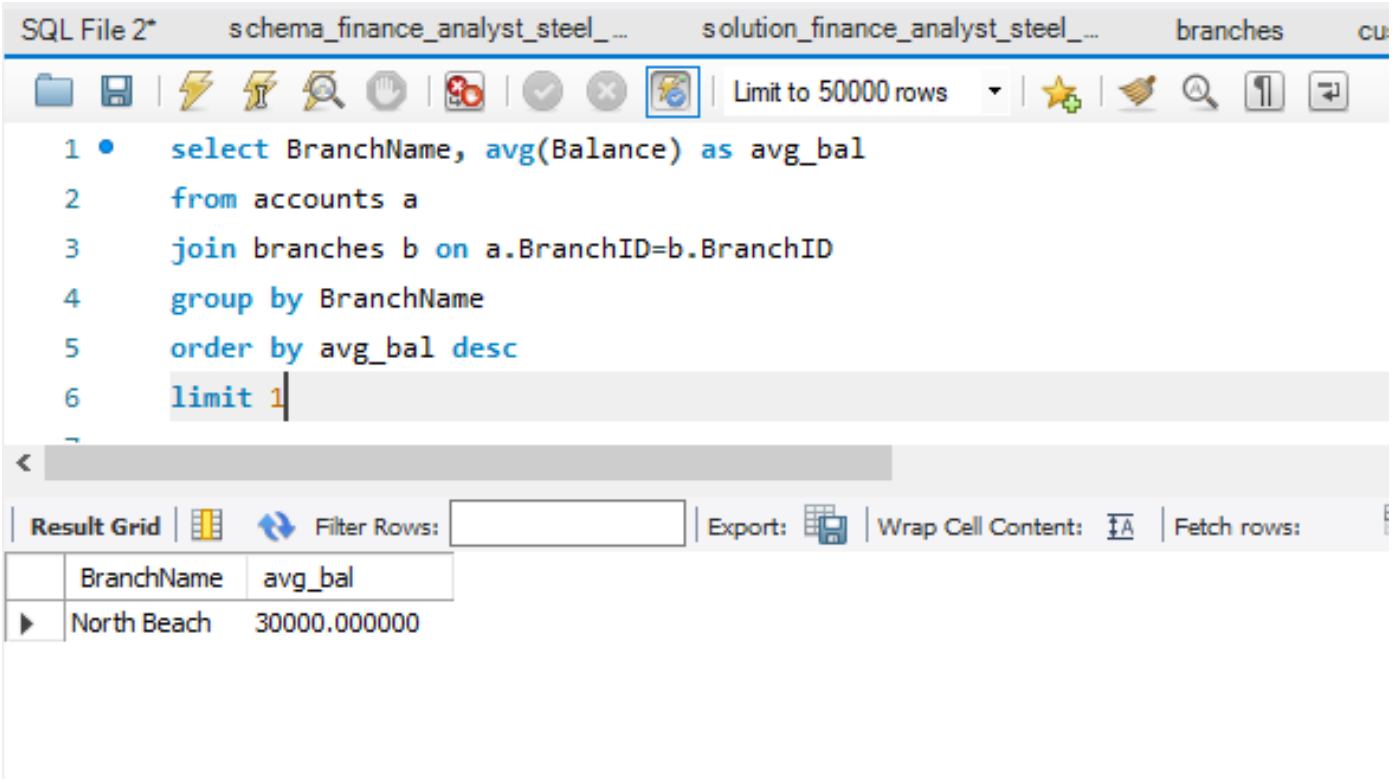
3. What is the total balance of all checking accounts?



