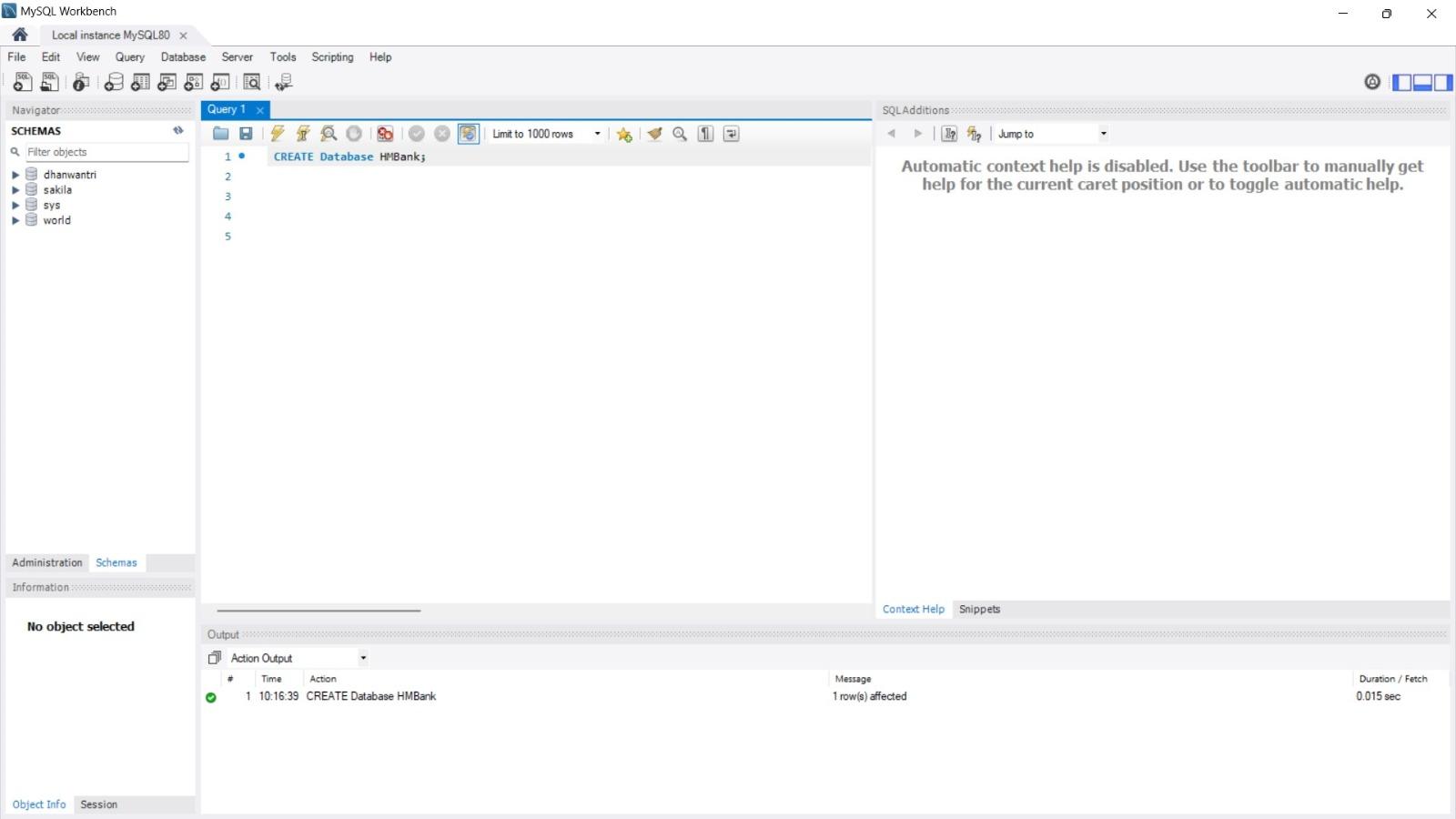
**ASSIGNMENT 3**

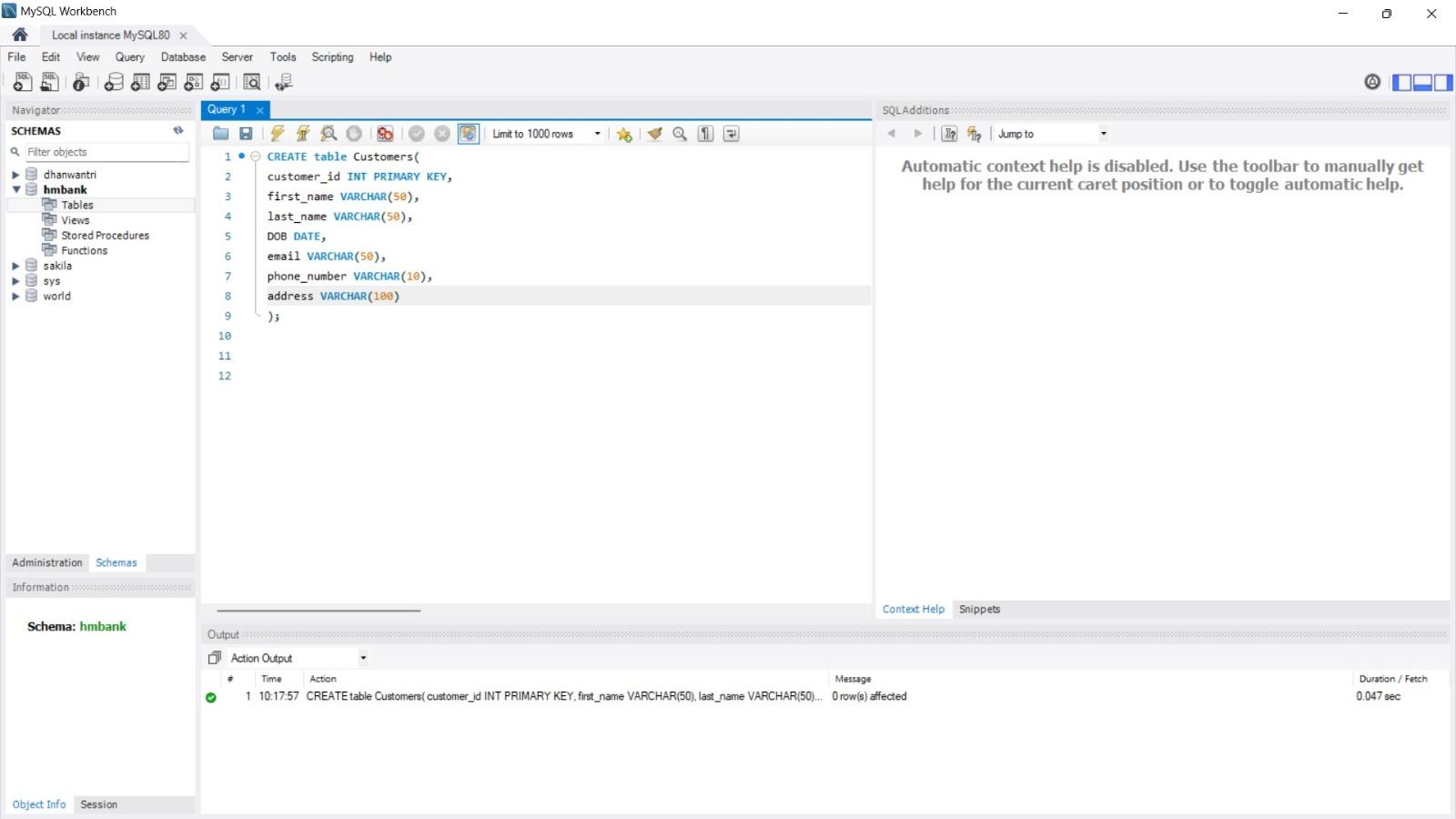
**Task 1: Database Design:**

**1. Create the database named "HMBank"**

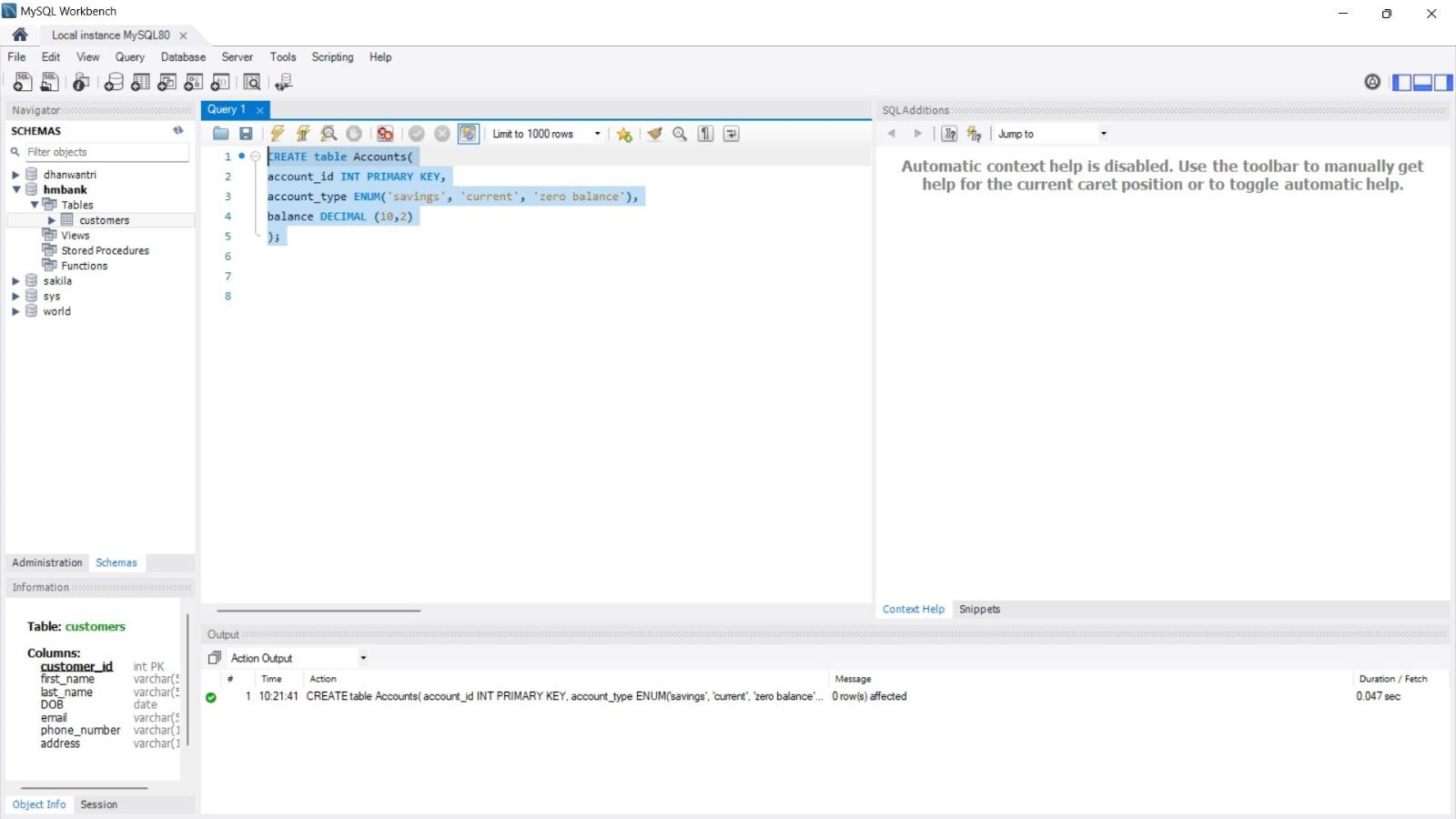
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**2. Define the schema for the Customers, Accounts, and Transactions tables based on the**

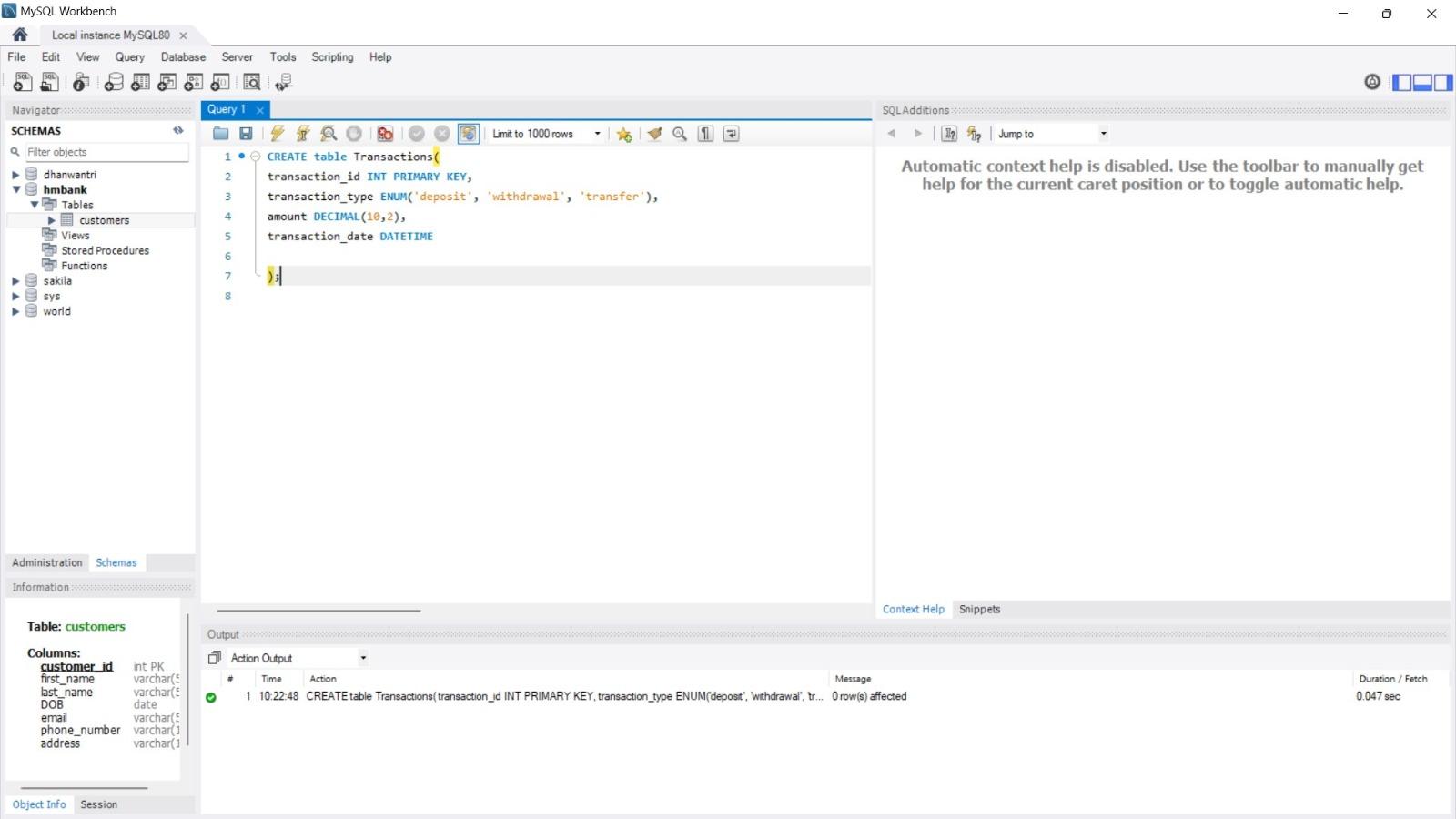
**provided schema.**

****

**3. Create an ERD (Entity Relationship Diagram) for the database.**

****

**4. Create appropriate Primary Key and Foreign Key constraints for referential integrity.**

****

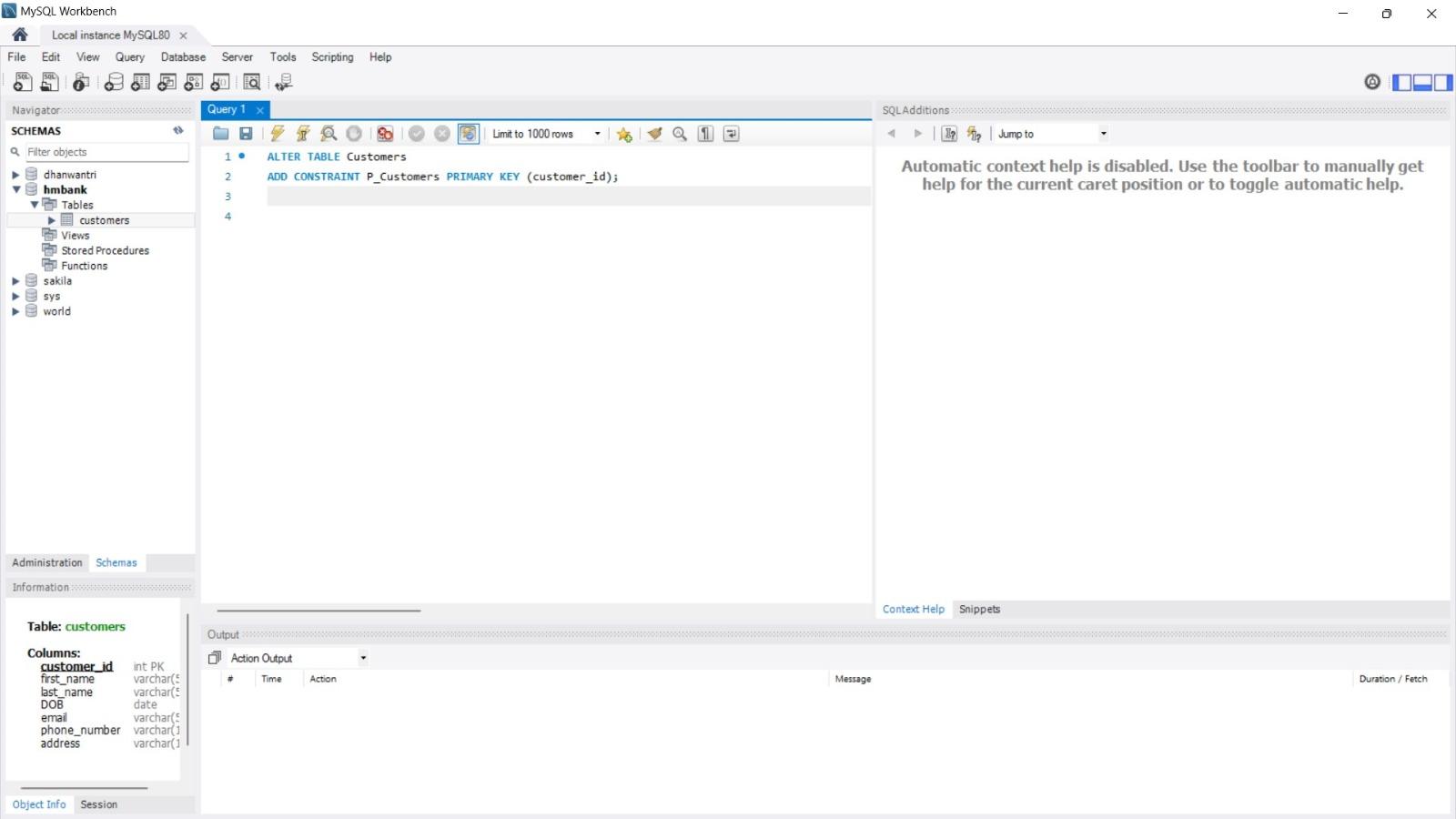
**5. Write SQL scripts to create the mentioned tables with appropriate data types, constraints,**

