Term Project

**Advanced Database Concepts – COMP 214 SECTION 003**

Project Case:

**Bank Database / User Accounts**

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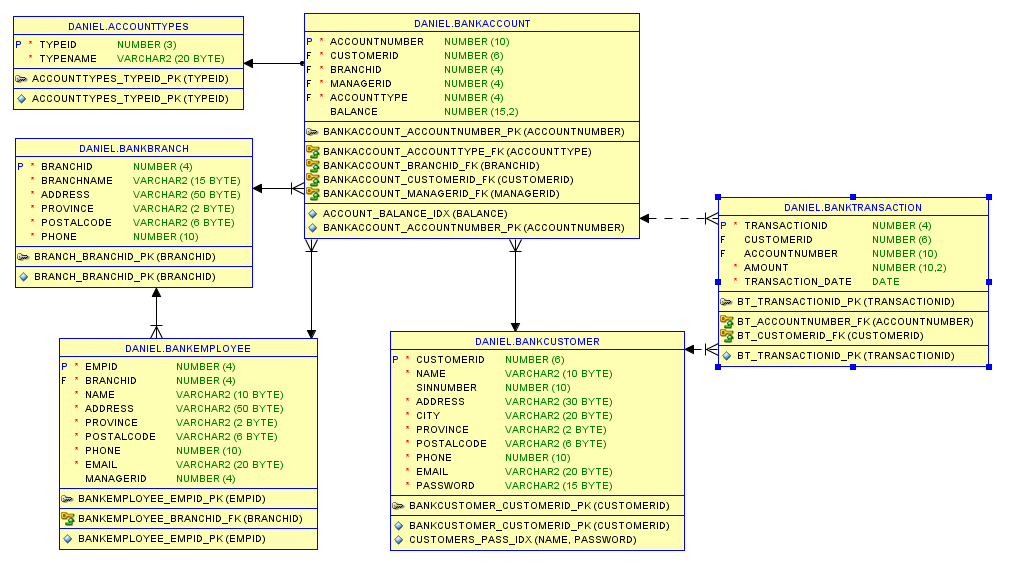
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# Problem Domain Description

The bank requires a software to deposit certain amount of money into the account of its customers. To do the operation, the user needs to access into the platform and find the customer by his/her ID. The user selects the account in the new screen, type the amount to deposit in the blank field and clicks the button enter. Once submitted, the procedures add a new record to the banktransaction table and the trigger updates the amount to the current balance in the bankaccount table, where the user accounts are listed as well and then the website will show a message displaying the a message to inform the if the transaction was successful.