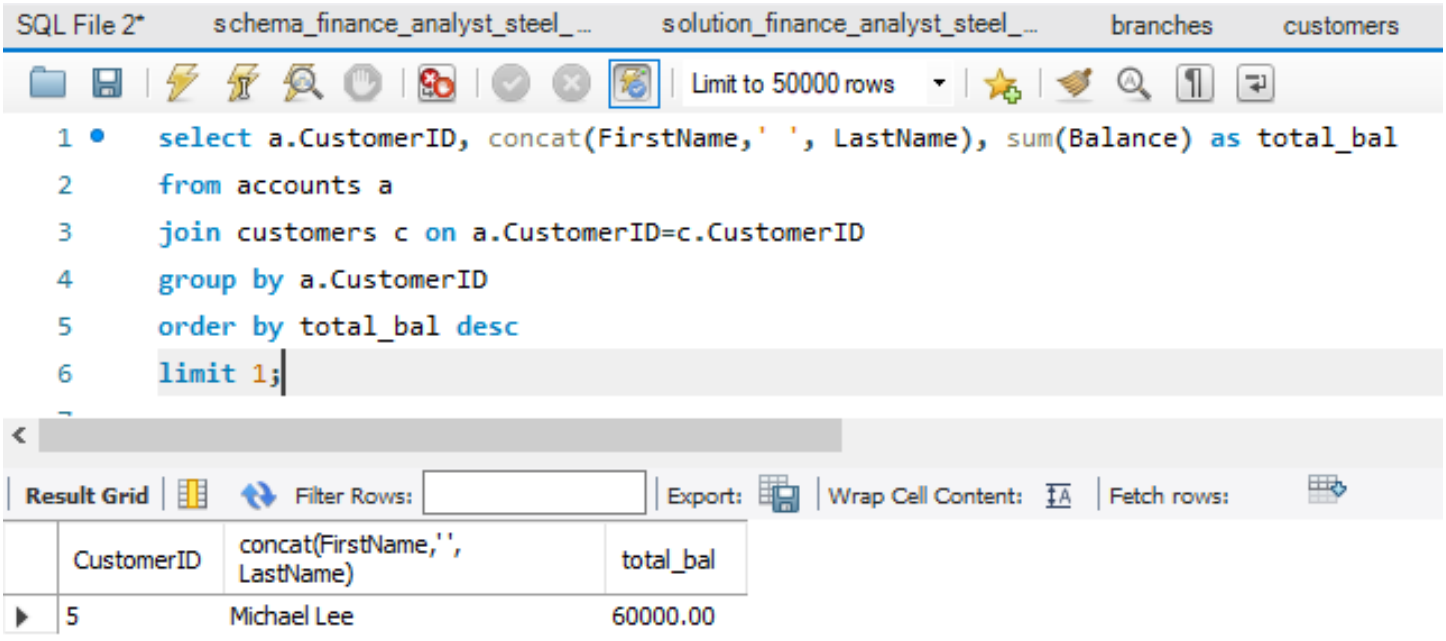
4. What is the total balance of all accounts associated with customers who live in Los Angeles?



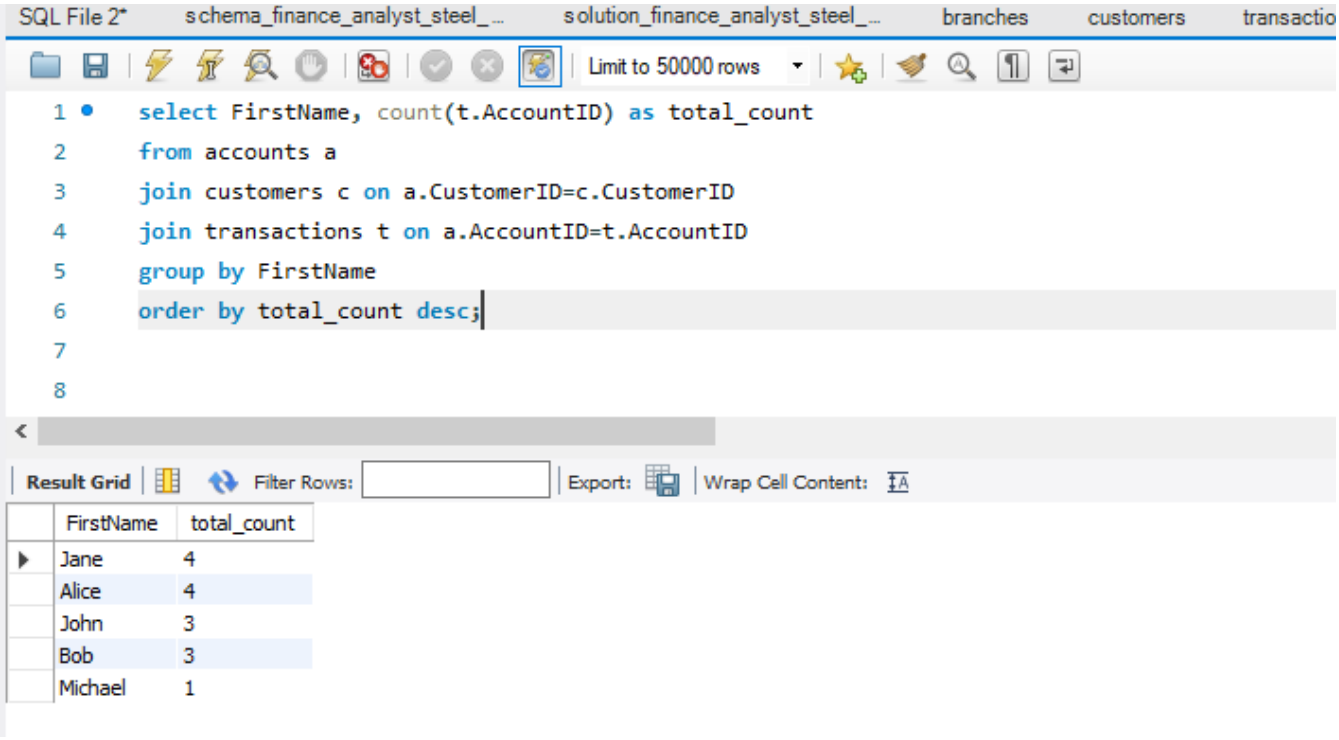
5. Which branch has the highest average account balance?