**and relationships.**

**• Customers**

**• Accounts**

**• Transactions**

****

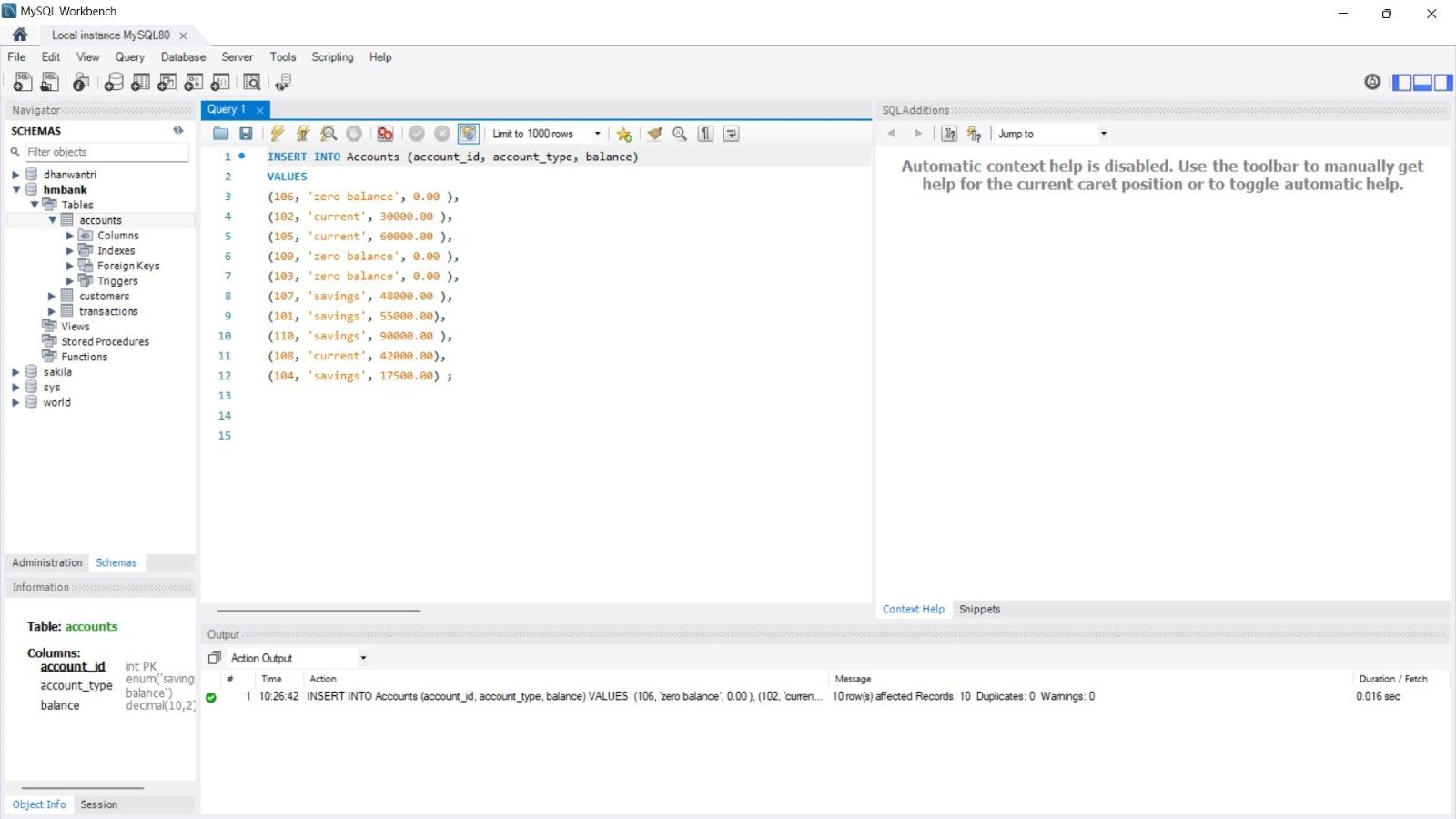
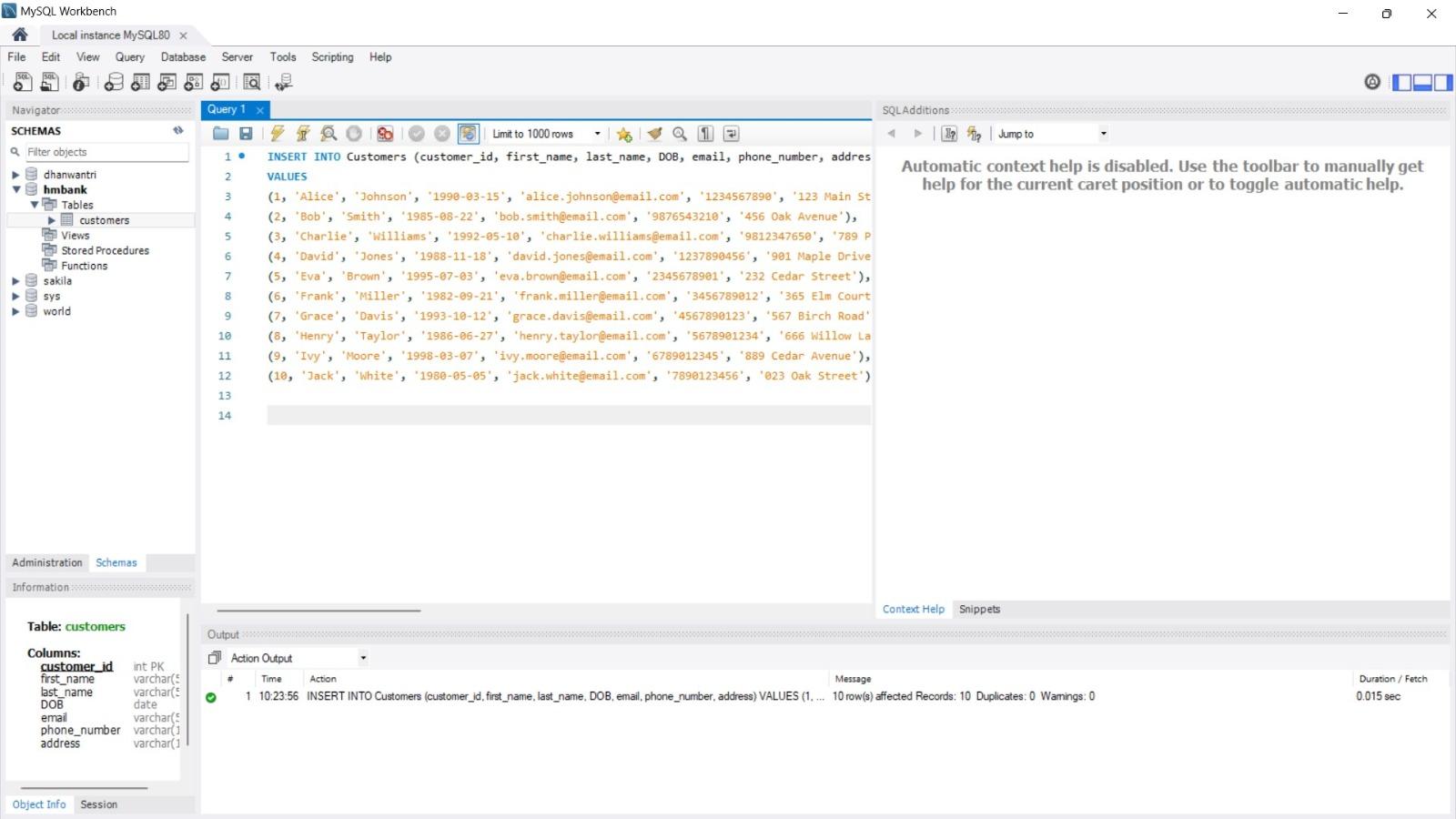
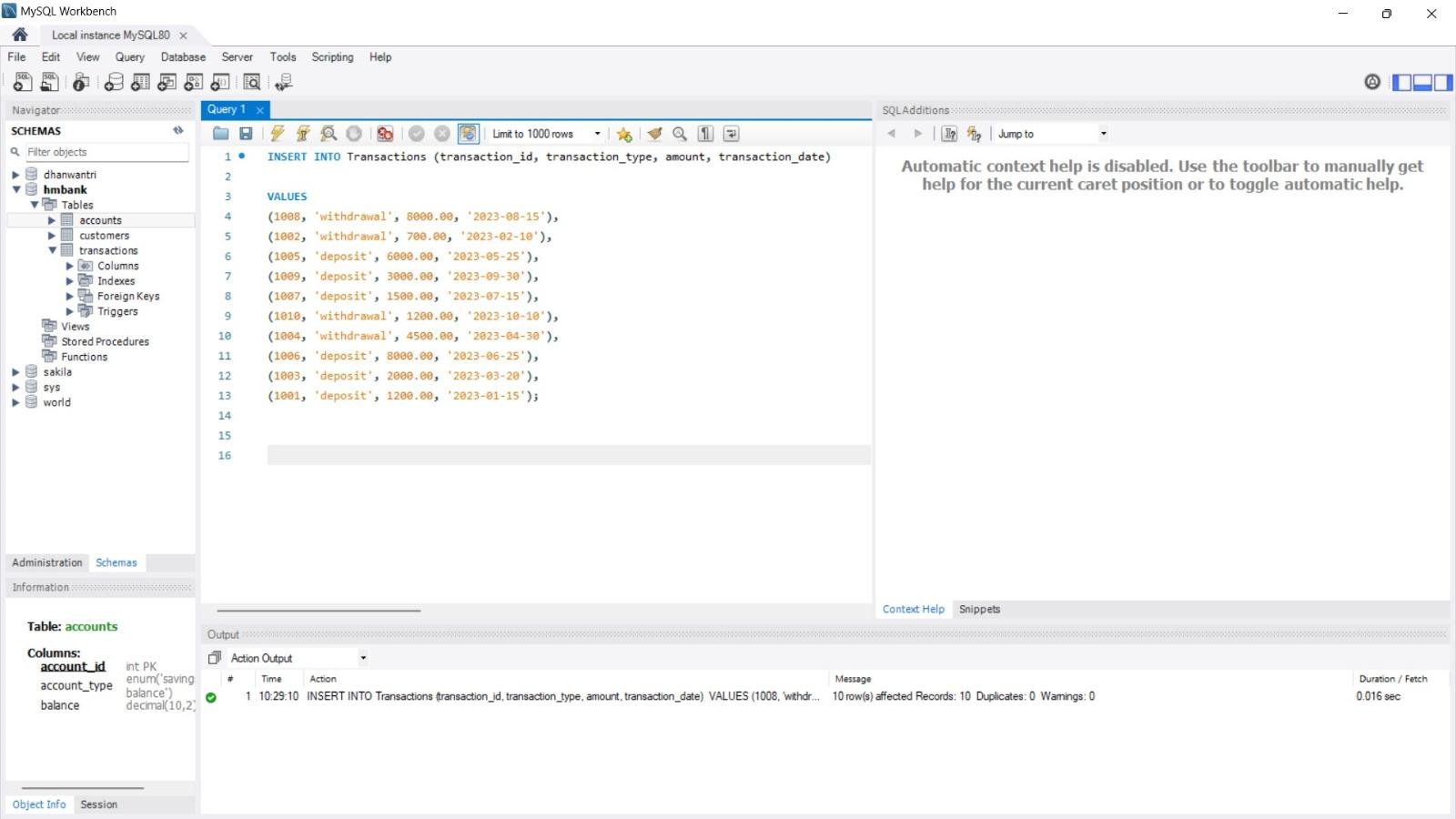
**Task 2: Select, Where, Between, AND, LIKE:**

**1. Insert at least 10 sample records into each of the following tables.**

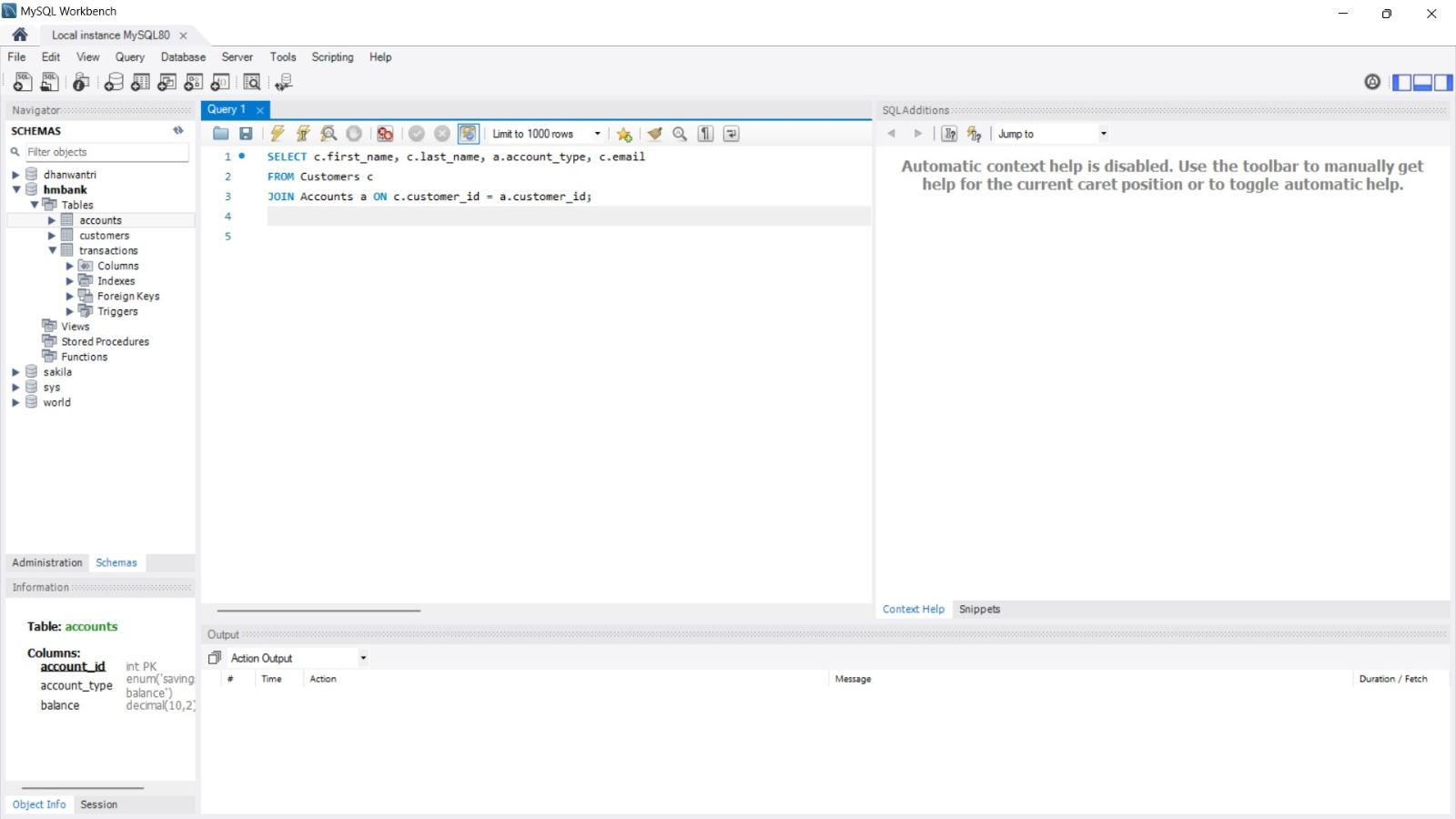
**• Customers**

**• Accounts**

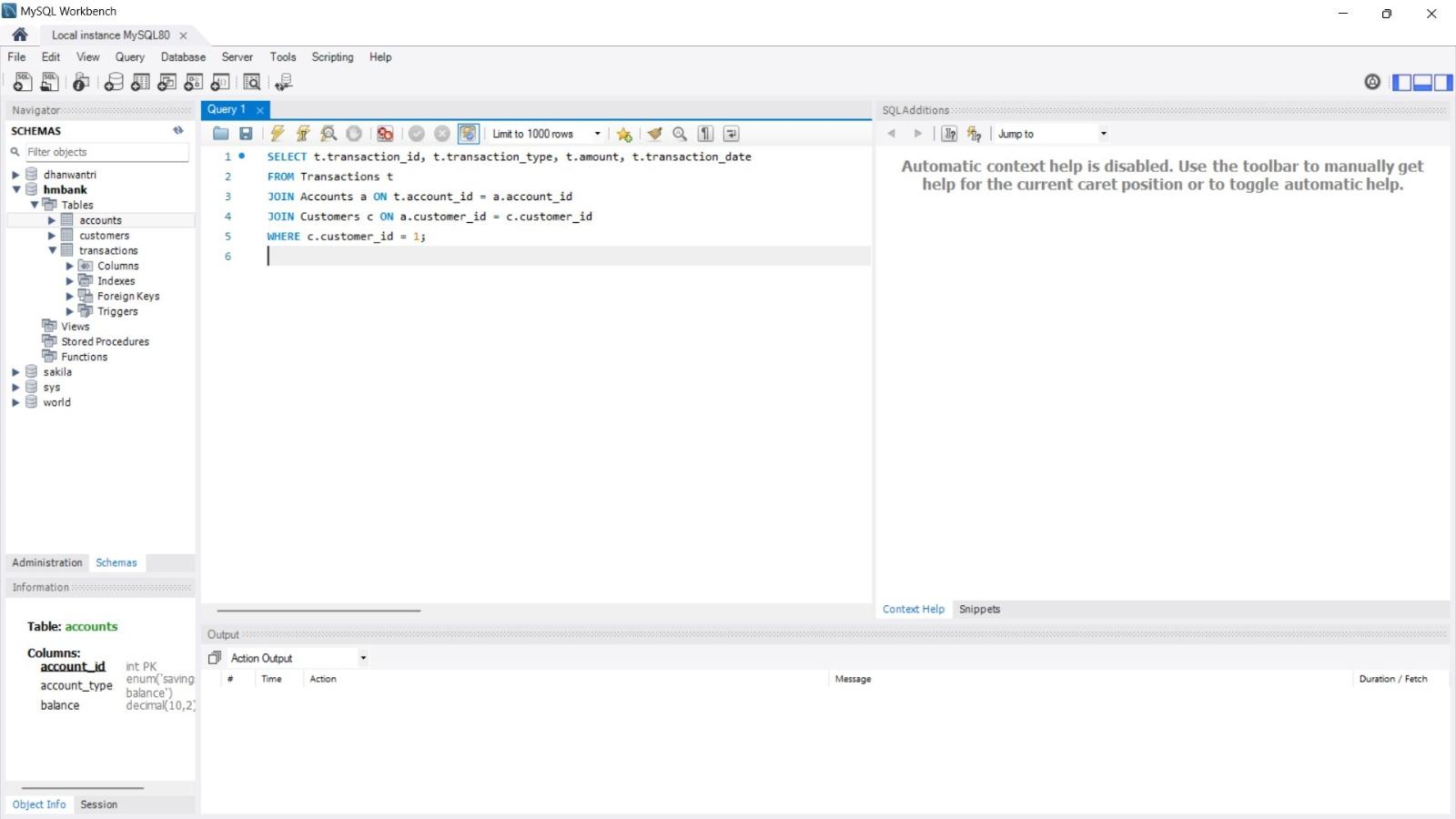
**• Transactions**

** Write SQL queries for the following tasks:**

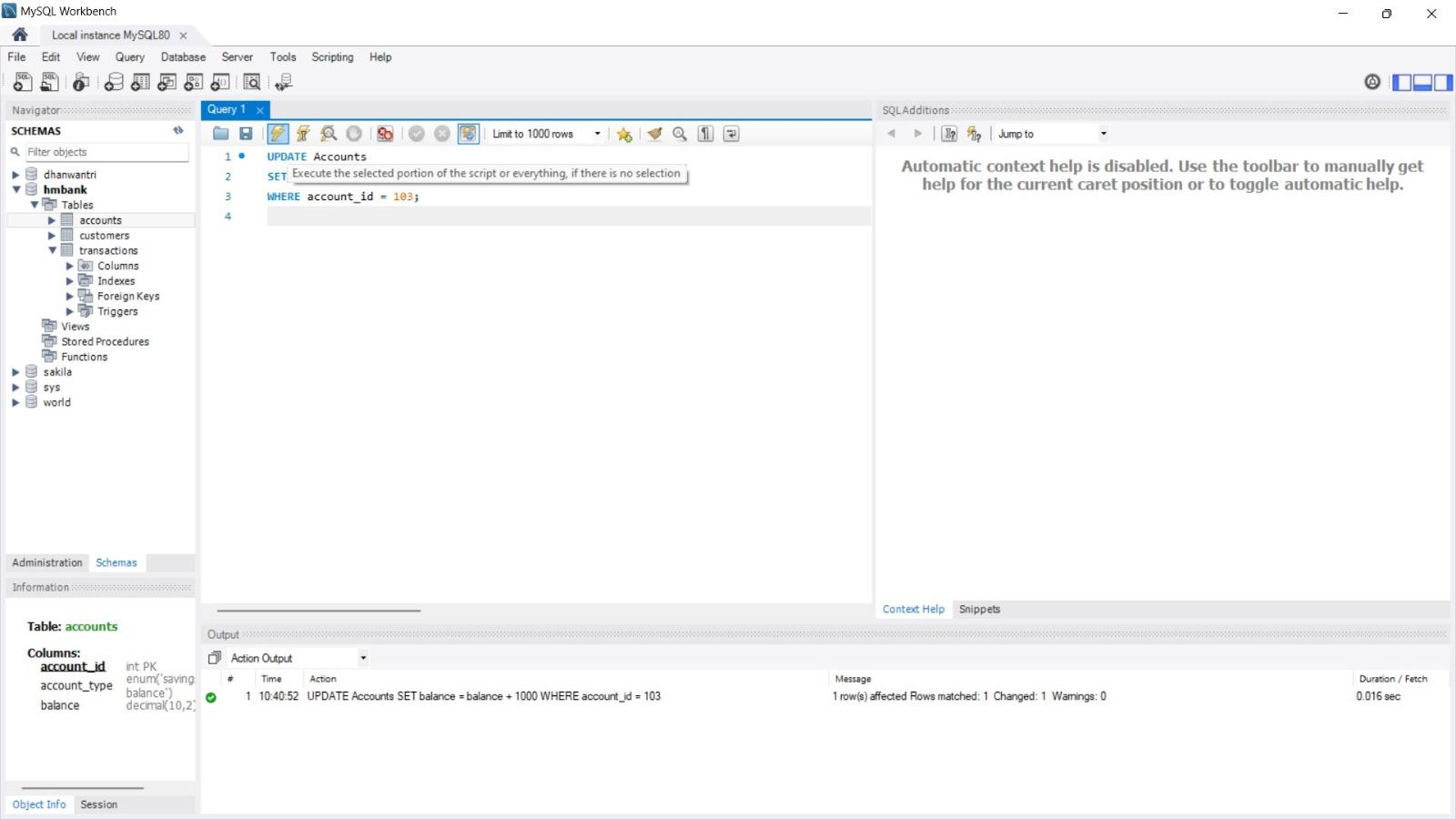
**1. Write a SQL query to retrieve the name, account type and email of all customers.**