# ERD



# Scripts (Screenshots)

## Creating Tables



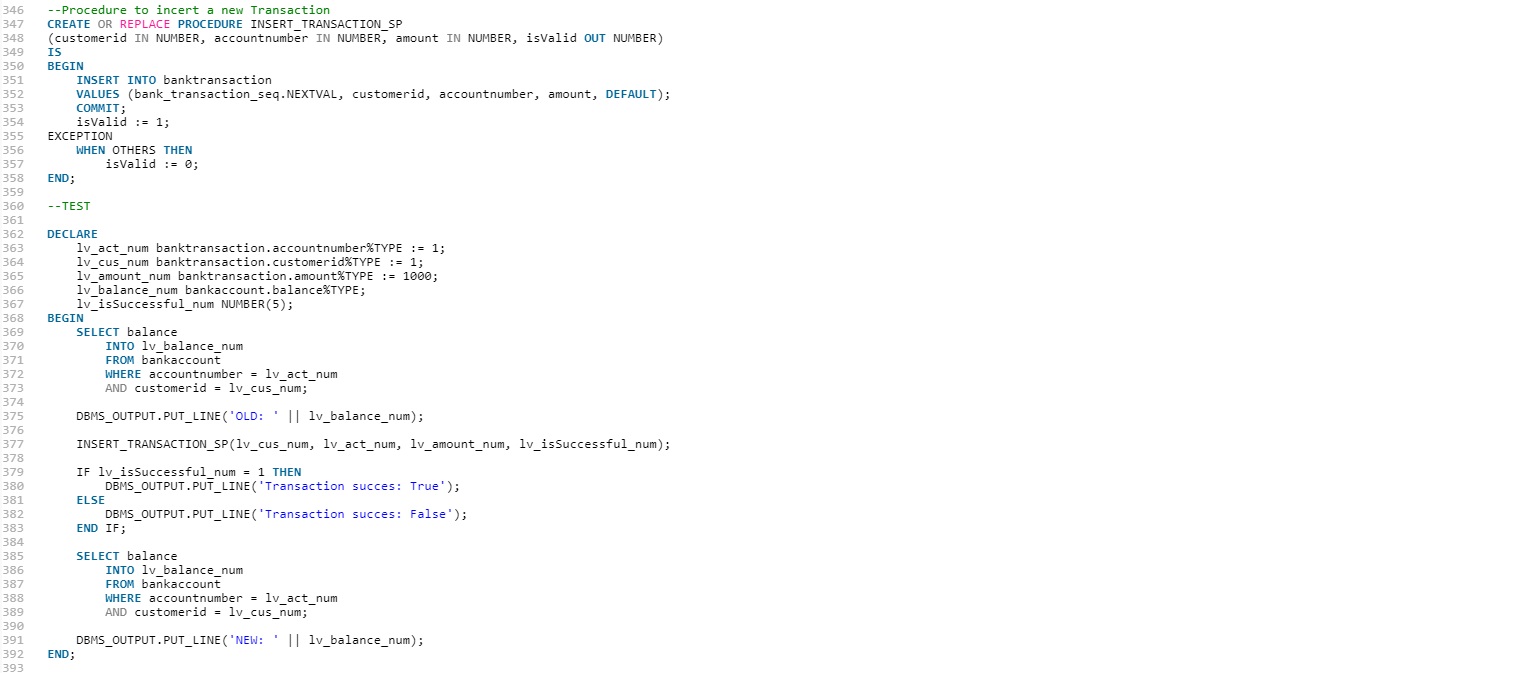
## Sequence and Indexes

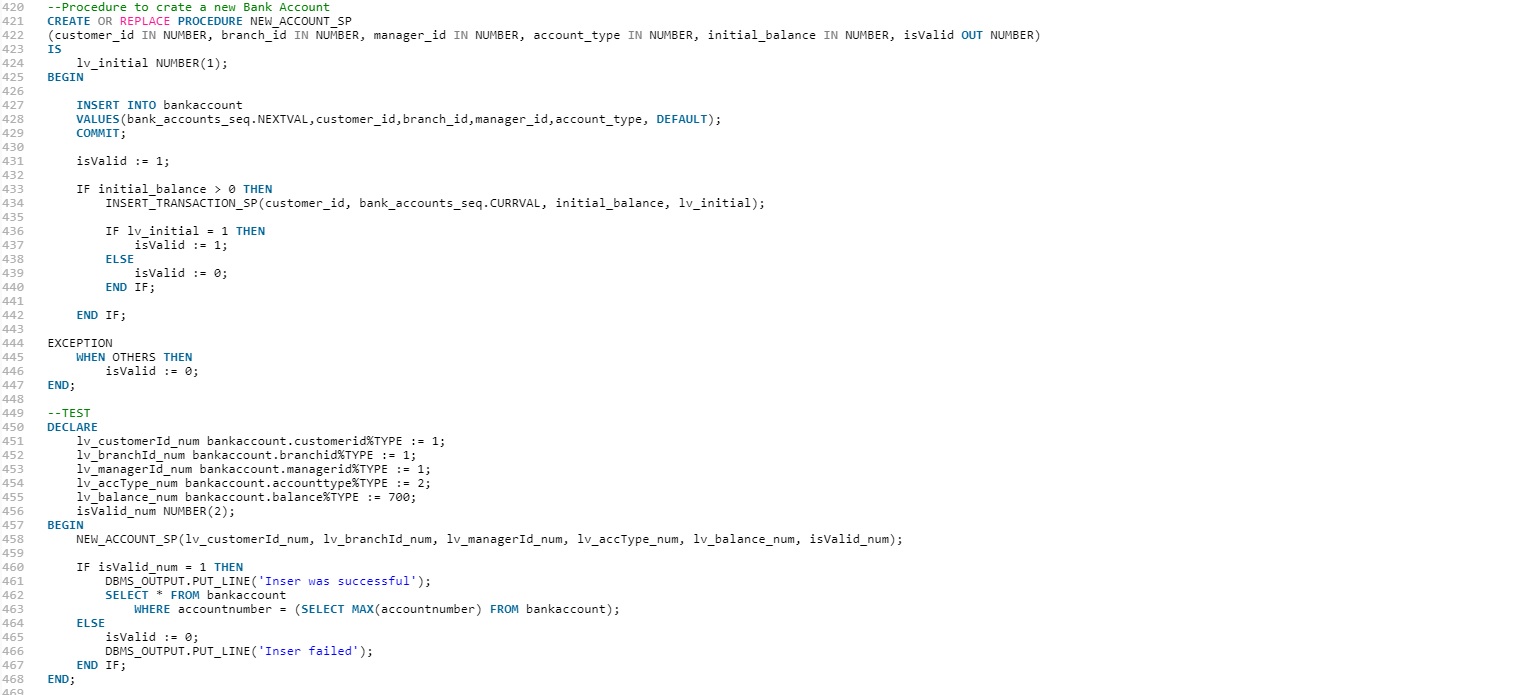