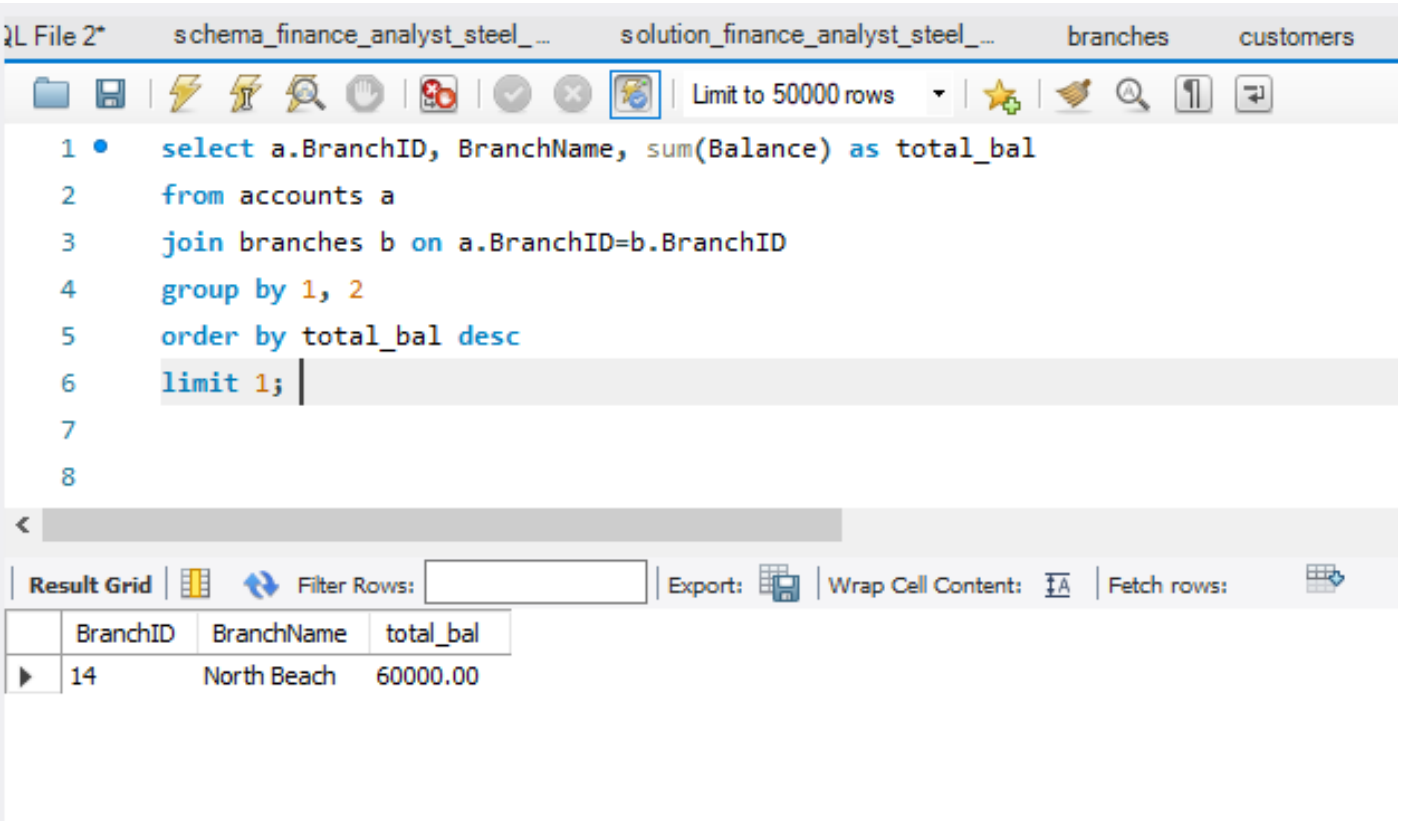
6. Which customer has the highest current balance in their accounts?