****

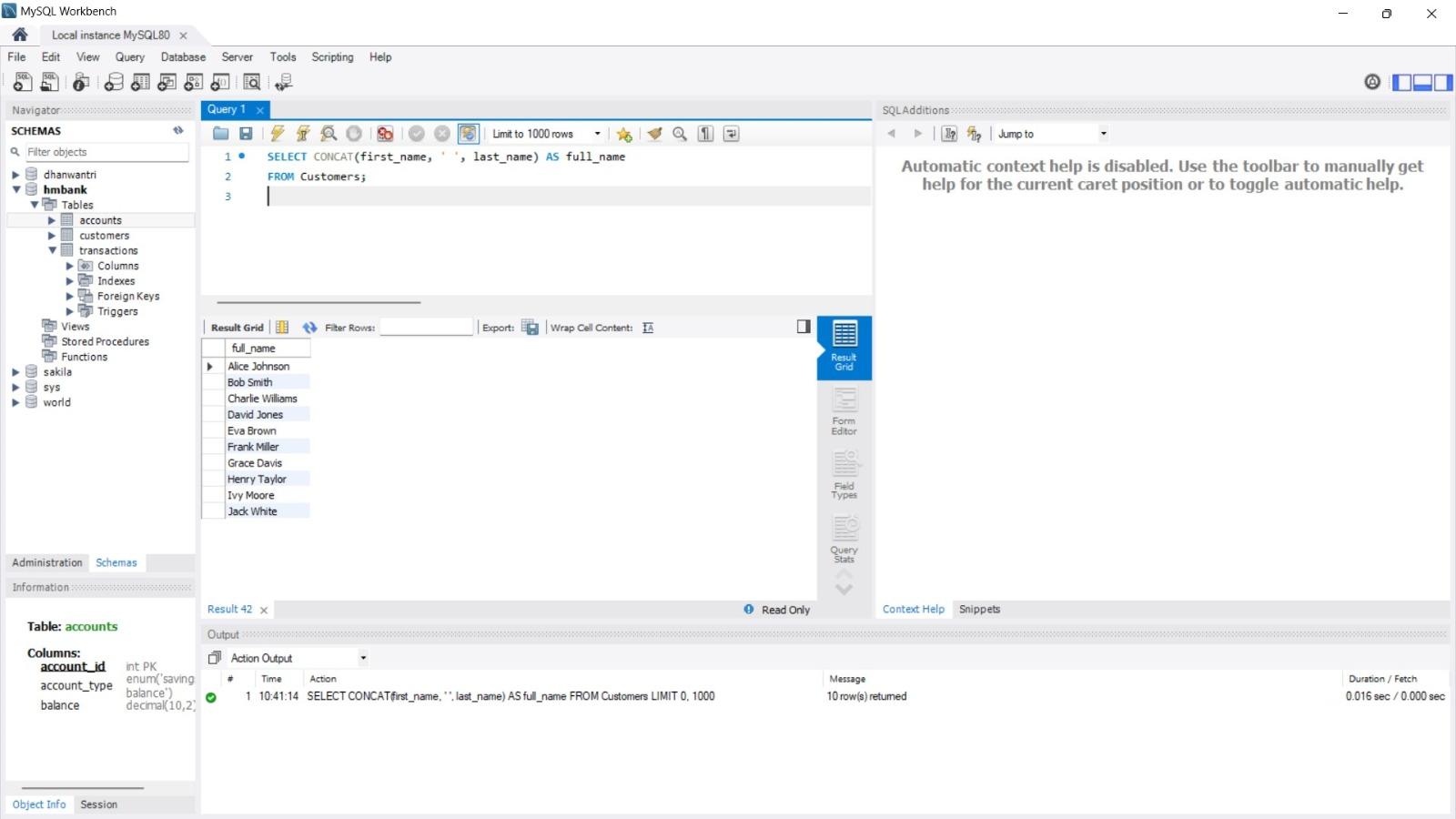
**2. Write a SQL query to list all transaction corresponding customers.**

****

**3. Write a SQL query to increase the balance of a specific account by a certain amount.**

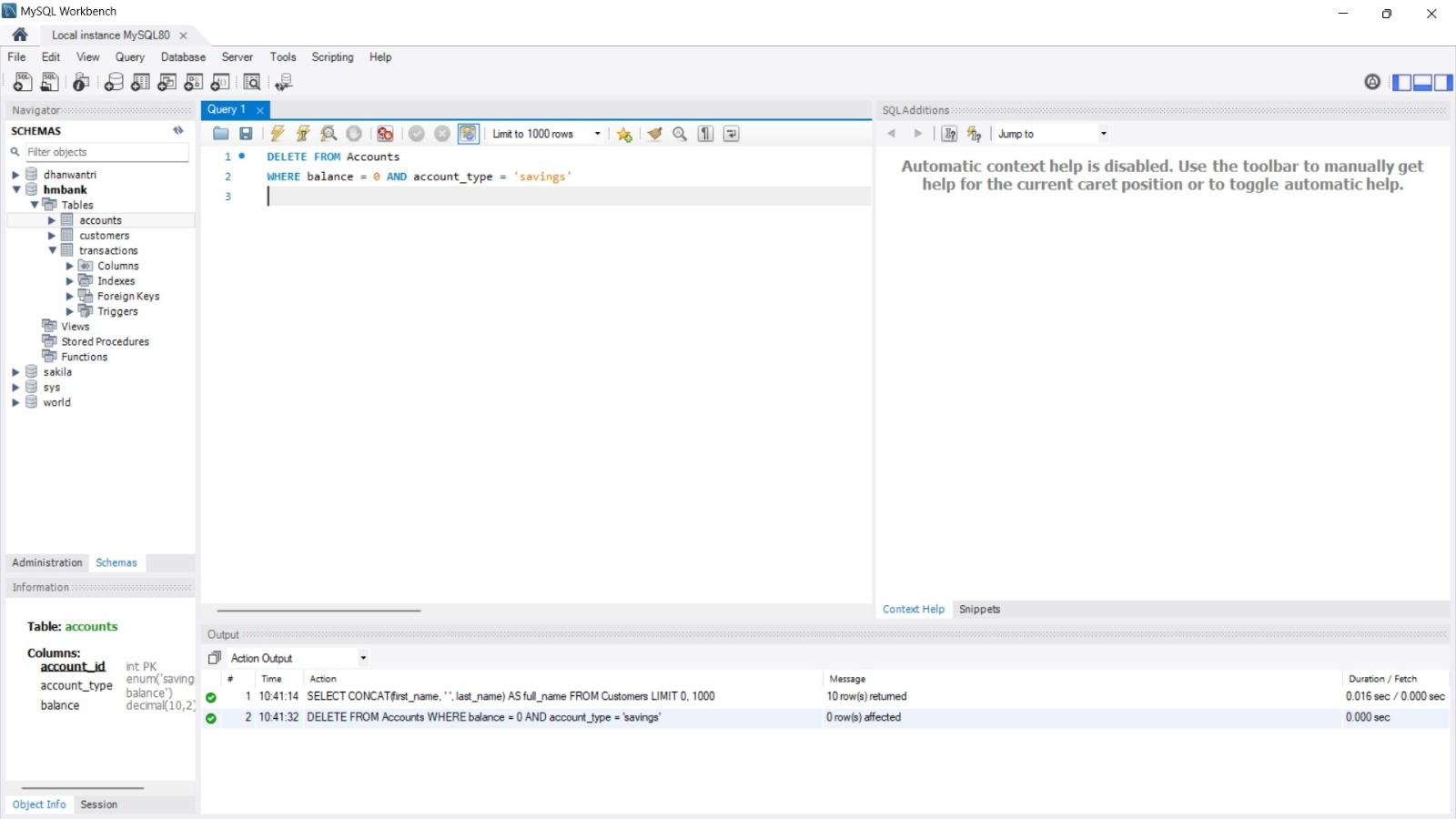
****

**4. Write a SQL query to Combine first and last names of customers as a full\_name.**

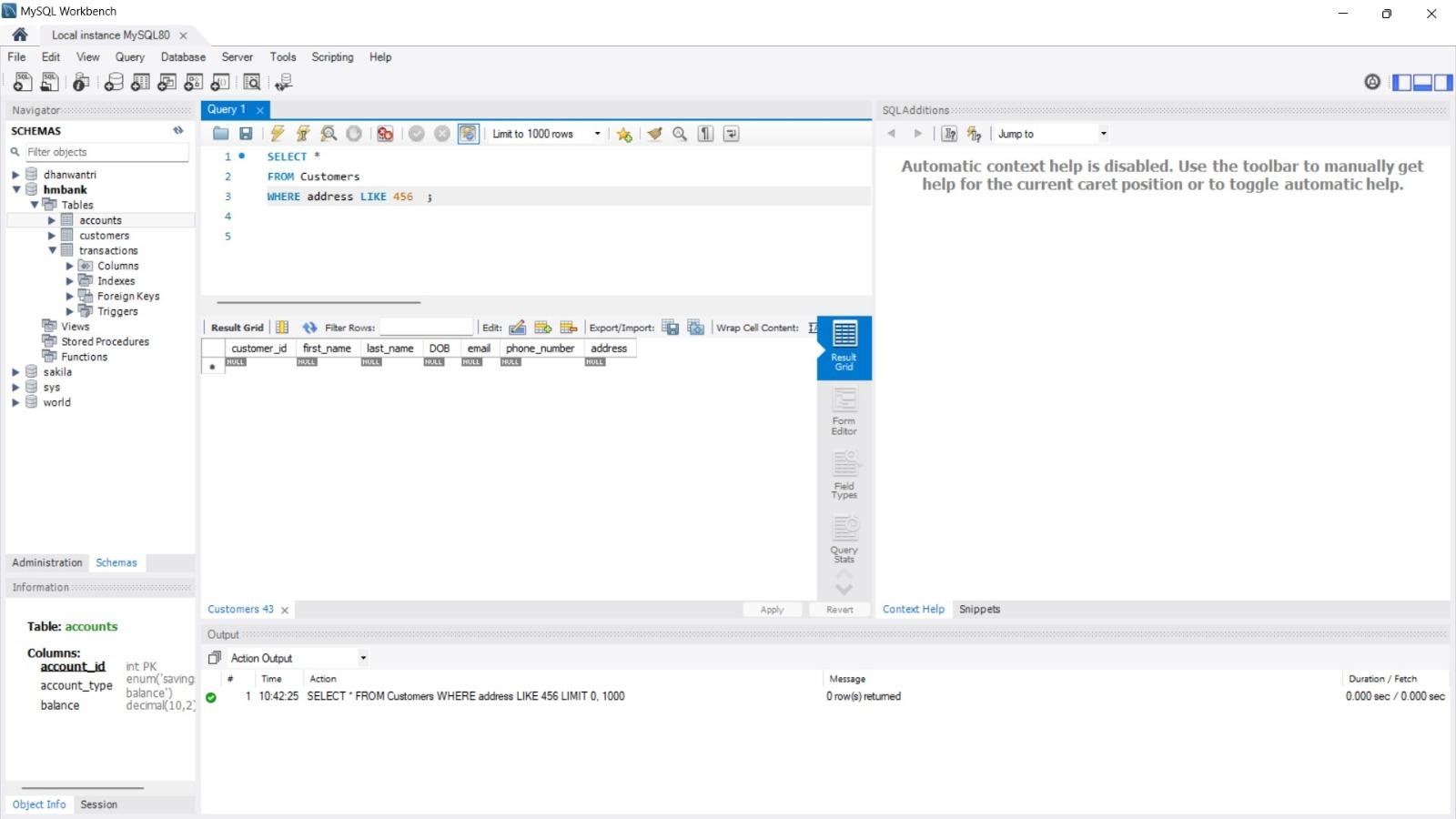
****

**5. Write a SQL query to remove accounts with a balance of zero where the account**

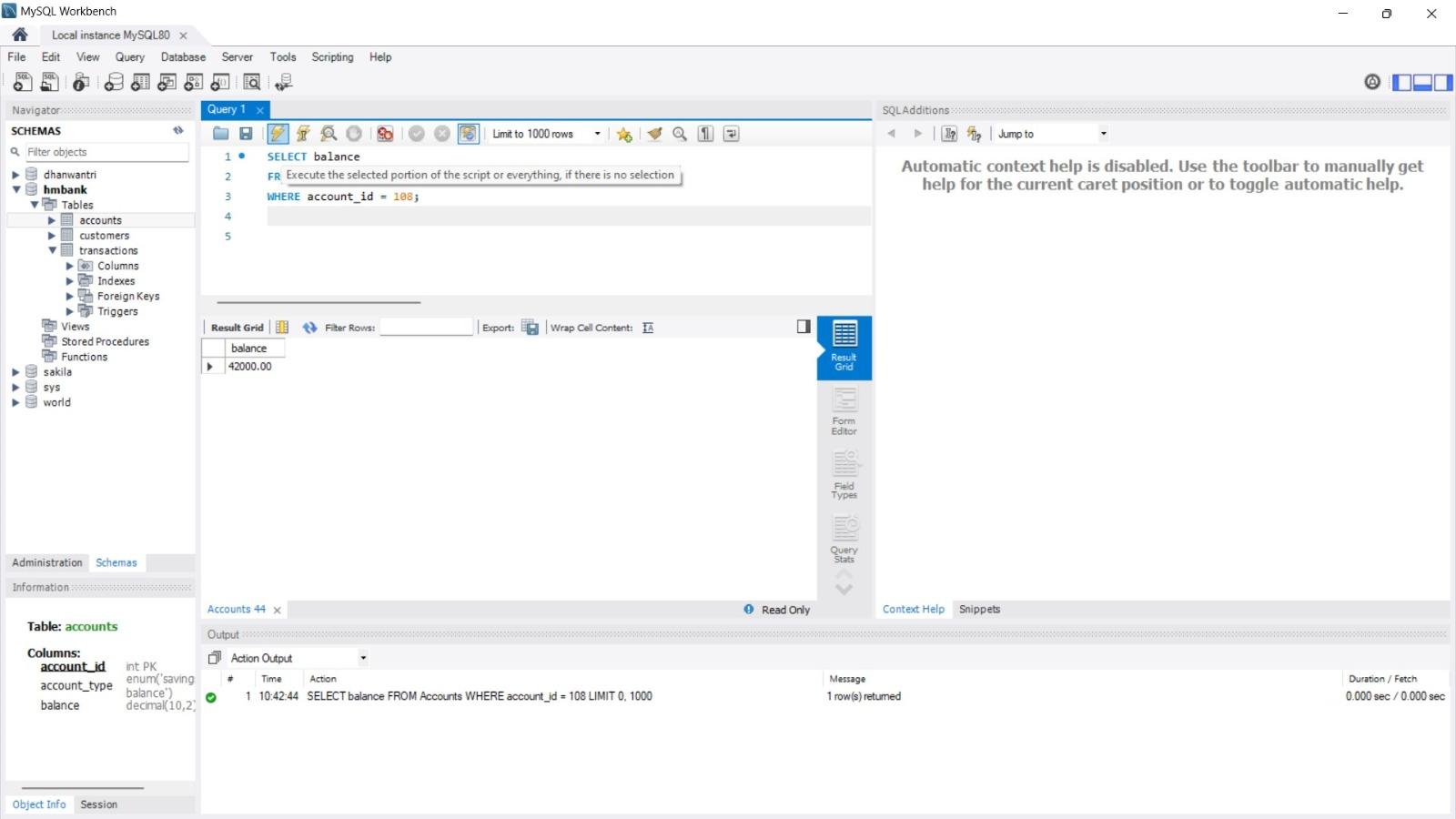
**type is savings.**

****

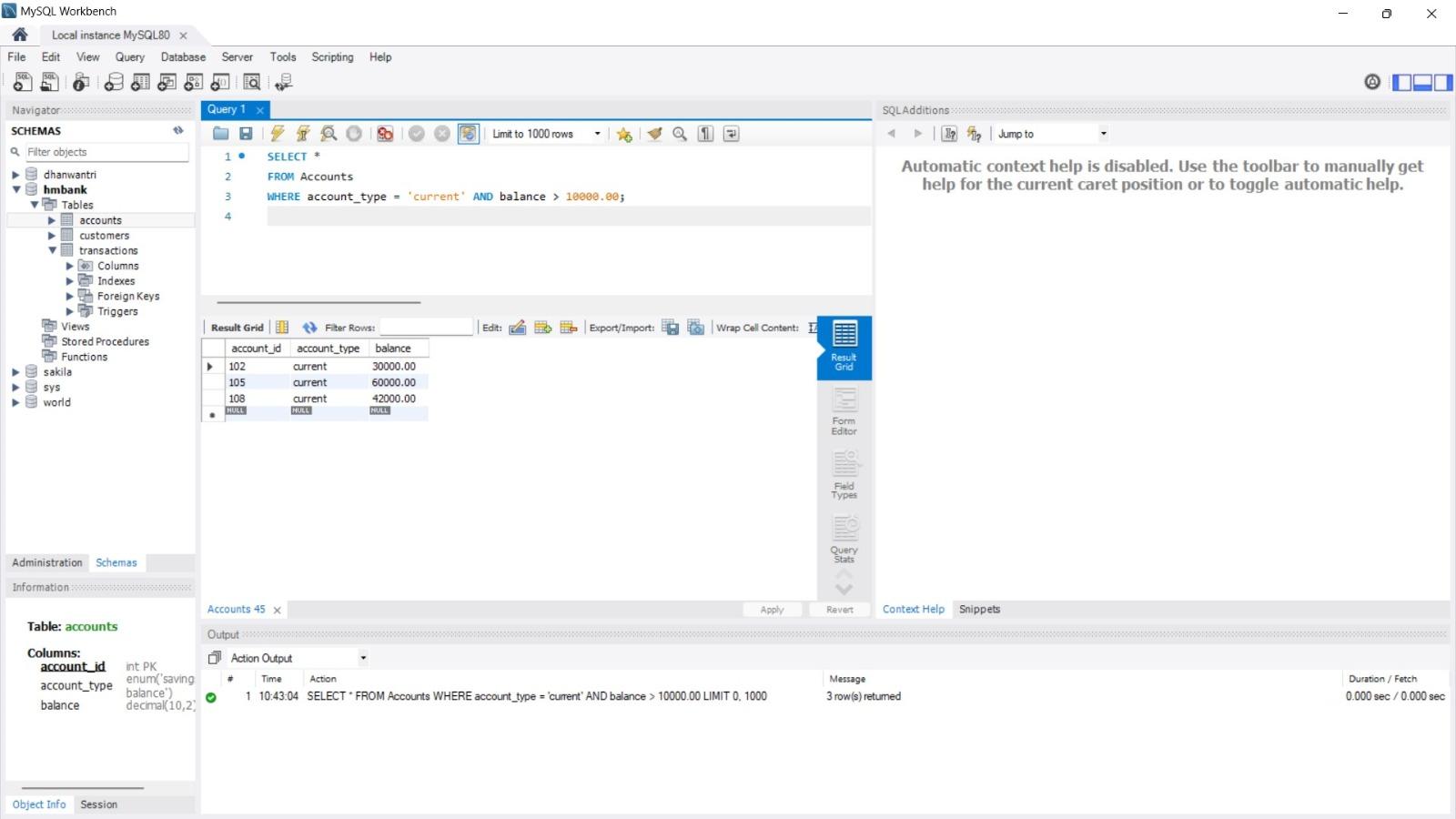
**6. Write a SQL query to Find customers living in a specific city.**