## Populating Tables

## Store Functions

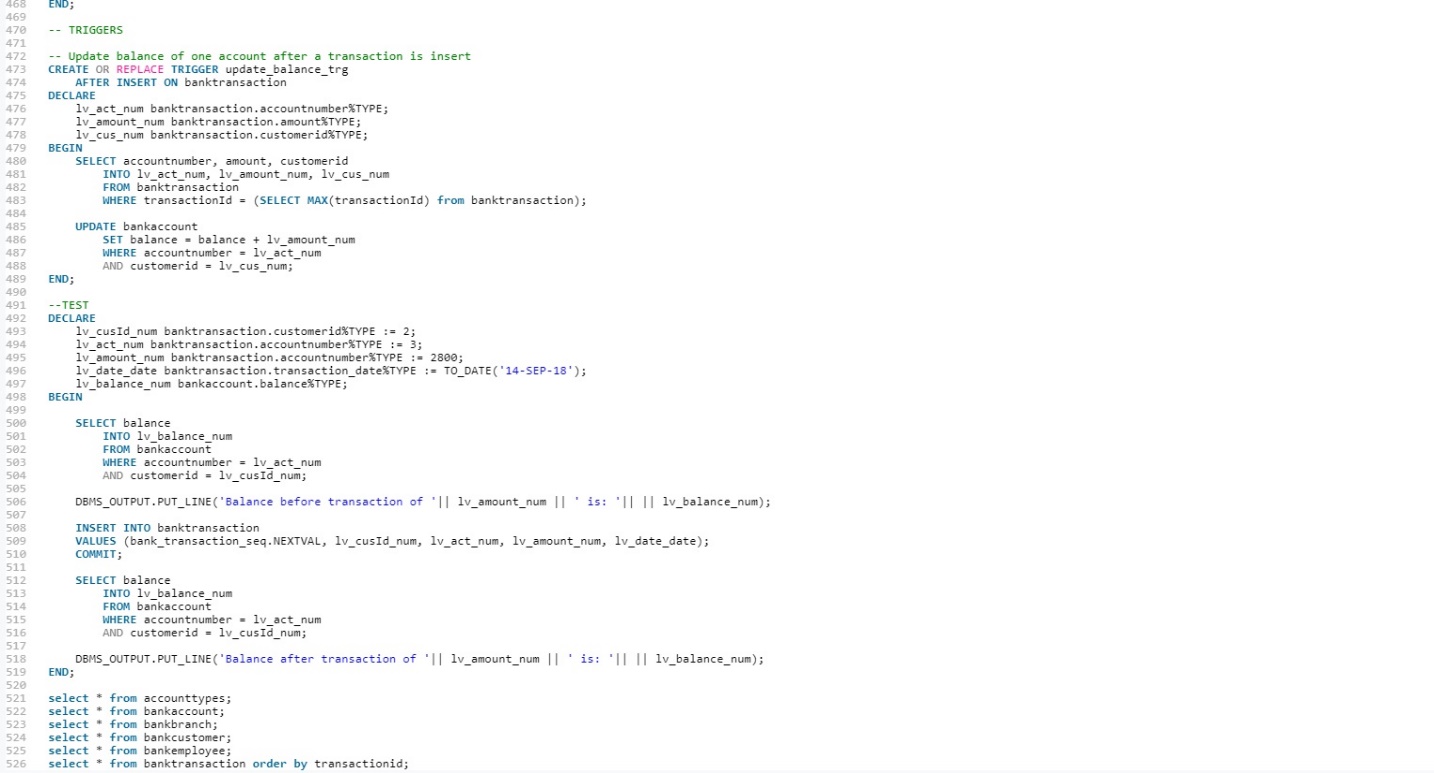


## Store Procedures





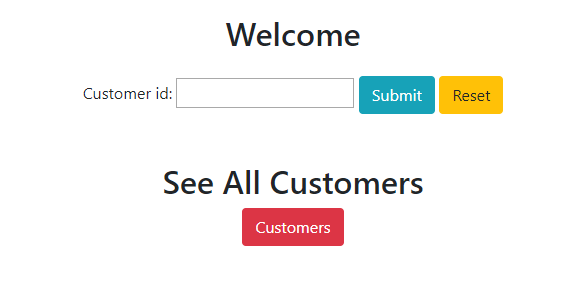