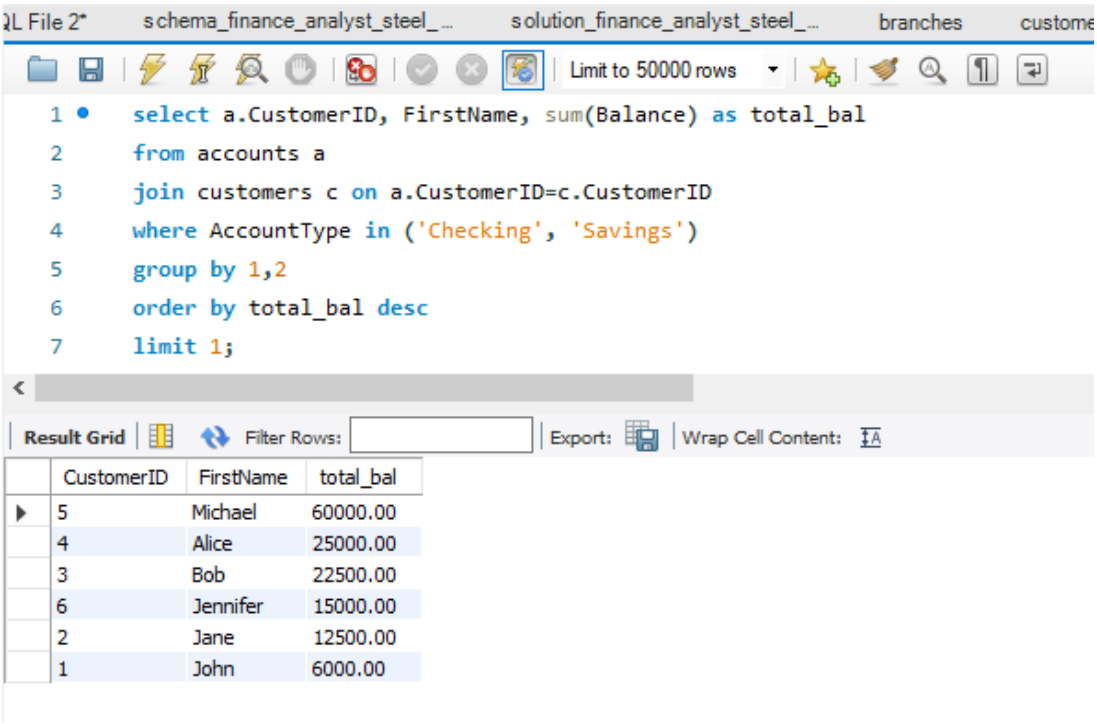
7. Which customer has made the most transactions in the Transactions table?



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

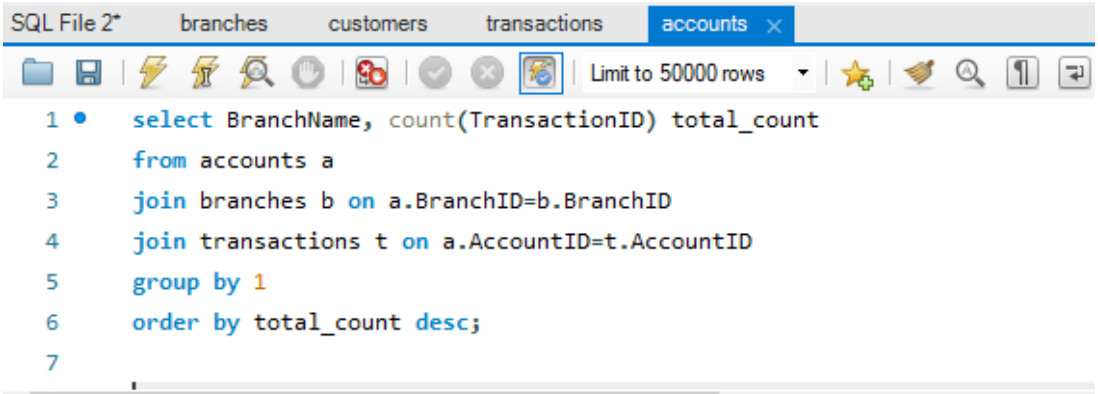


9. Which customer has the highest total balance across all of their accounts, including savings and checking accounts?



CustomerID	FirstName	total_bal
5	Michael	60000.00
4	Alice	25000.00
3	Bob	22500.00
6	Jennifer	15000.00
2	Jane	12500.00
1	John	6000.00

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



BranchName	total_count
Main	4
South Bay	4
Downtown	3
Uptown	3
North Beach	1

Insights

The following topics are completely covered in this case study:

- Joins in SQL
- Where clause
- Aggregate functions
- Group by clause
- Order by clause
- Limit in SQL
- Concatenate function

The following insights can be gathered for this case study:

- There are a total of 15 accounts which includes savings, credit card and checking account types.
- Michael has highest balance in all accounts and has made the lowest number of transactions.
- Main and South Bay branches has highest number of transactions.
- Out of the five branches North Beach has highest balance amount as well as highest average amount but it has the lowest number of transactions.
- Jane and Alice has made maximum number of transactions.