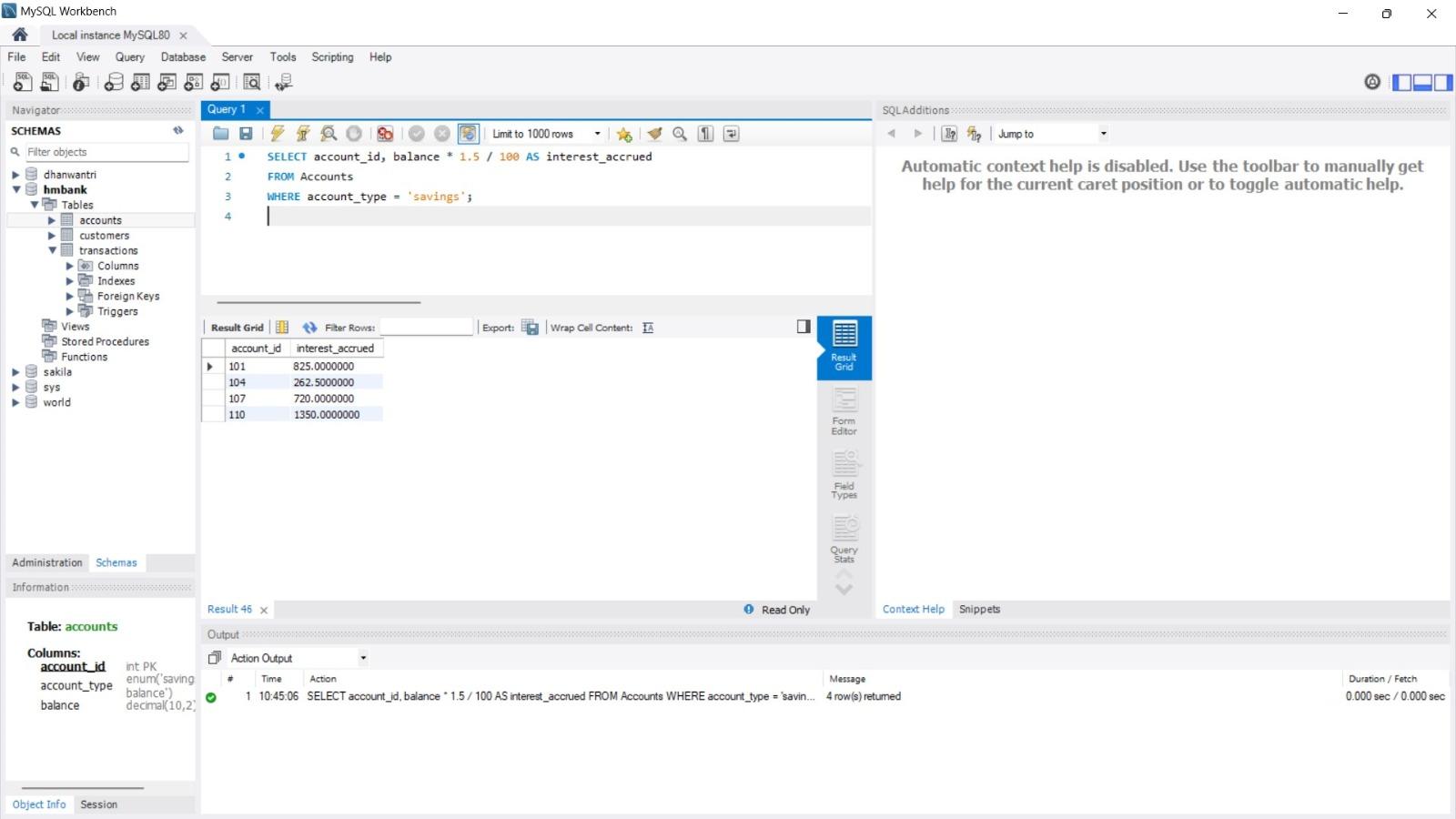
****

**7. Write a SQL query to Get the account balance for a specific account.**

****

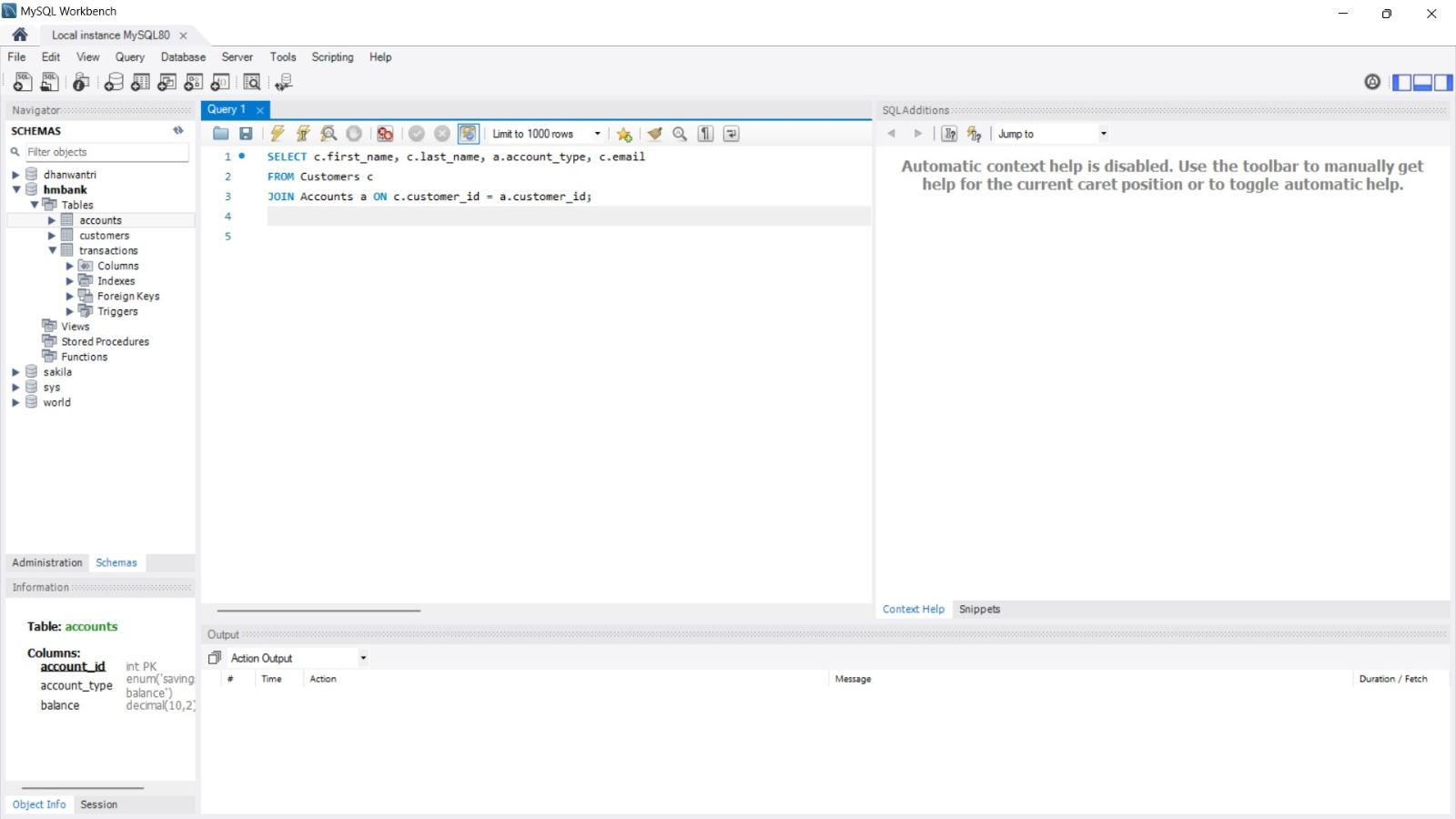
**8. Write a SQL query to List all current accounts with a balance greater than $1,000.**

****

**9. Write a SQL query to Retrieve all transactions for a specific account.**

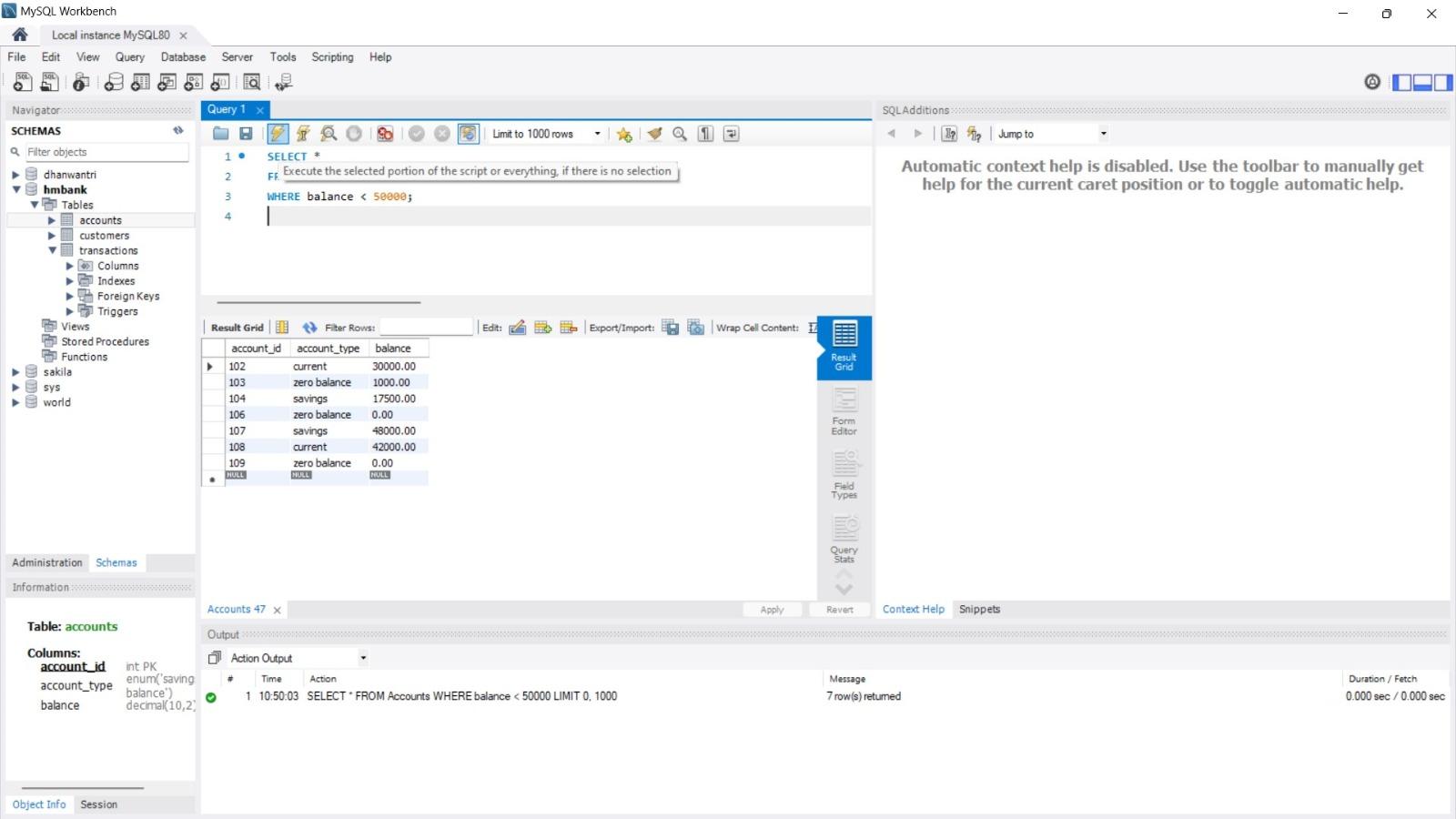
**10. Write a SQL query to Calculate the interest accrued on savings accounts based on a**

**given interest rate.**

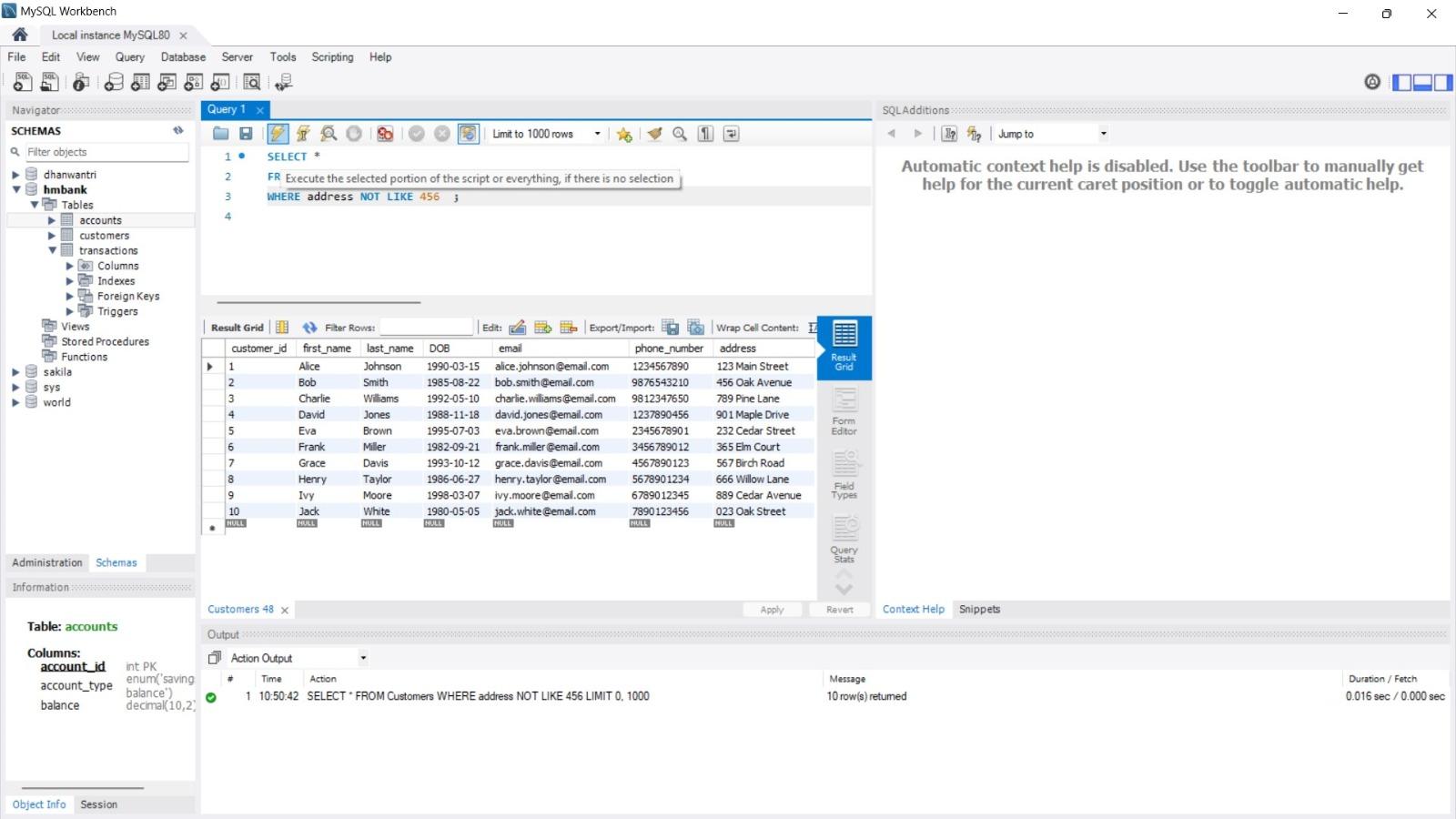
****

**11. Write a SQL query to Identify accounts where the balance is less than a specified**

**overdraft limit.**

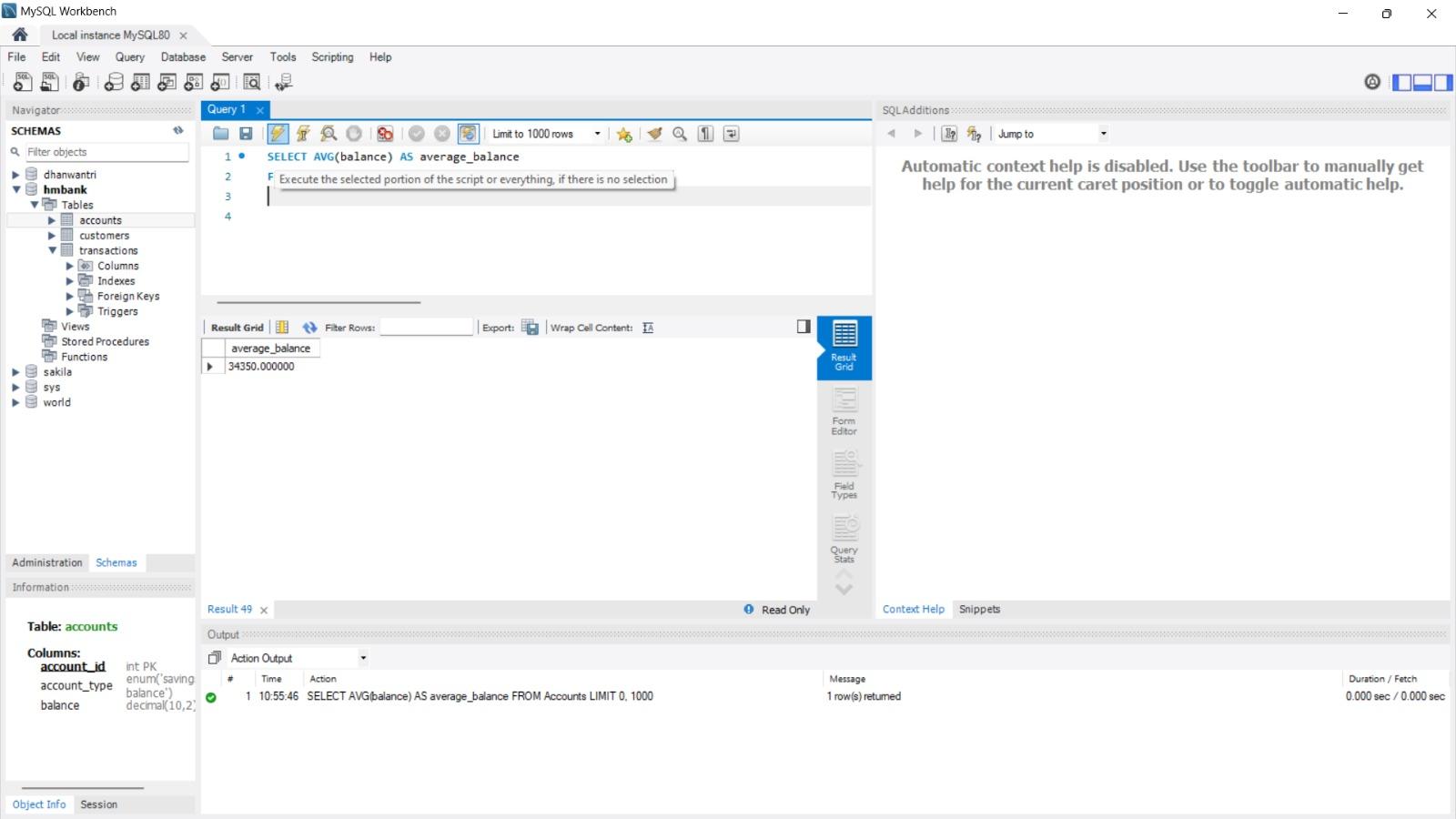
****

**12. Write a SQL query to Find customers not living in a specific city.**

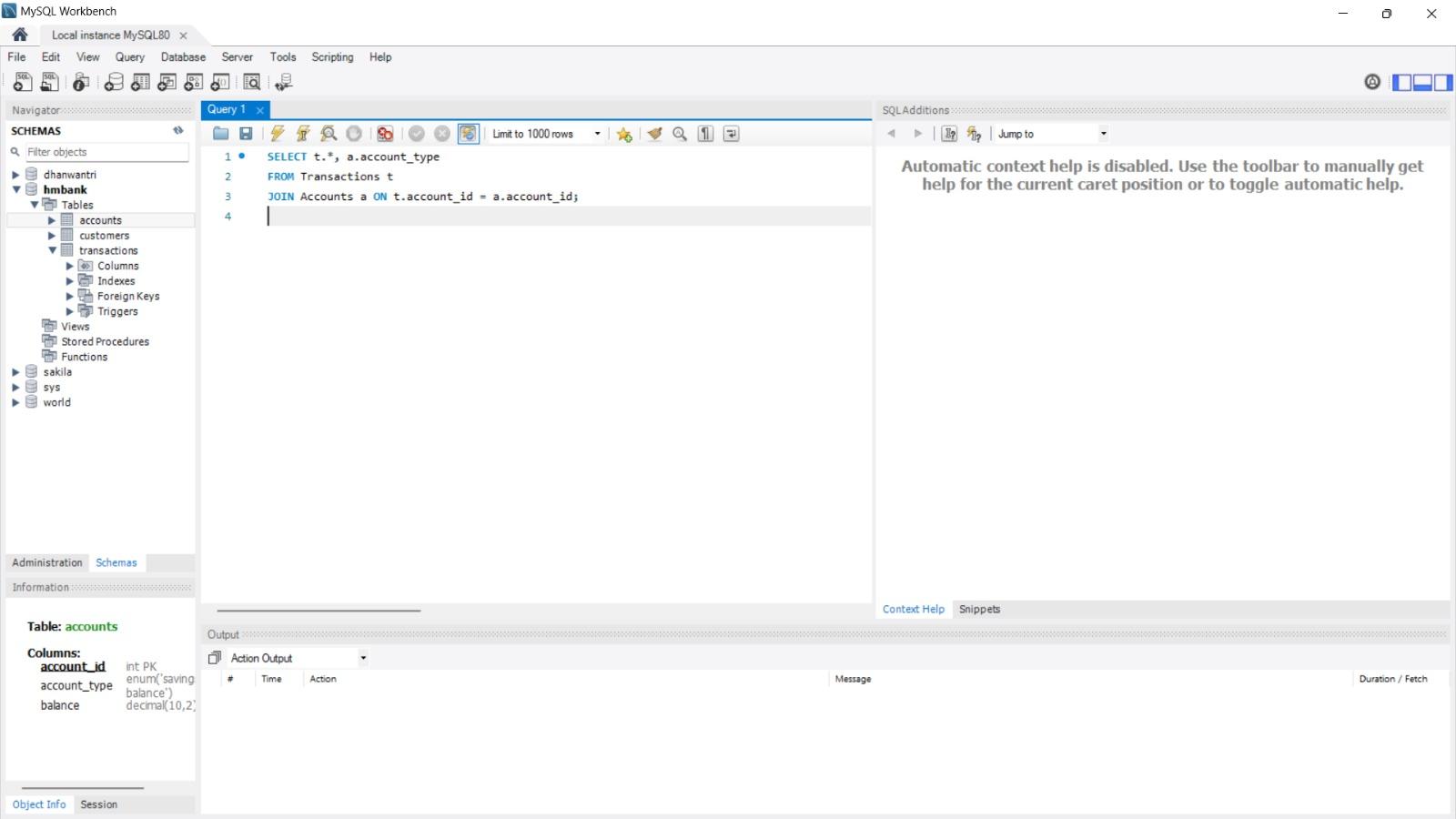
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**Task 3: Aggregate functions, Having, Order By, GroupBy and Joins:**