## Triggers



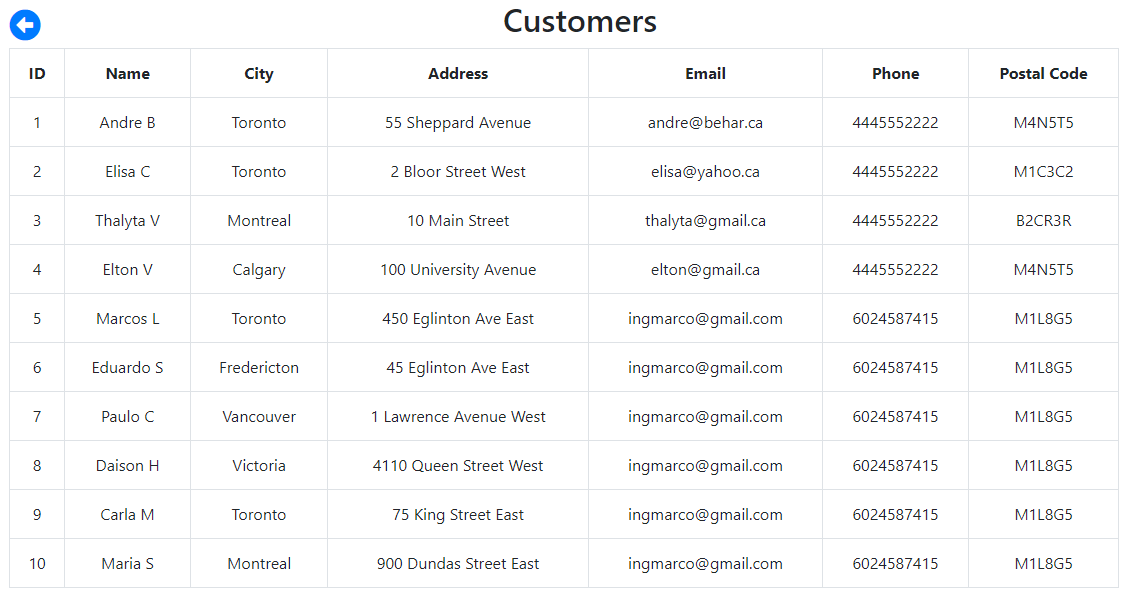
Trigger update\_balance\_trg update the balance of the account after a new transaction is added.

