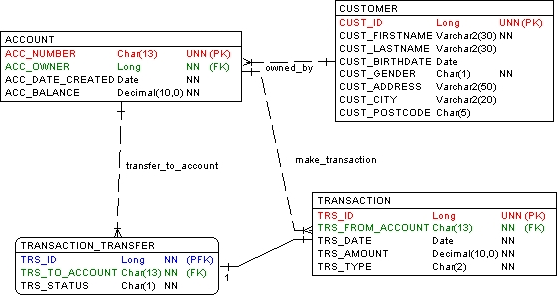
# Structured Query Language (SQL)



Note:

UNN : Unique, Not Null PK : Primary Key

FK : Foreign Key NN : Not Null

Table description:

1. CUSTOMER: contains all bank customer data

The column CUST\_GENDER is set to 1 for male and 2 for female.

1. ACCOUNT: contains all customer accounts

The column ACC\_OWNER is the Foreign Key which refers to the column CUST\_ID of the table CUSTOMER.

1. TRANSACTION: records all transactions.

The column TRS\_TYPE contains the transaction type with possible values:

* 1. DB: for debit transaction.
  2. CR: for credit transaction.
  3. TF: for money transfer. The column TRS\_FROM\_ACCOUNT contains the source account.

1. TRANSACTION\_TRANSFER: contains additional information if the transaction is money transfer.

The column TRS\_STATUS contains one of the following values:

* 1. 0: if transaction is not executed yet
  2. 1: if transaction is executed successfully
  3. -1: if transaction is failed (e.g. the balance of source account (TRS\_FROM\_ACCOUNT) is not available)

# Questions

Create SQL queries for the following requirements:

1. Recapitulation of number of accounts owned by every customer.

Answer:

SELECT

c.CUST\_ID,

c.CUST\_FIRSTNAME,

c.CUST\_LASTNAME,

COUNT(a.ACC\_NUMBER) AS NUM\_OF\_ACCOUNTS

FROM

CUSTOMER c

LEFT JOIN

ACCOUNT a ON c.CUST\_ID = a.ACC\_OWNER

GROUP BY

c.CUST\_ID, c.CUST\_FIRSTNAME, c.CUST\_LASTNAME;

1. All transactions created by John Michael sorted by account number and transaction date

Answer:

SELECT

t.TRS\_ID,

t.TRS\_FROM\_ACCOUNT,

t.TRS\_DATE,

t.TRS\_AMOUNT,

t.TRS\_TYPE

FROM

TRANSACTION t

JOIN

CUSTOMER c ON t.TRS\_FROM\_ACCOUNT = a.ACC\_NUMBER

WHERE

c.CUST\_FIRSTNAME = 'John' AND c.CUST\_LASTNAME = 'Michael'

ORDER BY

t.TRS\_FROM\_ACCOUNT, t.TRS\_DATE;