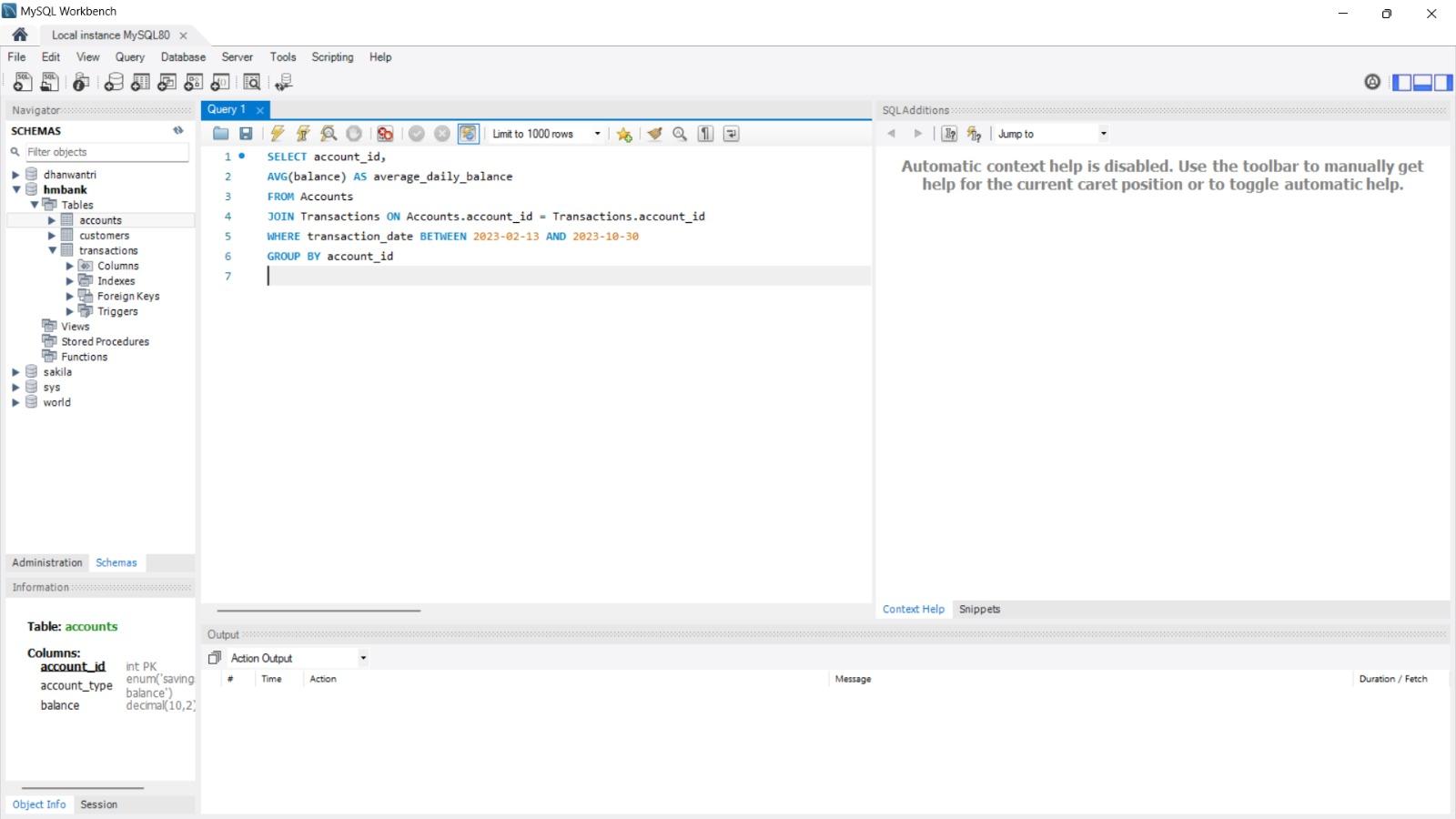
**1. Write a SQL query to Find the average account balance for all customers.**

****

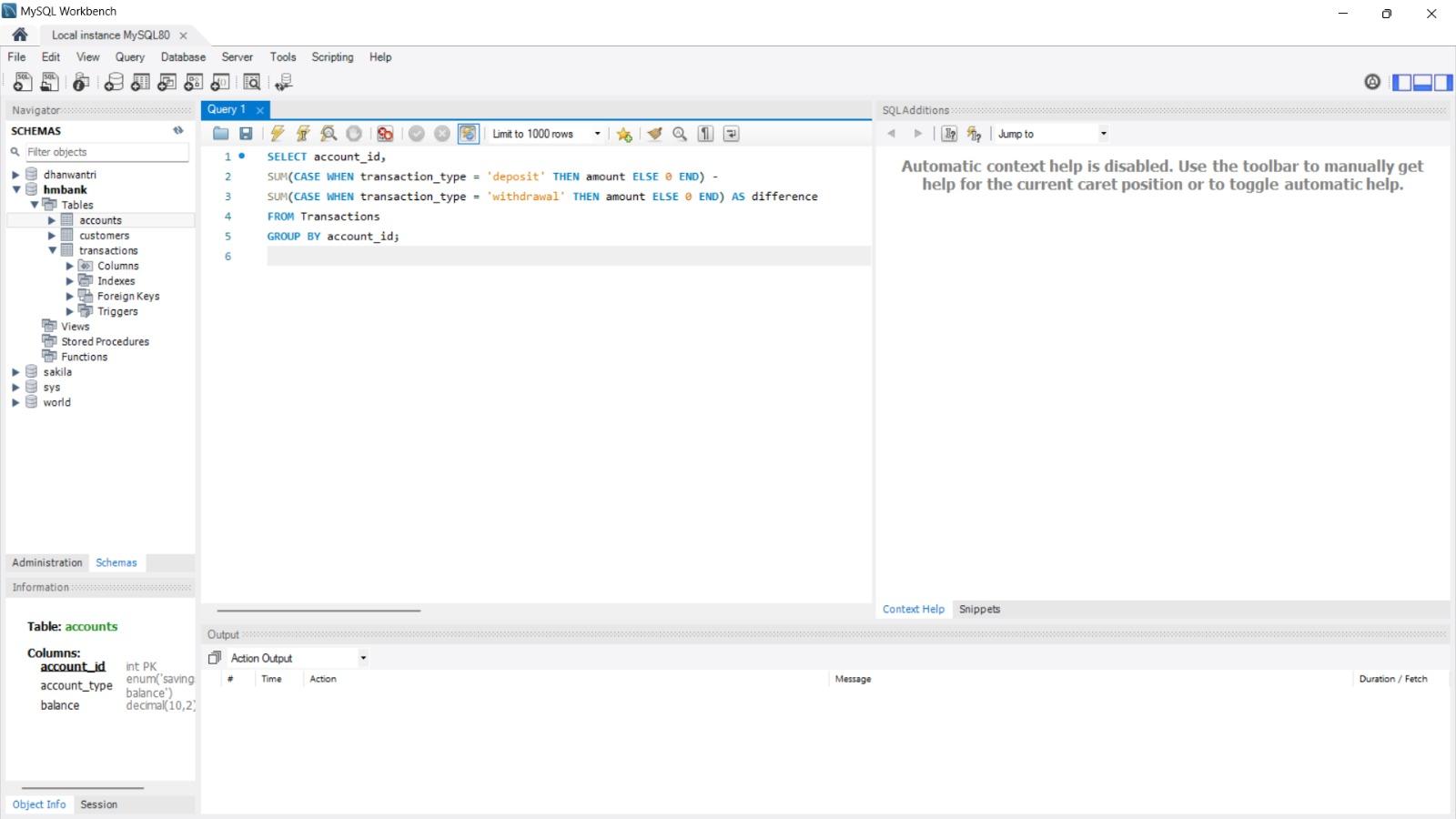
**2. Write a SQL query to Retrieve the top 10 highest account balances.**

****

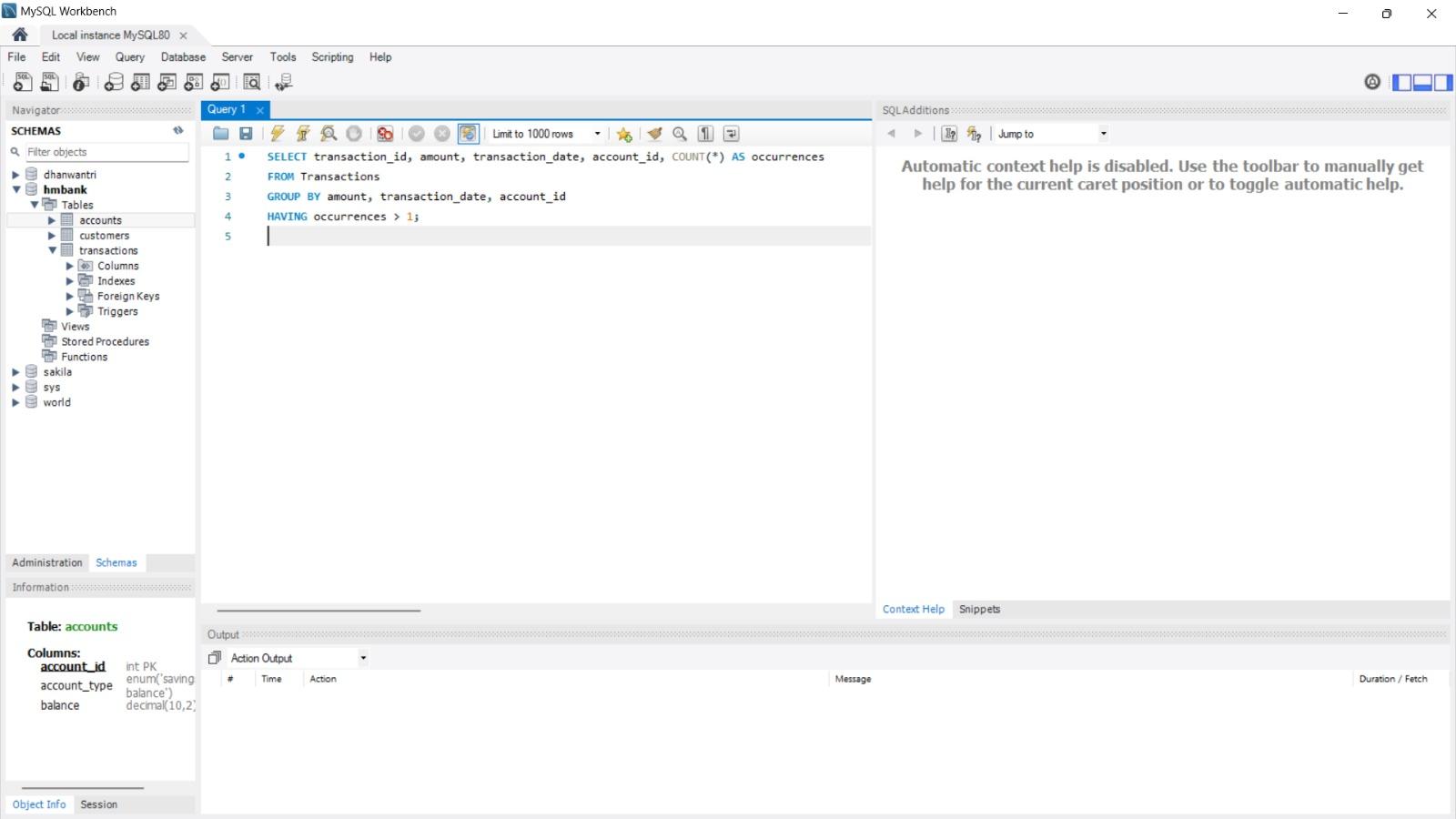
**3. Write a SQL query to Calculate Total Deposits for All Customers in specific date.**

****

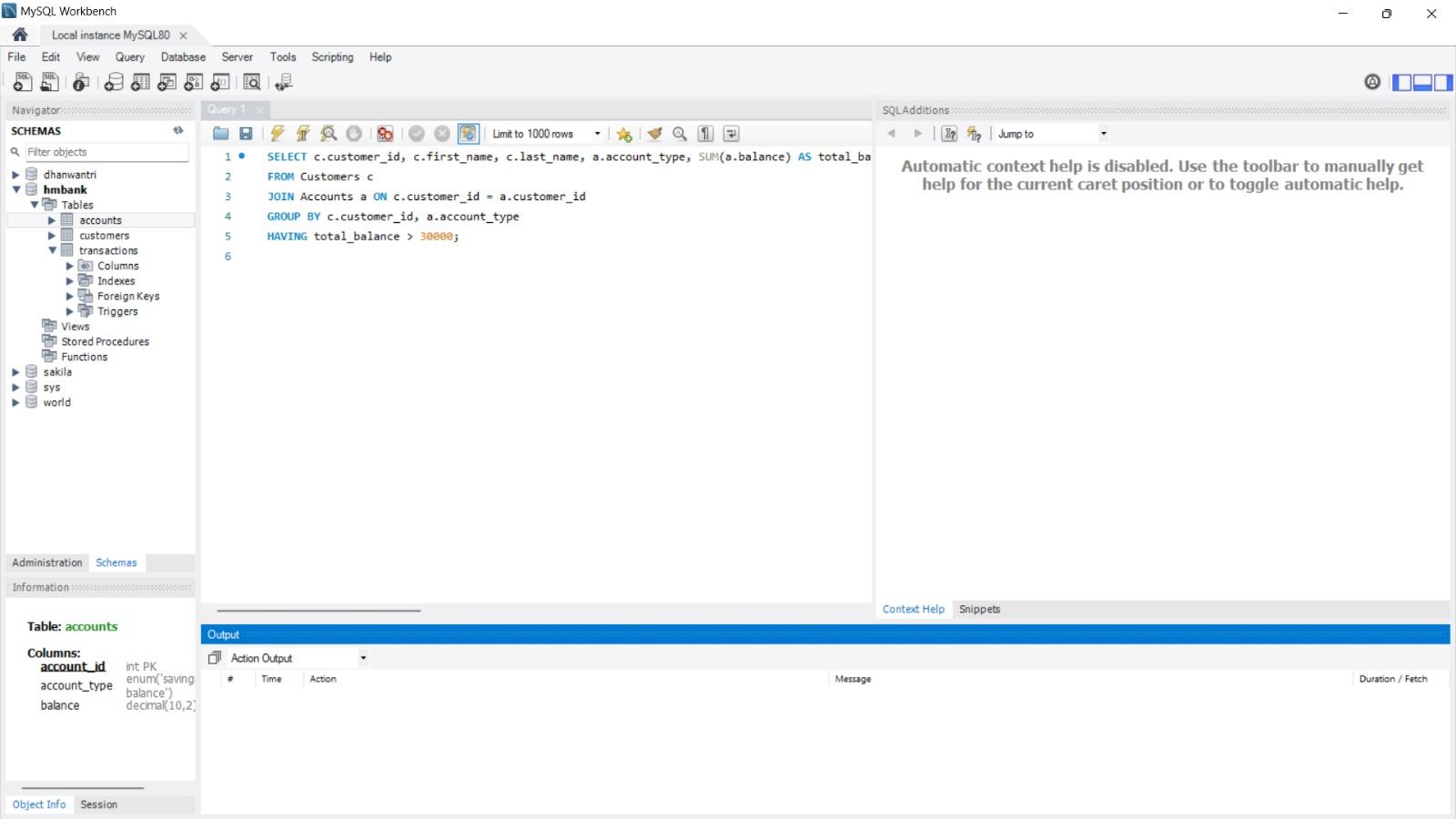
**4. Write a SQL query to Find the Oldest and Newest Customers.**