# Front End Screenshots

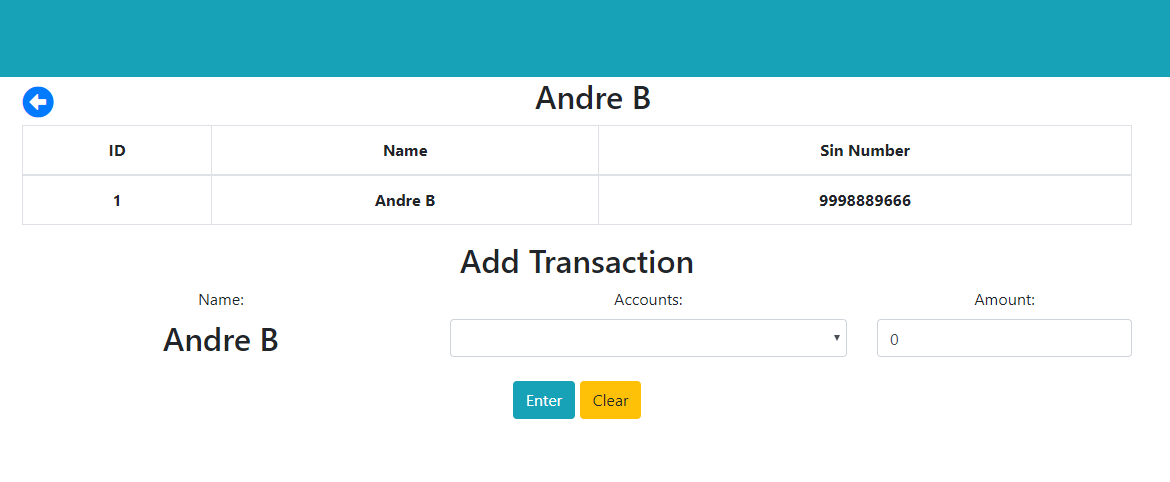
## Index



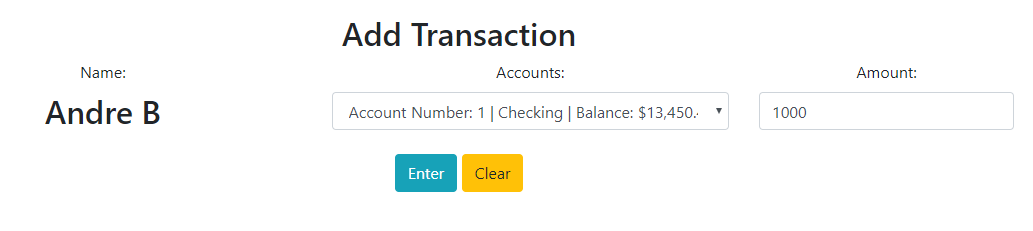
## All Customers

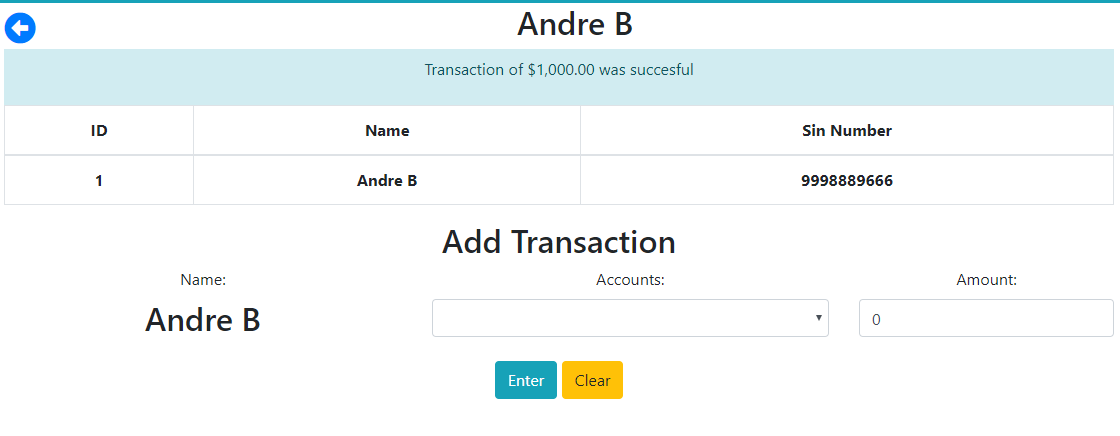


## Find customer by ID

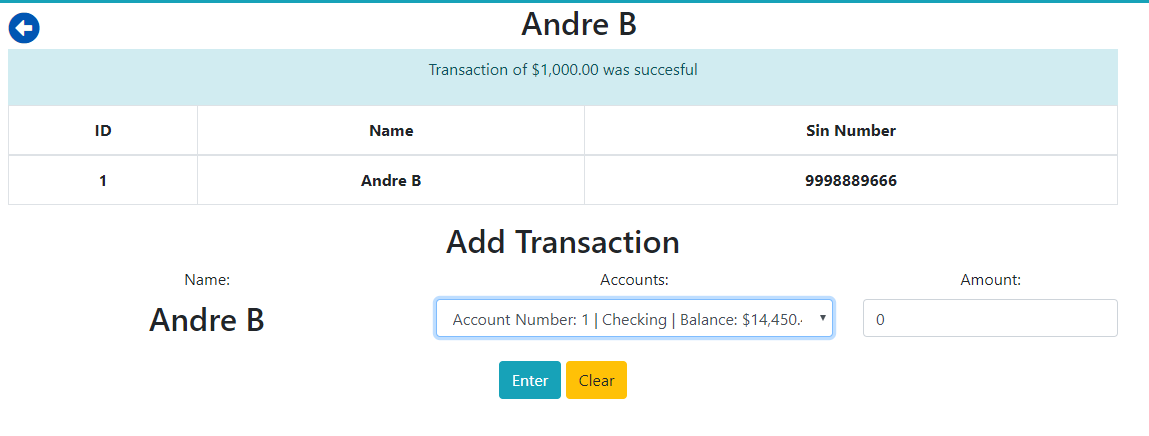


Adding a transaction to checking account

