

ISLAMIC UNIVERSITY OF TECHNOLOGY



DATABASE MANAGEMENT SYSTEMS LAB

CSE 4308 / CSE 4174

Lab 7

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1 Lab Tasks

1. Run the lab7.sql file to create and populate the tables such that it maintains the following schema:

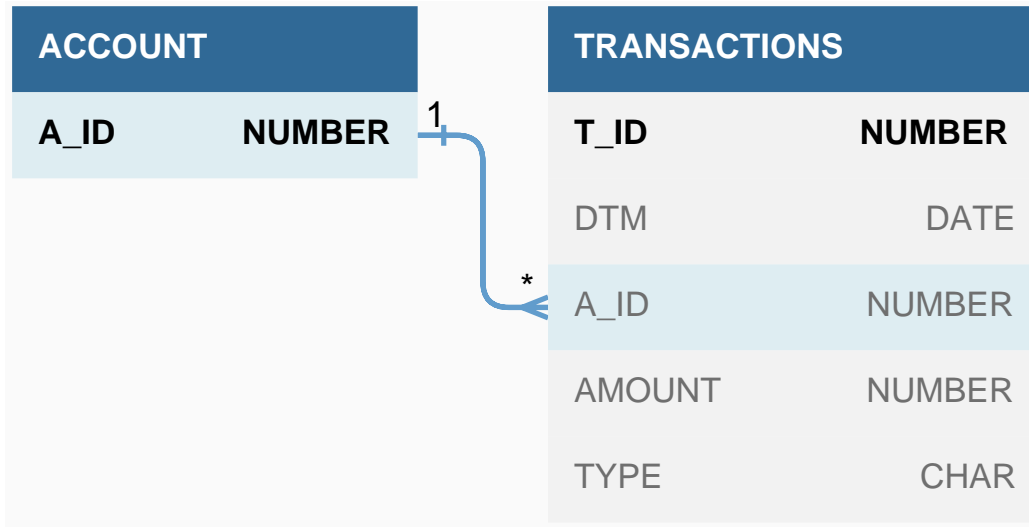


Figure 1: Database Schema.

The ACCOUNT table contains only the A_ID. The TRANSACTIONS table contains the information related to each transaction that occurs in the bank. The table stores the transaction ID, date of the transaction, account involved in the transaction, the amount transacted, and the type of the transaction. The TYPE column is set to 0 if the money is credited to the account, i.e., the money is added to the account, and 1 if the money is debited from the account, i.e., the money is subtracted from the account. There are 4 types of accounts in the bank:

- (a) **Commercially Important Person (CIP):** If the person has a balance of more than 1,000,000 and all the transactions that they have made totals more than 5,000,000.
- (b) **Very Important Person (VIP):** If the person has a balance of more than 500,000 but less than 900,000 and all the transactions that they have made totals more than 2,500,000 but less than 4,500,000.

- (c) **Ordinary Person (OP):** If the user has a balance less than 100,000 and all the transactions they have made totals less than 1,000,000.
- (d) **Not Categorized:** If the account does not satisfy any of the given conditions.

2. Write a JAVA code to:

- (a) Establish connection to the database.
- (b) Count the total number of accounts, number of CIP, VIP, OP, and Not Categorized.
- (c) Show which account has done total transactions (both debit or credit) of at least 10,000 \$ in the past month.
- (d) Find the date on which most transactions that are higher than the average amount have occurred.

- 3. Use a prepared statement to insert two new records into the **TRANSACTIONS** table of the given schema. You should use the same prepared statement for inserting both the records. Do not create two separate **PreparedStatement**s.
- 4. Use these metadata features to print the number of columns, names of the columns, and the data types of the columns for the **ACCOUNT** and **TRANSACTIONS** tables in the given schema.
- 5. Delete the tables from the database using Java. **Note:** Do not forget to use **commit** to save the changes.