****

**5. Write a SQL query to Retrieve transaction details along with the account type.**

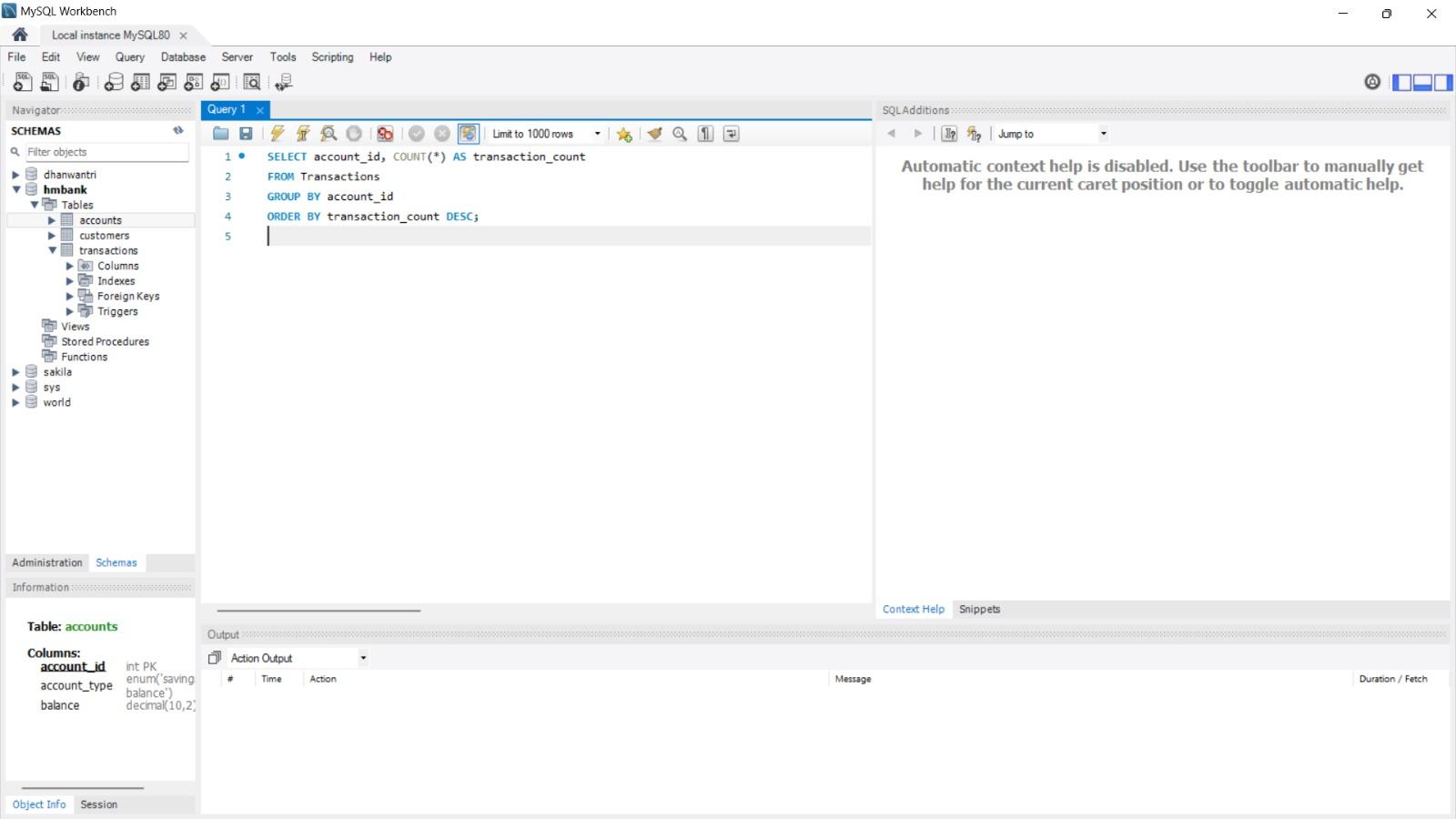
****

**6. Write a SQL query to Get a list of customers along with their account details.**

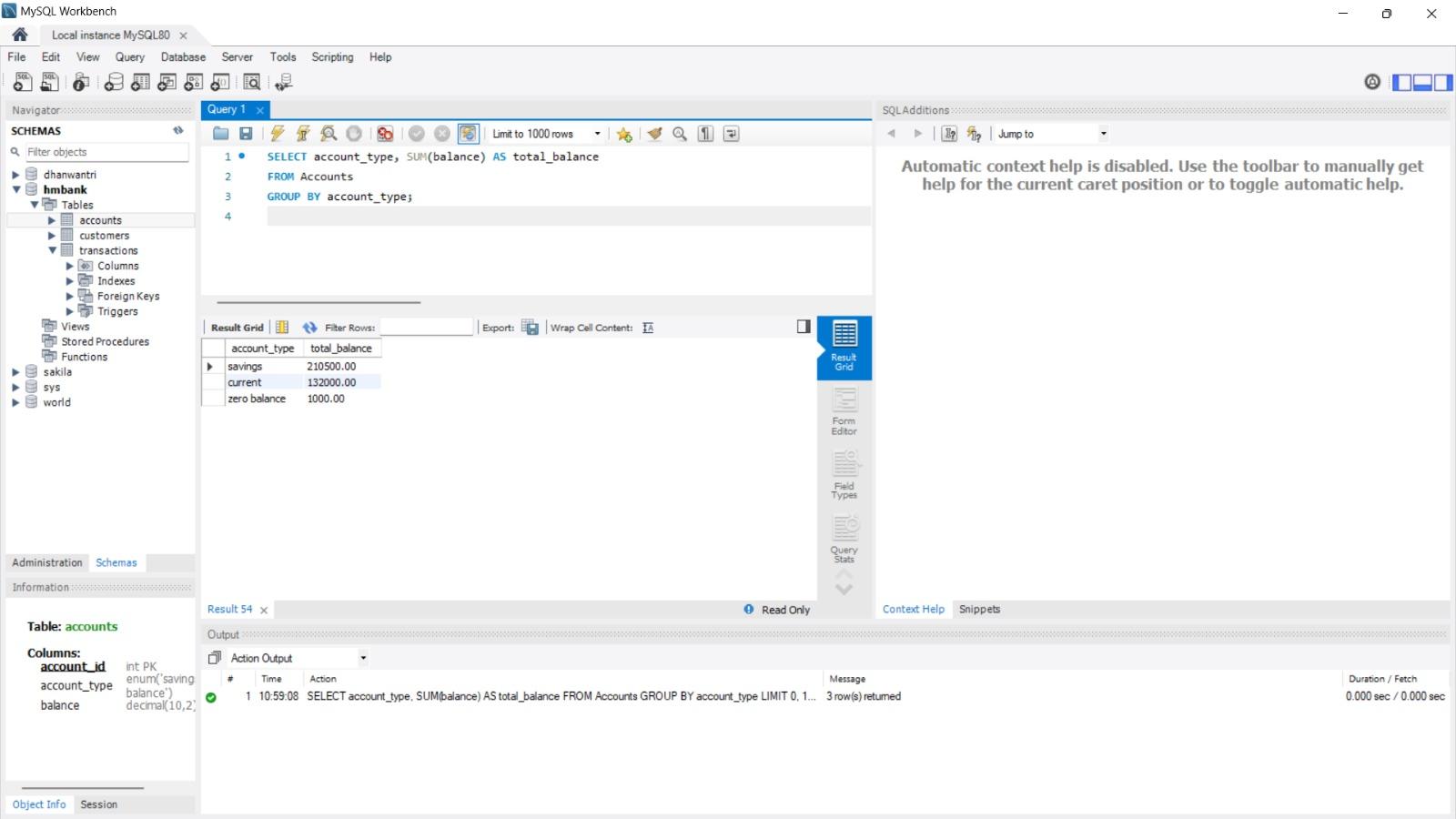
****

**7. Write a SQL query to Retrieve transaction details along with customer information for a**

**specific account.**

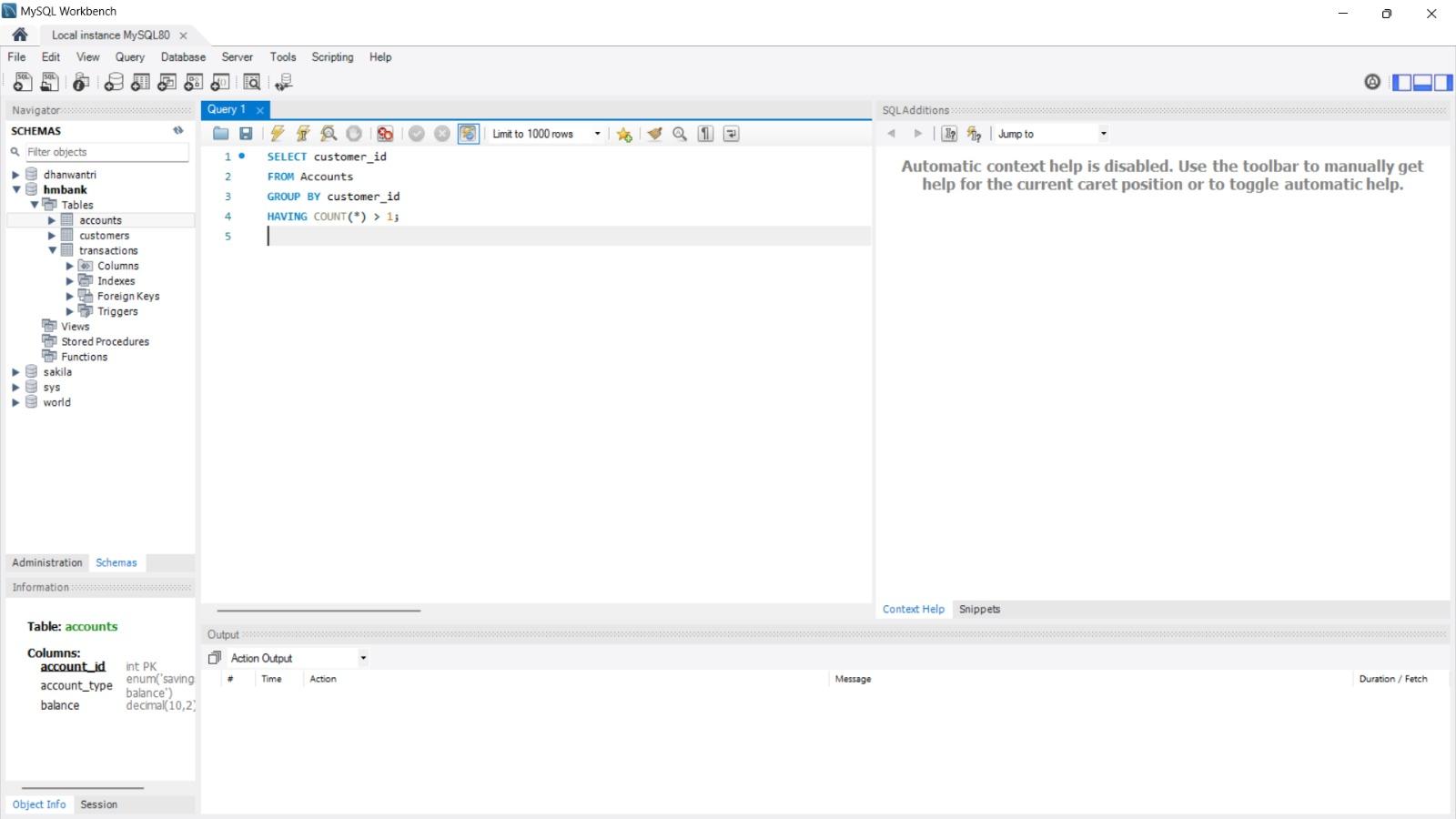
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**8. Write a SQL query to Identify customers who have more than one account.**

****

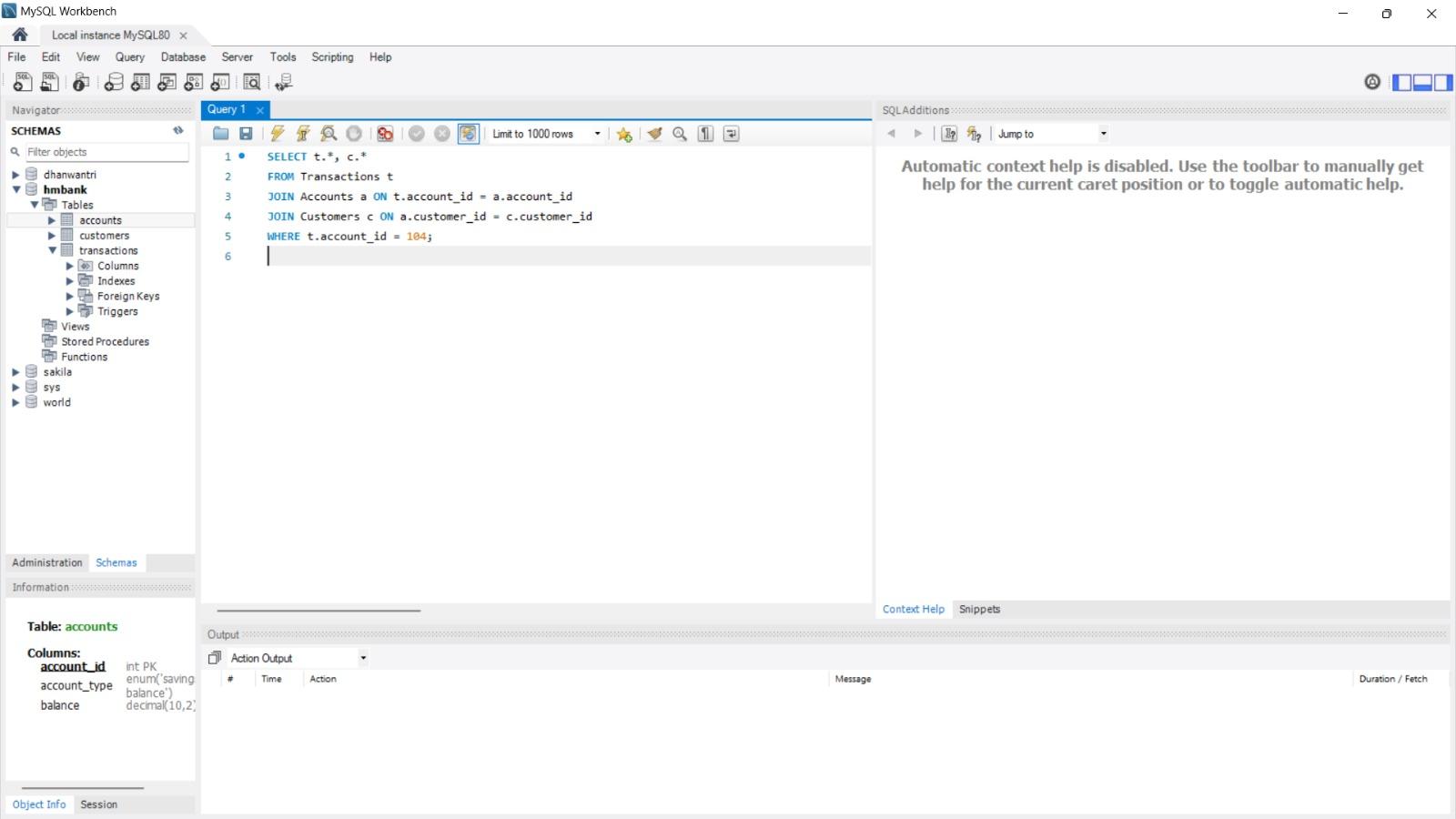
**9. Write a SQL query to Calculate the difference in transaction amounts between deposits and**

**withdrawals.**

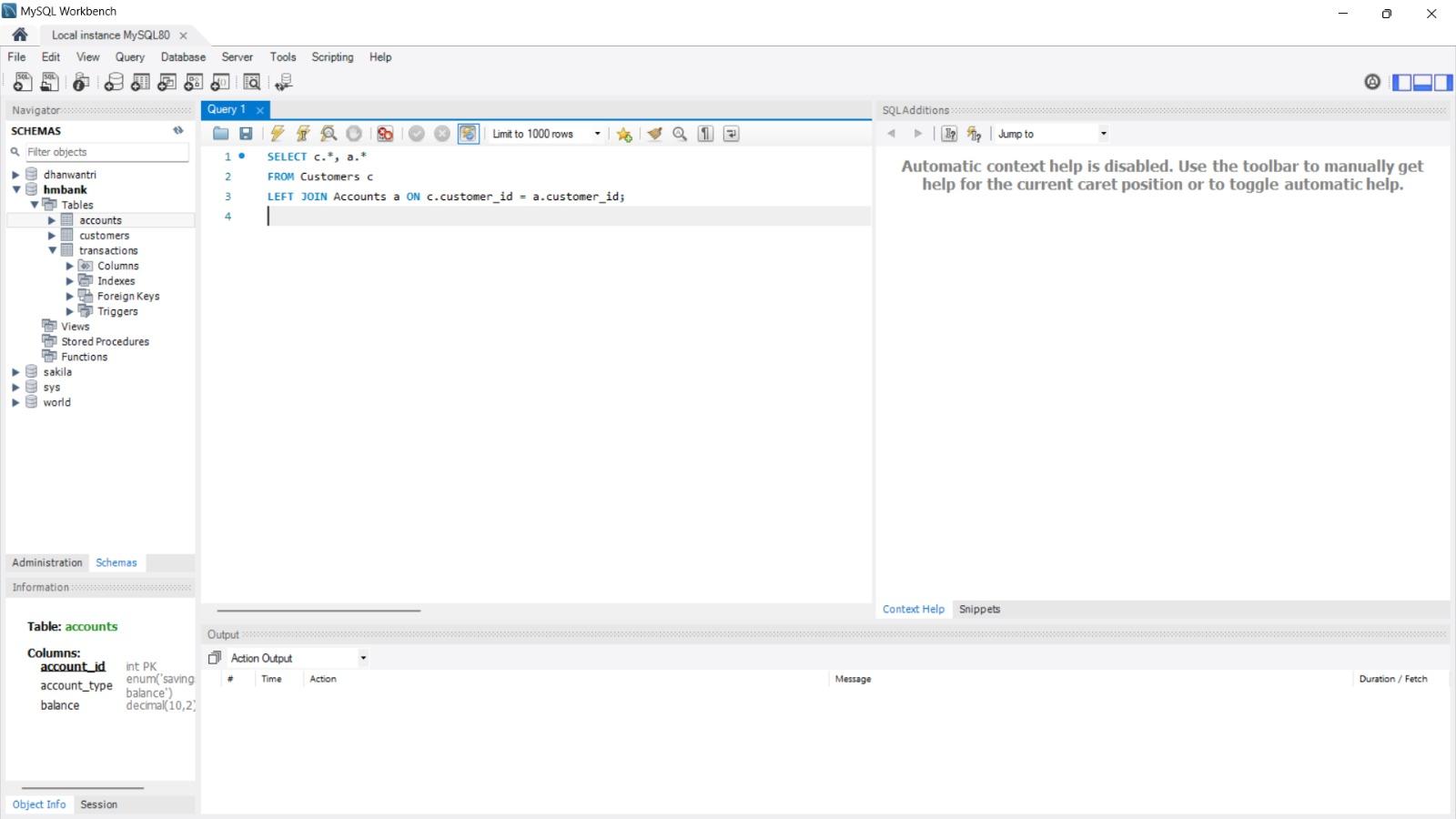
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**10. Write a SQL query to Calculate the average daily balance for each account over a specified**

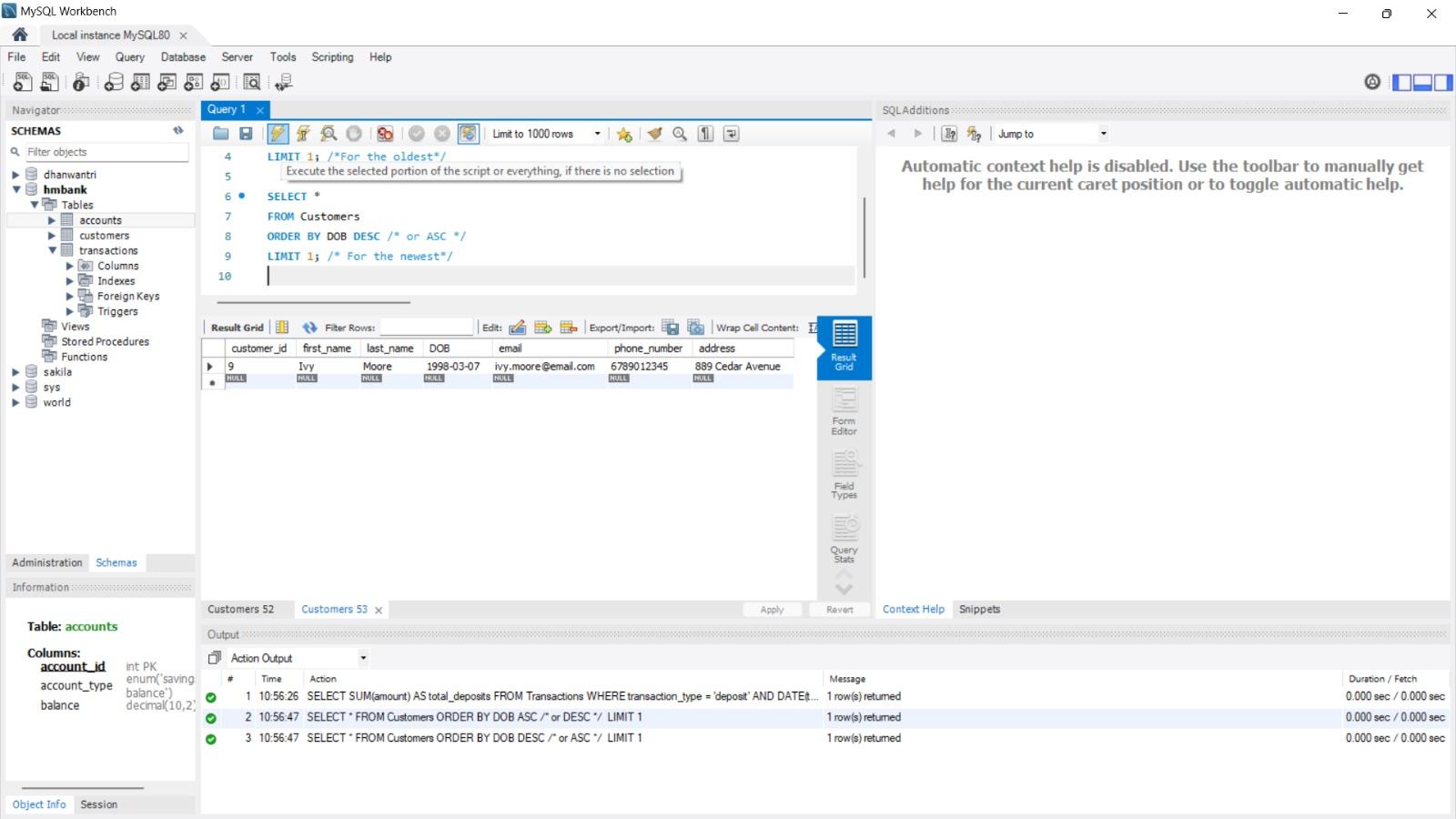
**period.**

****

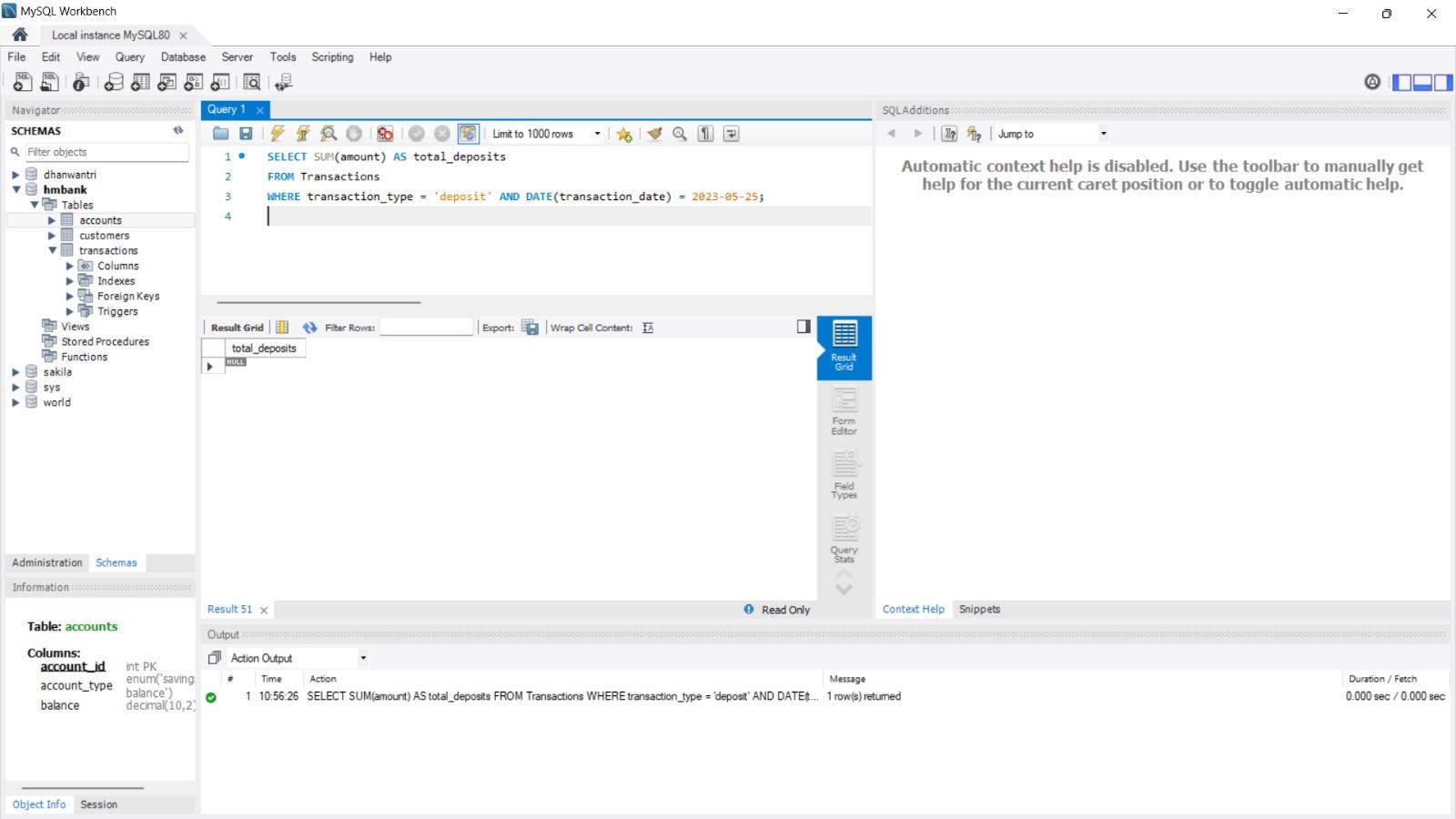
**11. Calculate the total balance for each account type.**