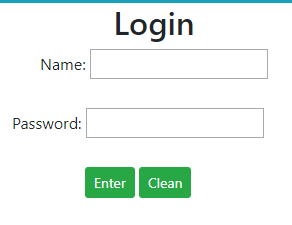




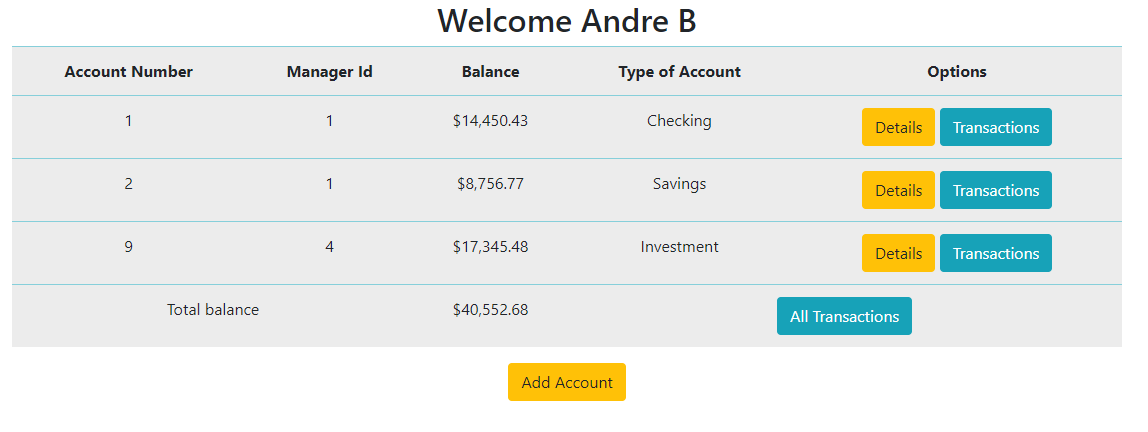
Updated balance is displayed



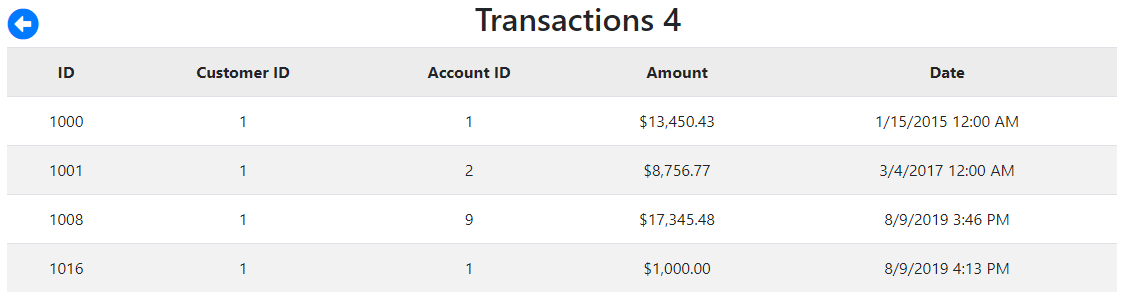
## Login



## Accounts

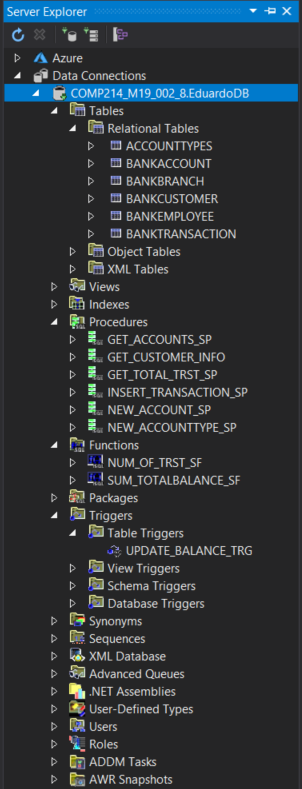


## Transactions



Last transaction of $1000.00 is shown.