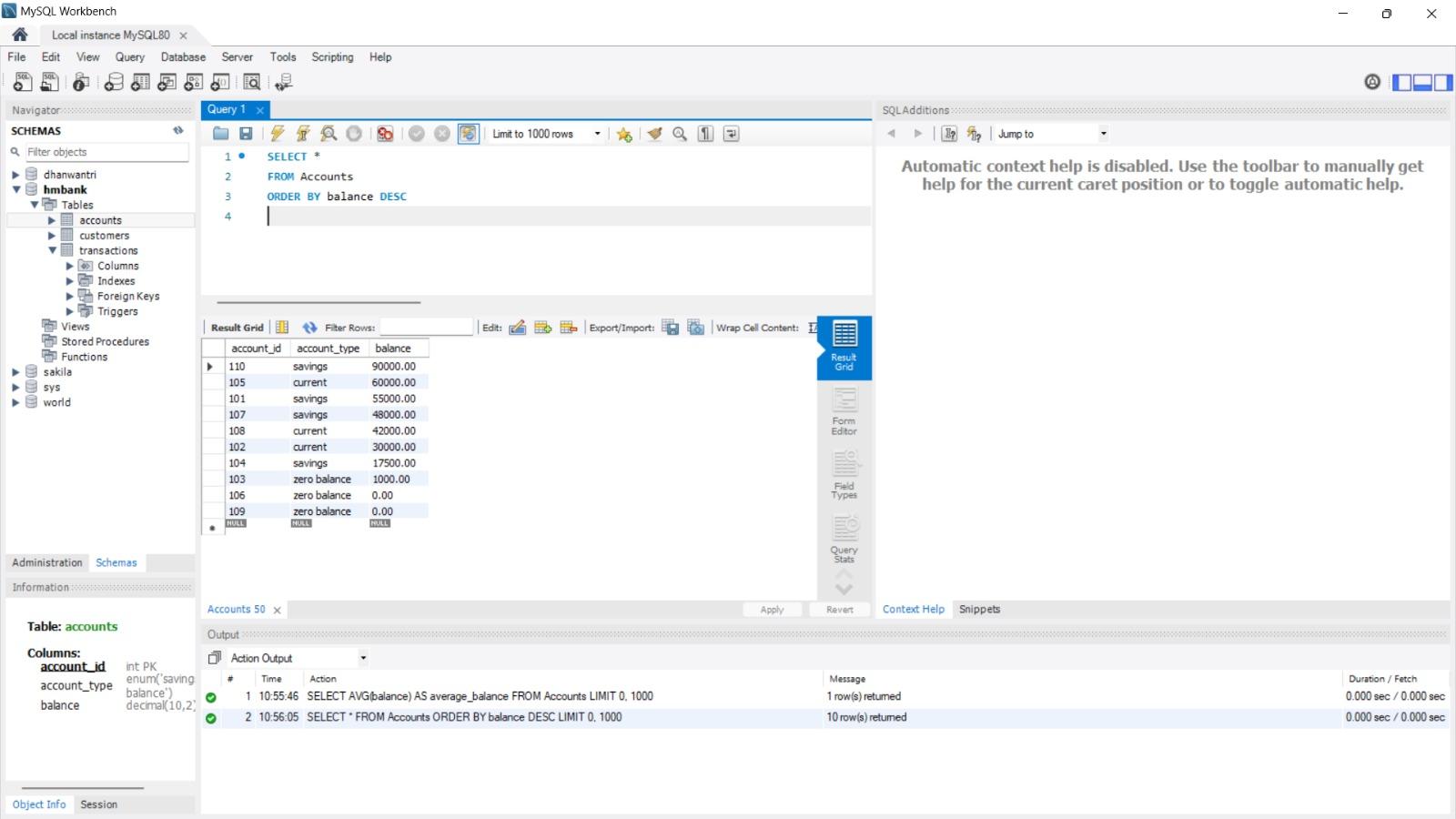
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**12. Identify accounts with the highest number of transactions order by descending order.**

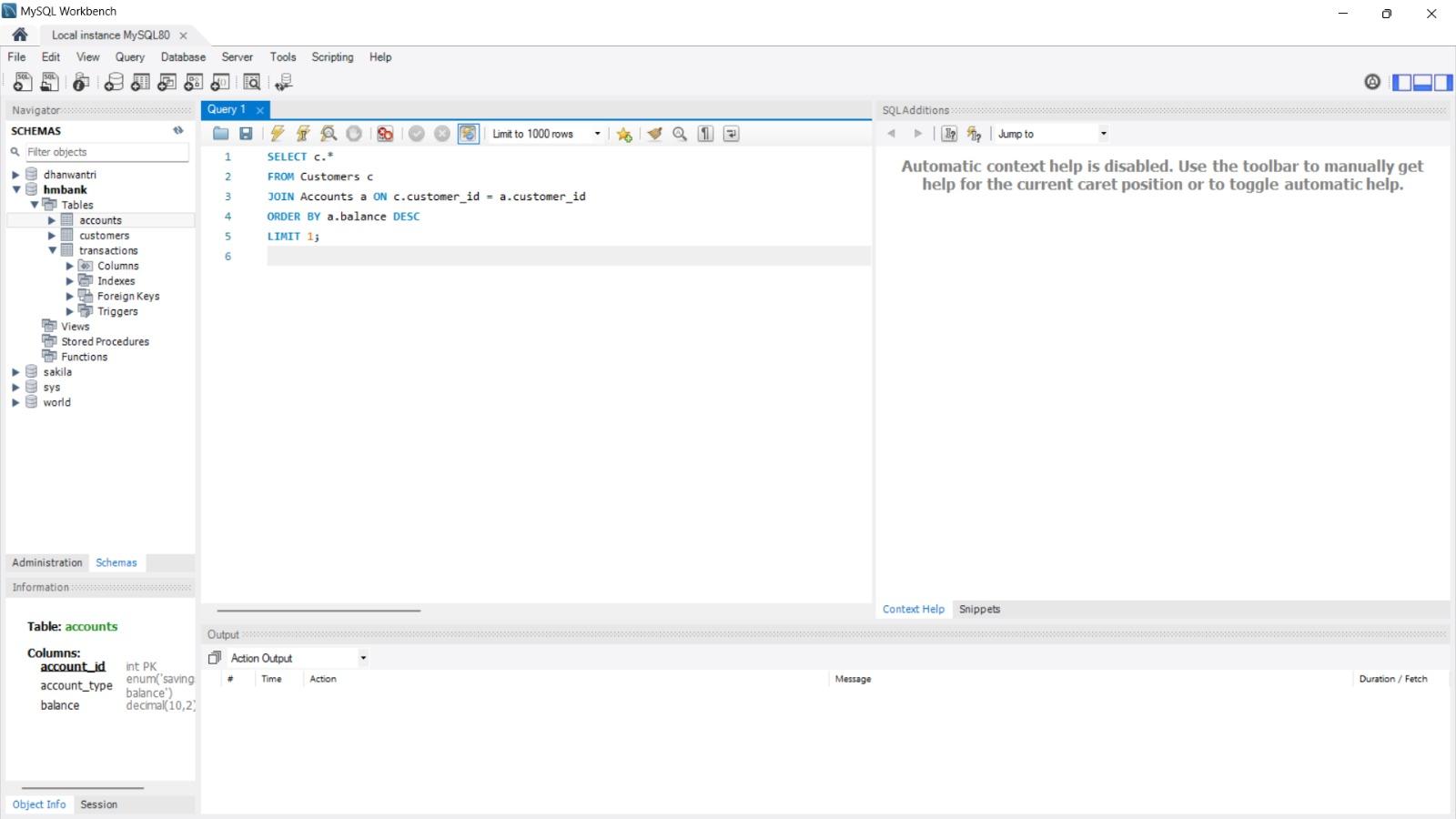
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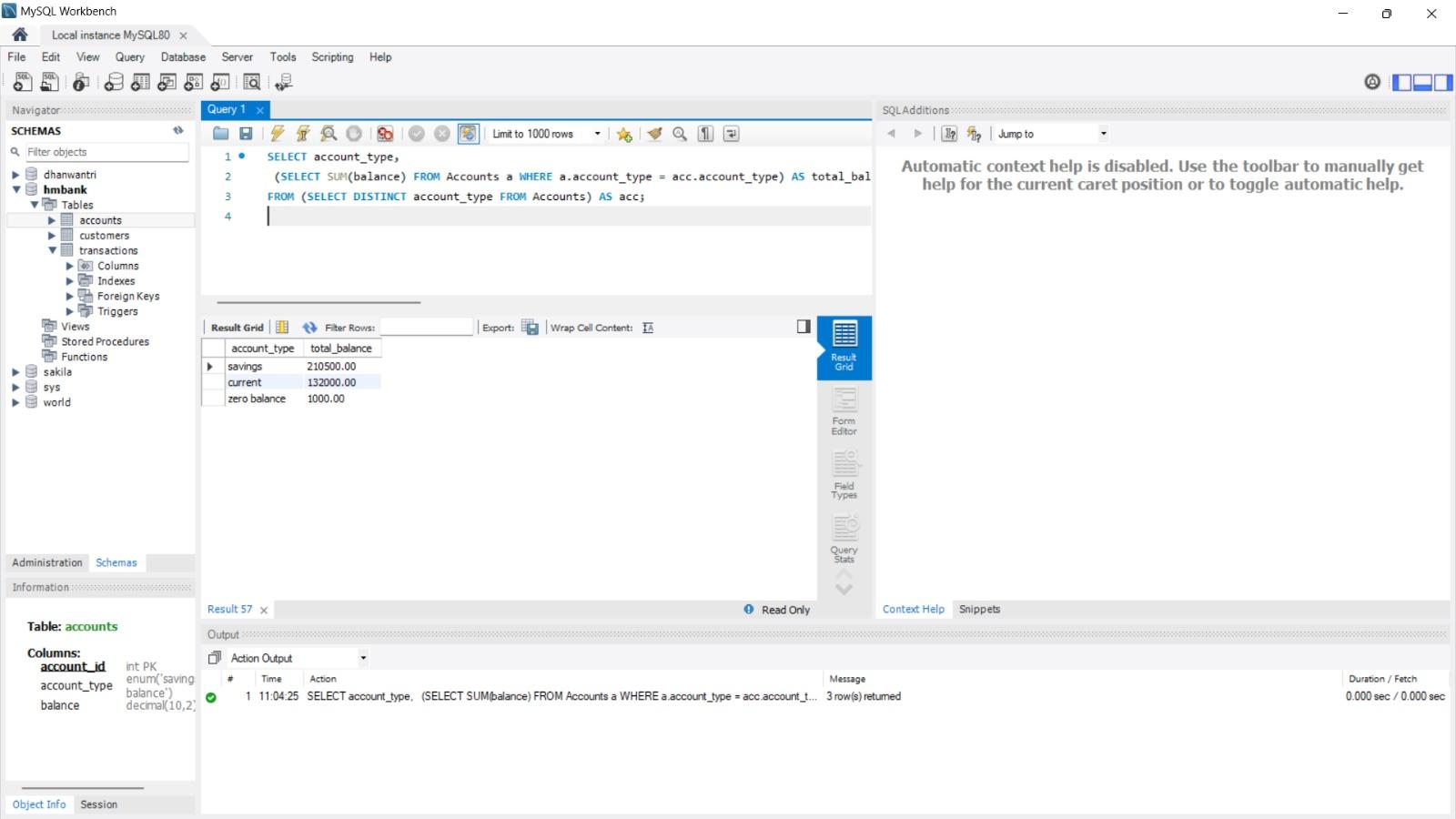
**13. List customers with high aggregate account balances, along with their account types.**

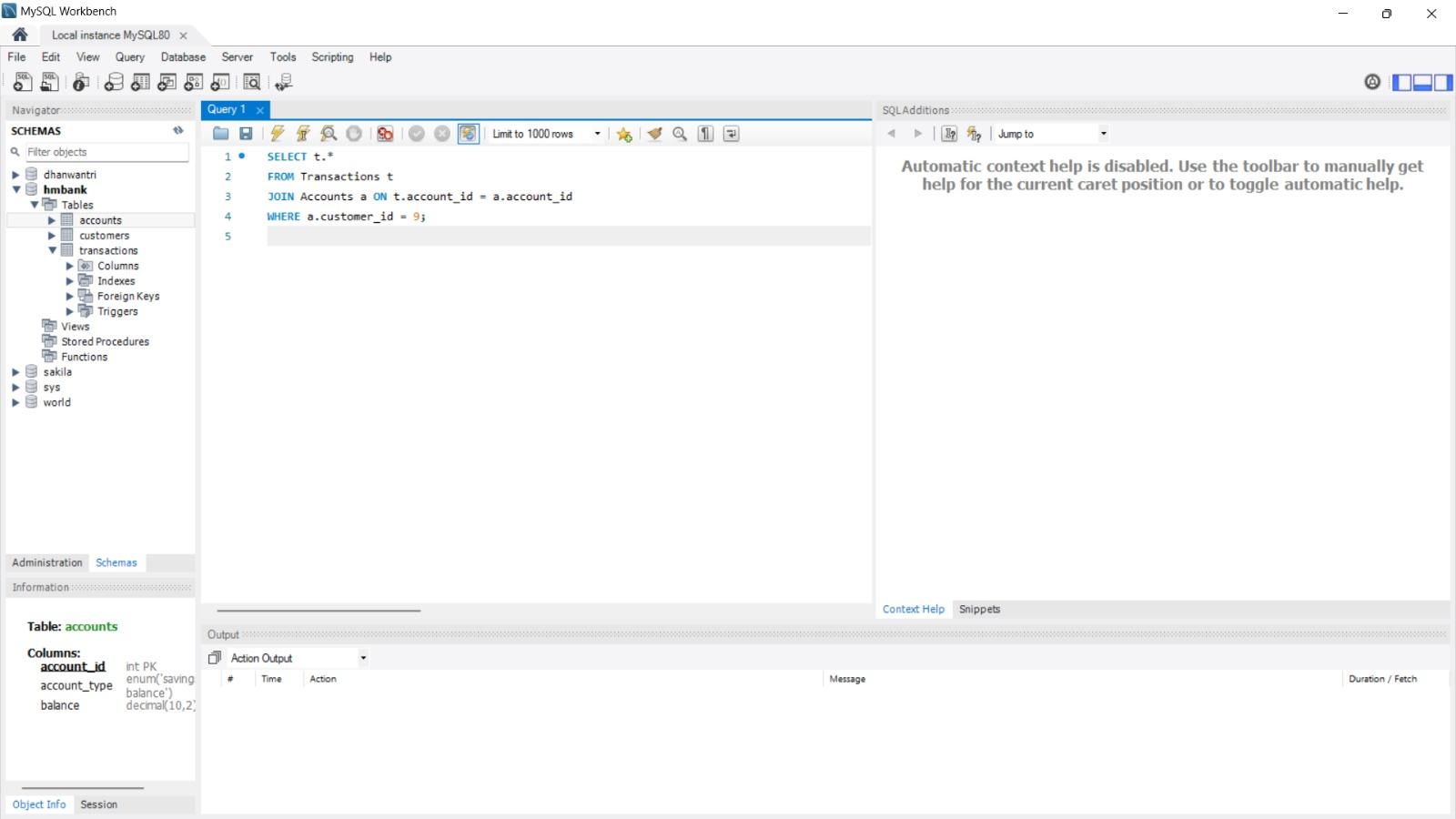
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**14. Identify and list duplicate transactions based on transaction amount, date, and account.**

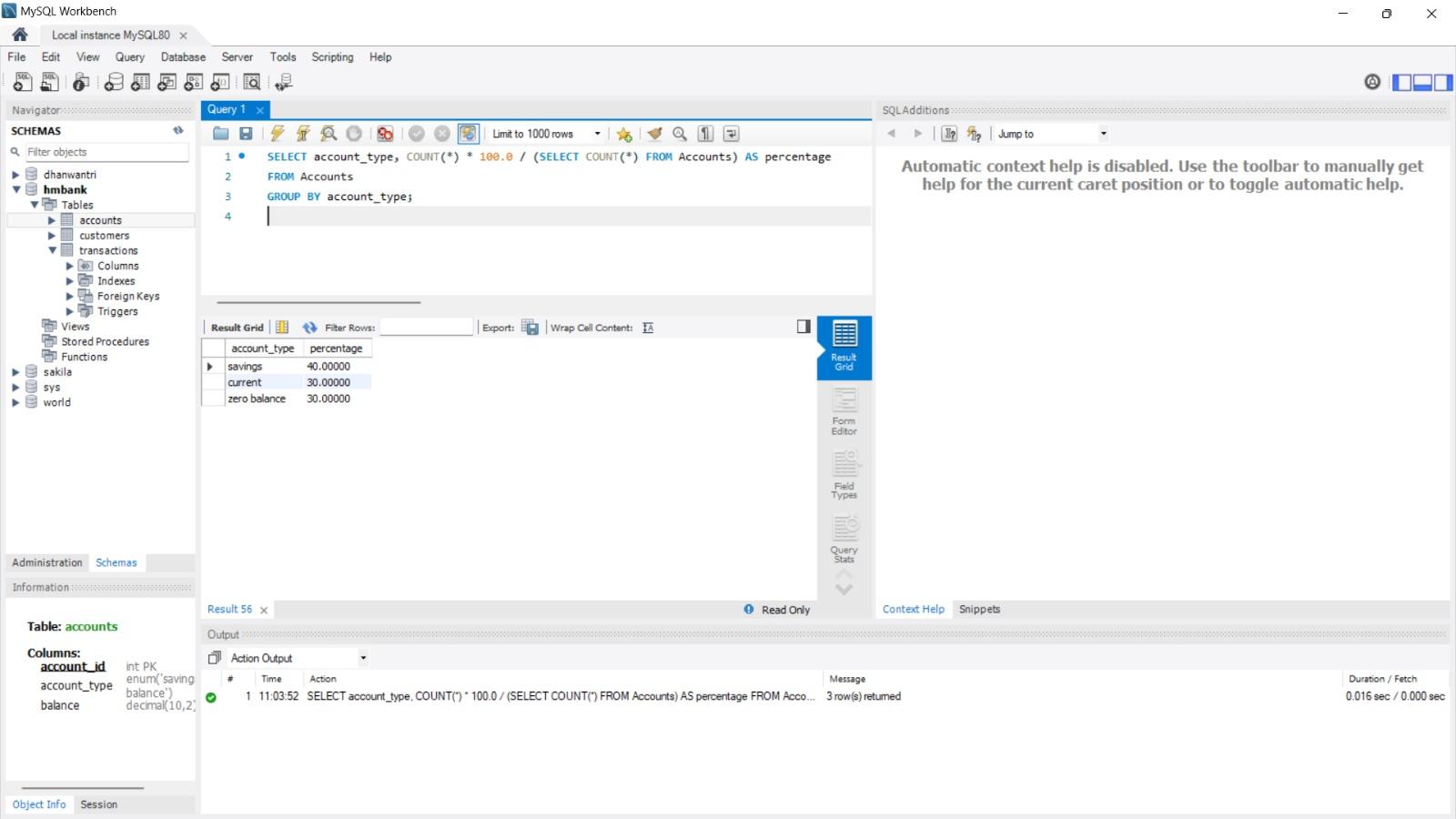
**Task 4: Subquery and its type:**

**1. Retrieve the customer(s) with the highest account balance.**

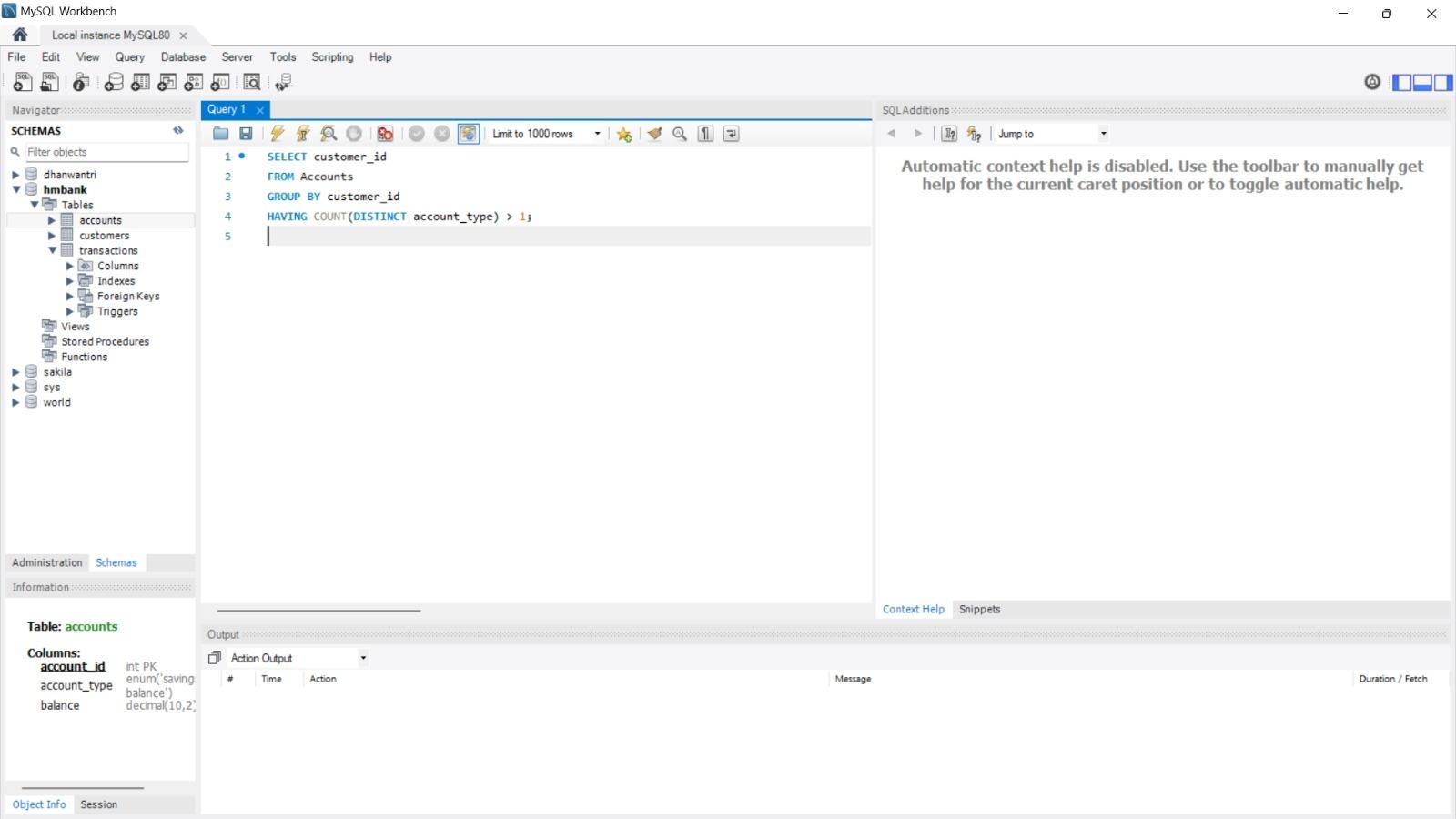
**2. Calculate the average account balance for customers who have more than one account.**

**3. Retrieve accounts with transactions whose amounts exceed the average transaction amount.**

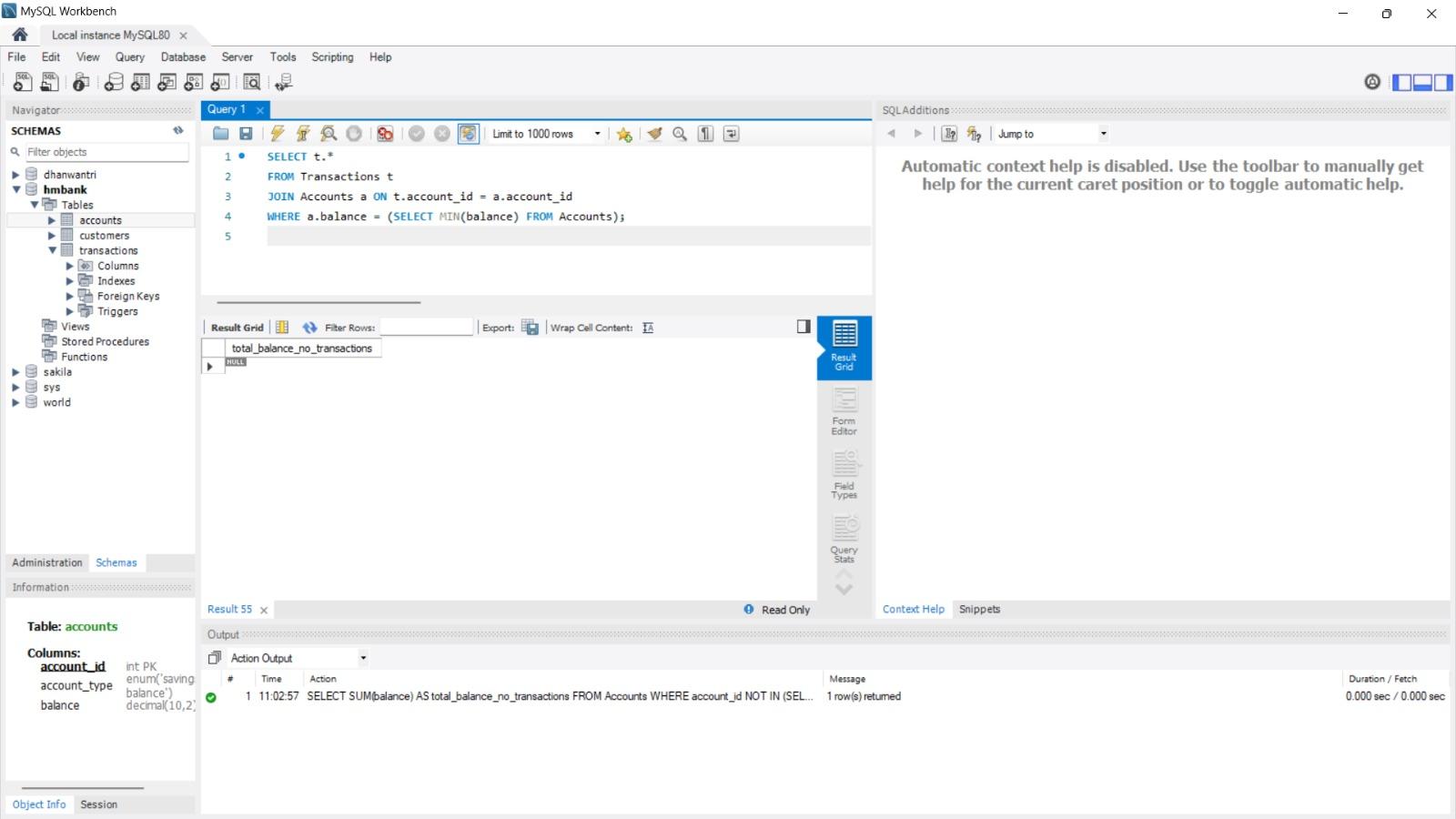
**4. Identify customers who have no recorded transactions.**

****

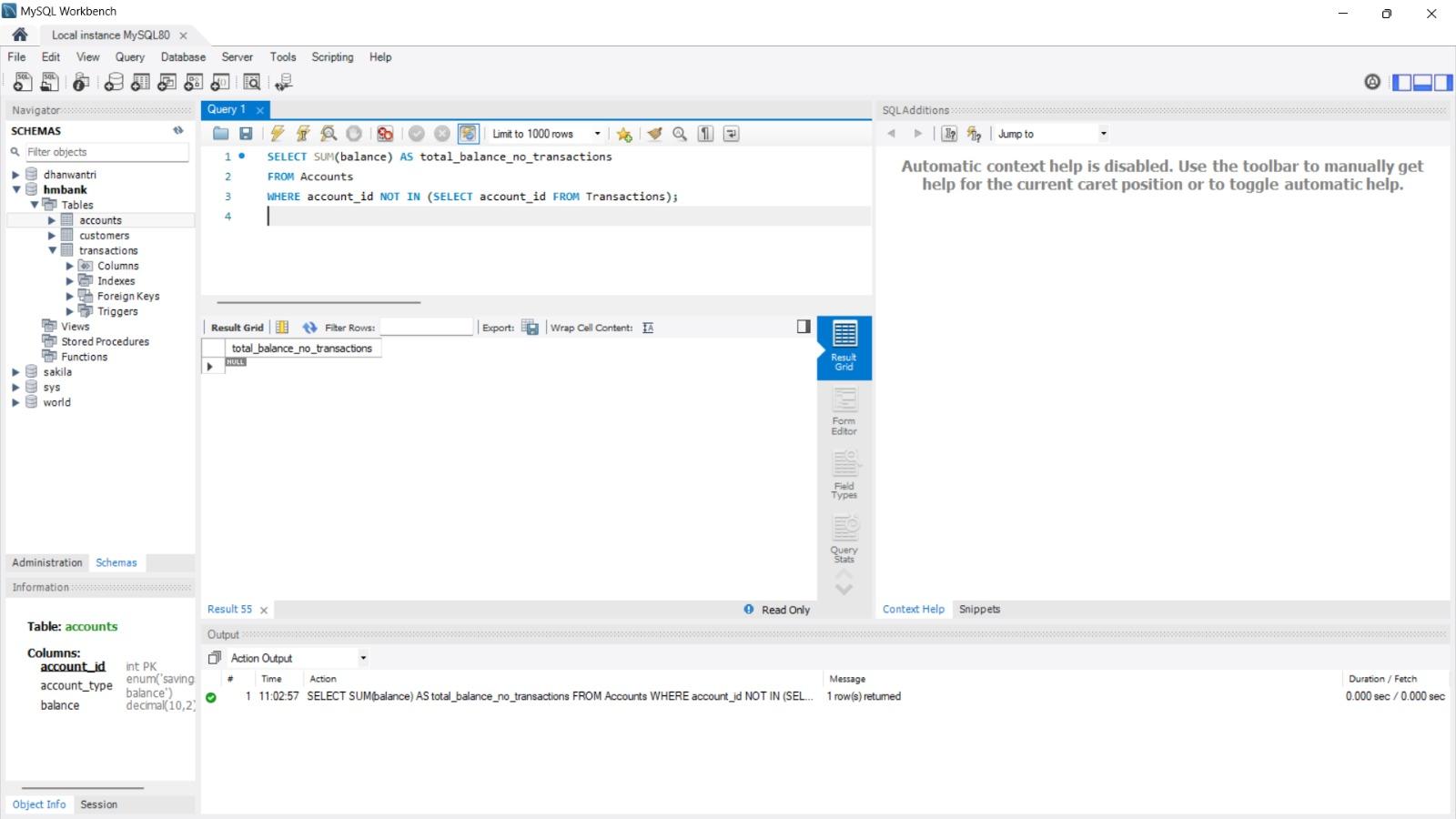
**5. Calculate the total balance of accounts with no recorded transactions.**

****

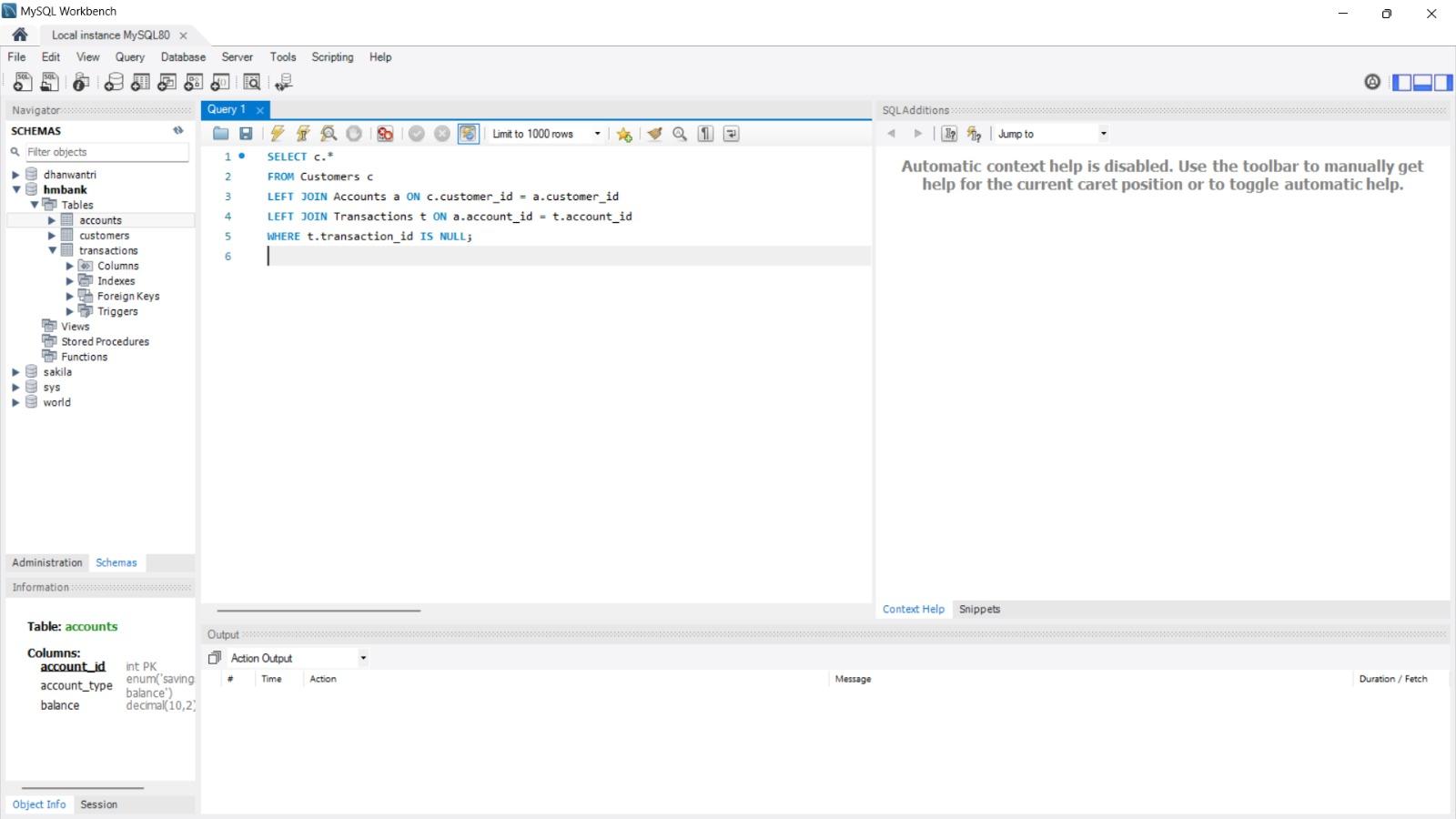
**6. Retrieve transactions for accounts with the lowest balance.**

****

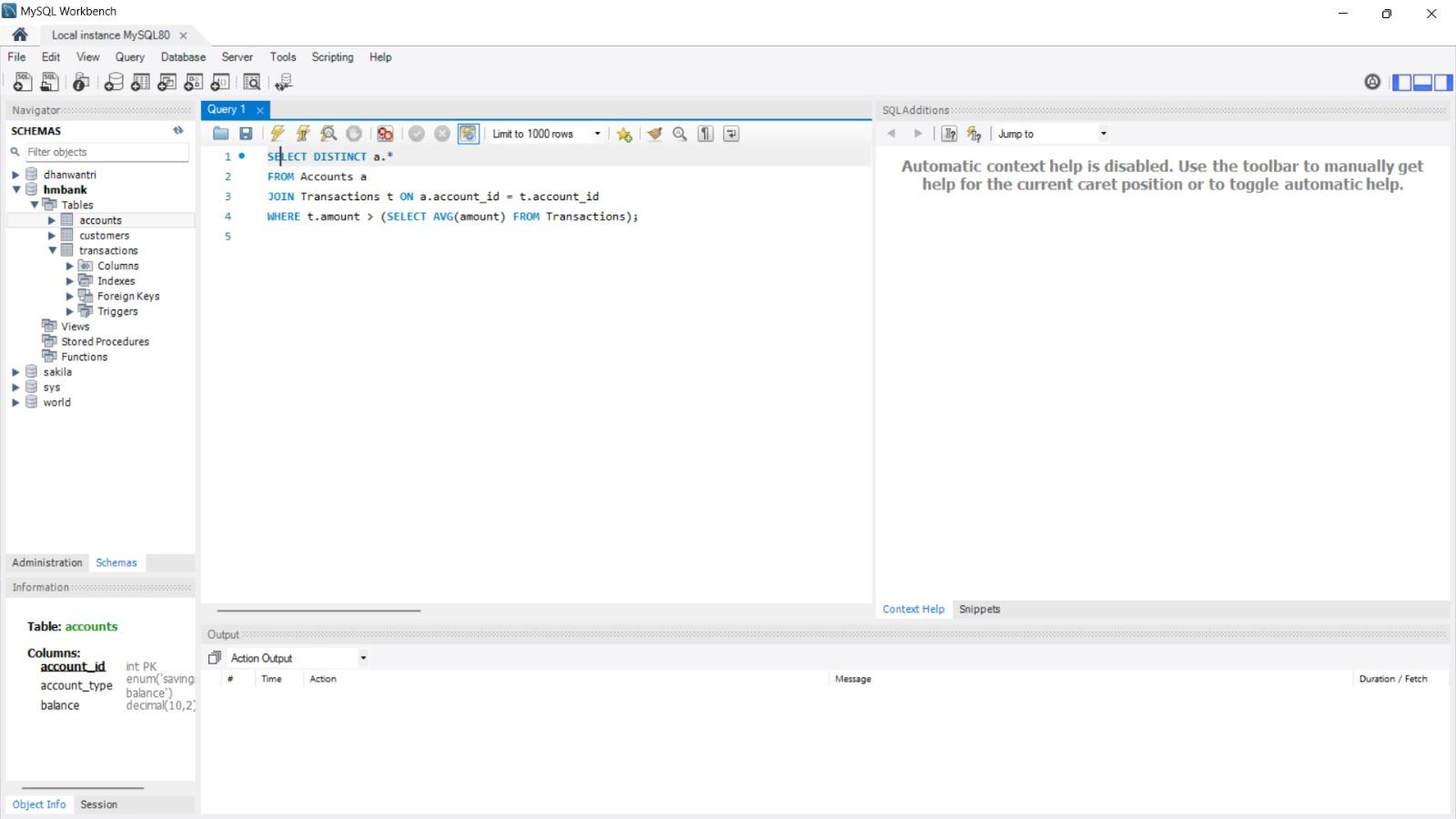
**7. Identify customers who have accounts of multiple types.**

****

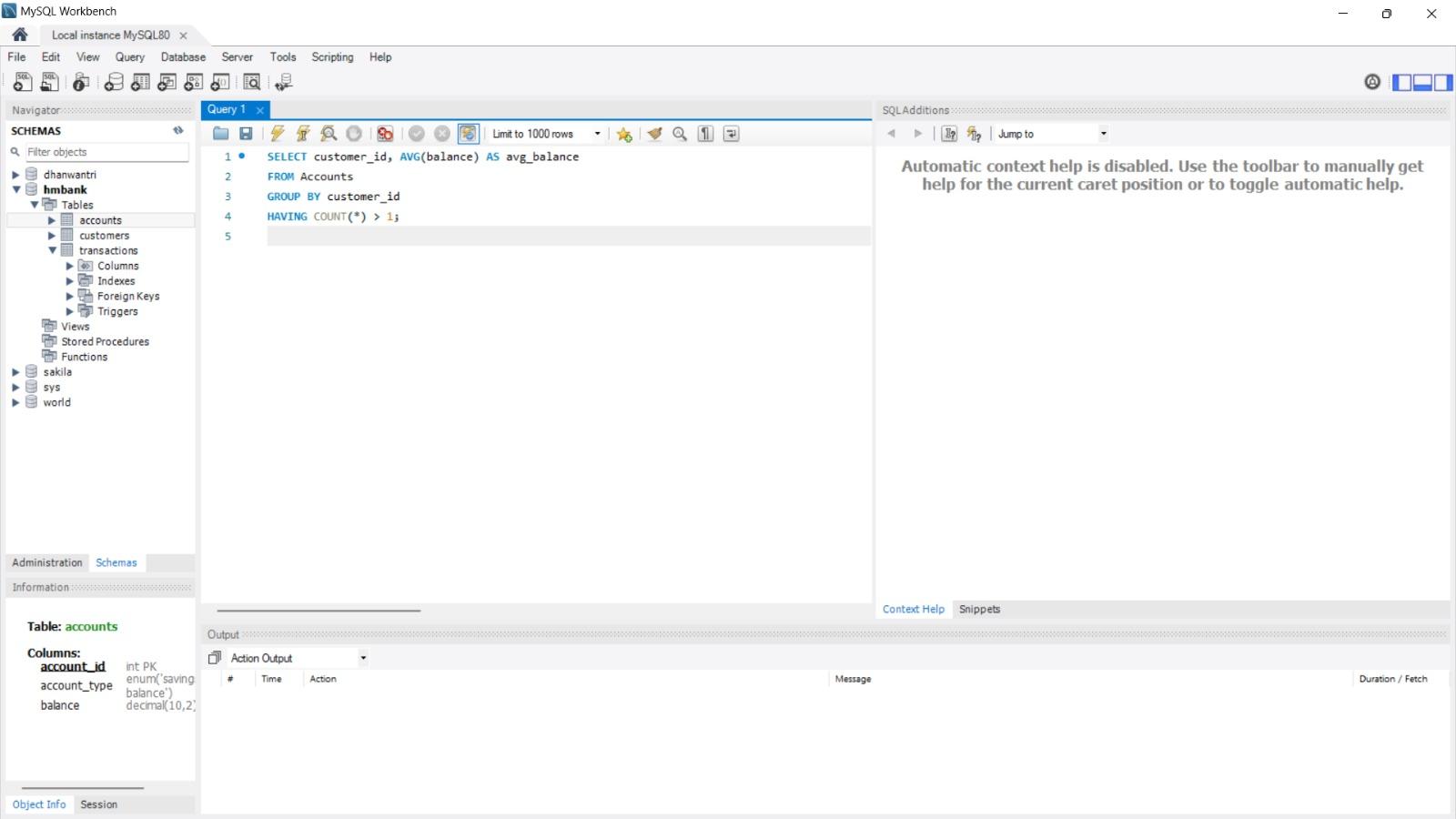
**8. Calculate the percentage of each account type out of the total number of accounts.**

****

**9. Retrieve all transactions for a customer with a given customer\_id.**

****

**10. Calculate the total balance for each account type, including a subquery within the SELECT**

**clause**