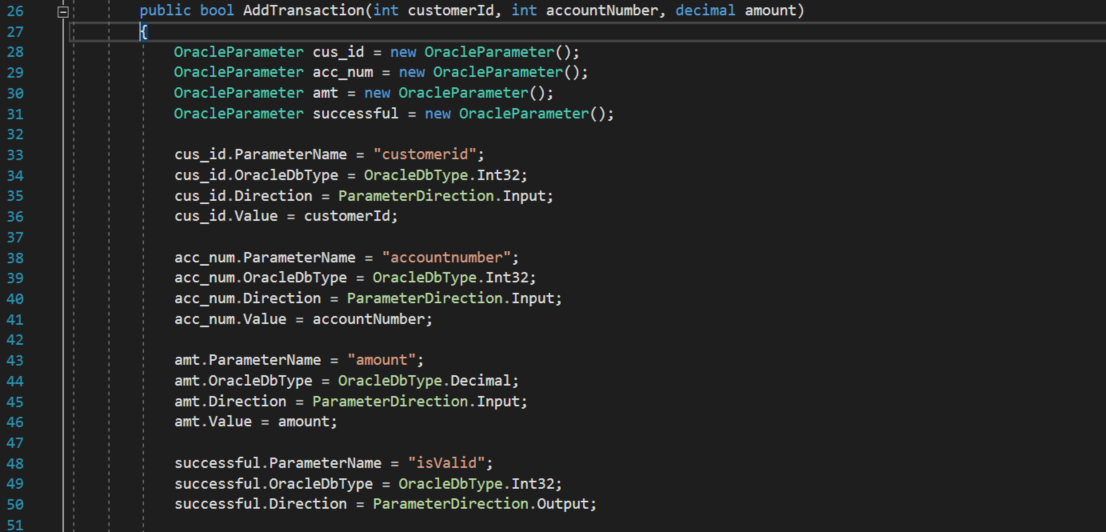
# Database in Visual Studio

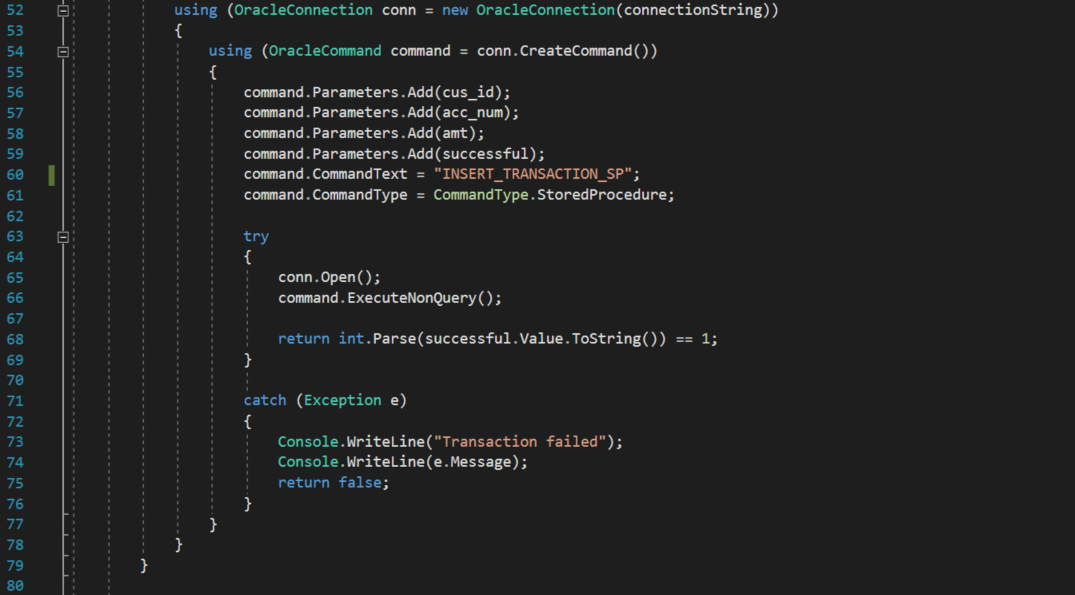


# Procedure in Visual Studio

## Method that calls a procedure

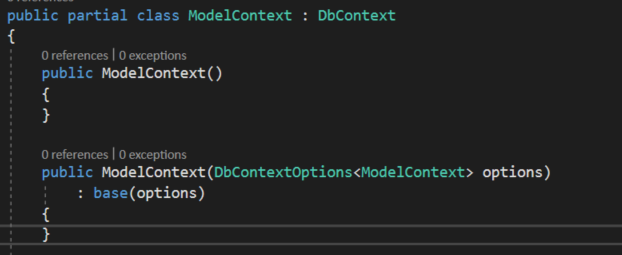
Method AddTransaction() creates the parameters and send them to the stored procedure in the database.





## DbSet from Visual Studio

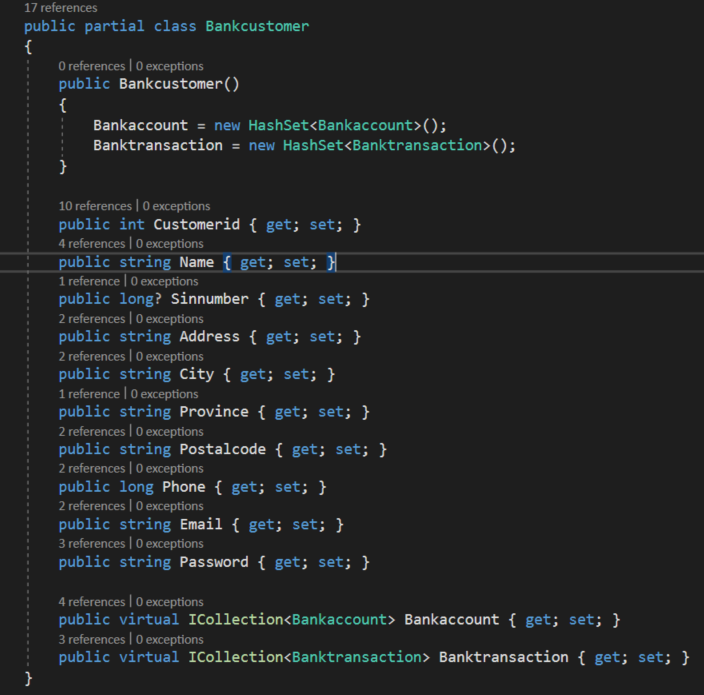
Creation of class that inherits DbContext class from library Oracle.EntityFramework.



Creation of DbSet that uses the model Bancustomer.



Model class that supports the records



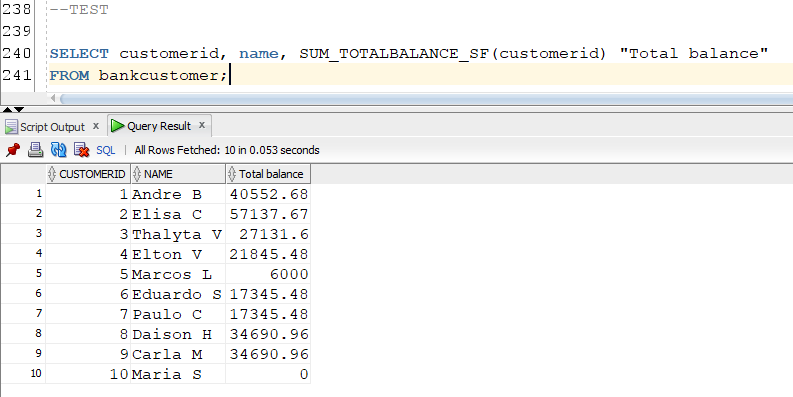
Connection String



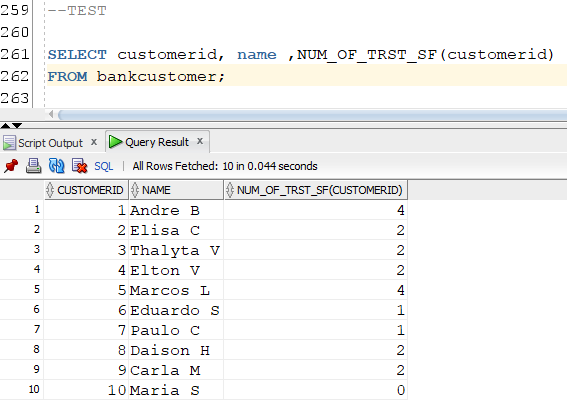
# Testing

## Stored Functions

Test of function SUM\_TOTALBALANCE\_SF

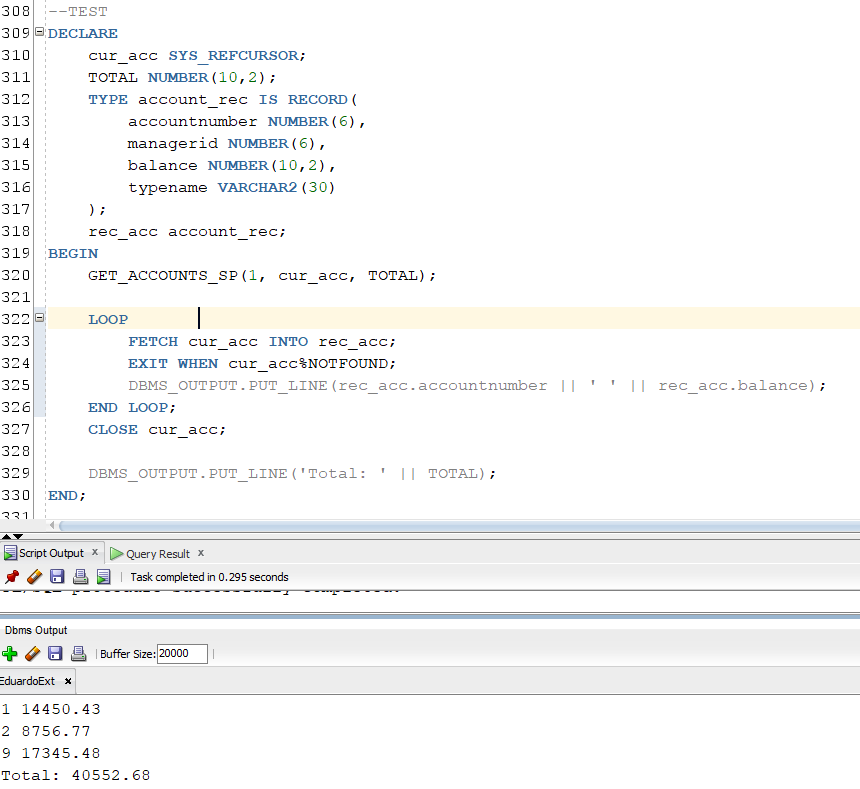


Test of function NUM\_OF\_TRST\_SF

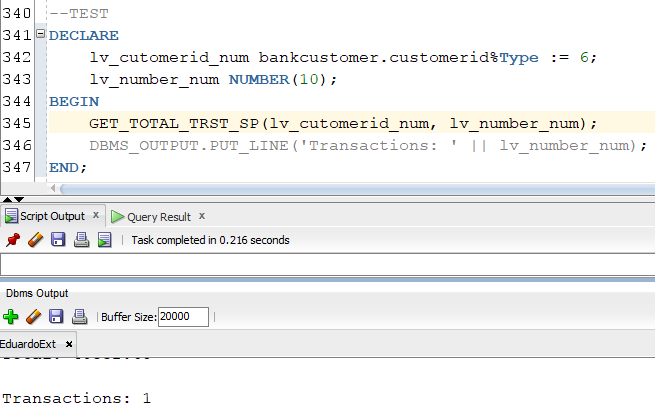


## Stored Procedures

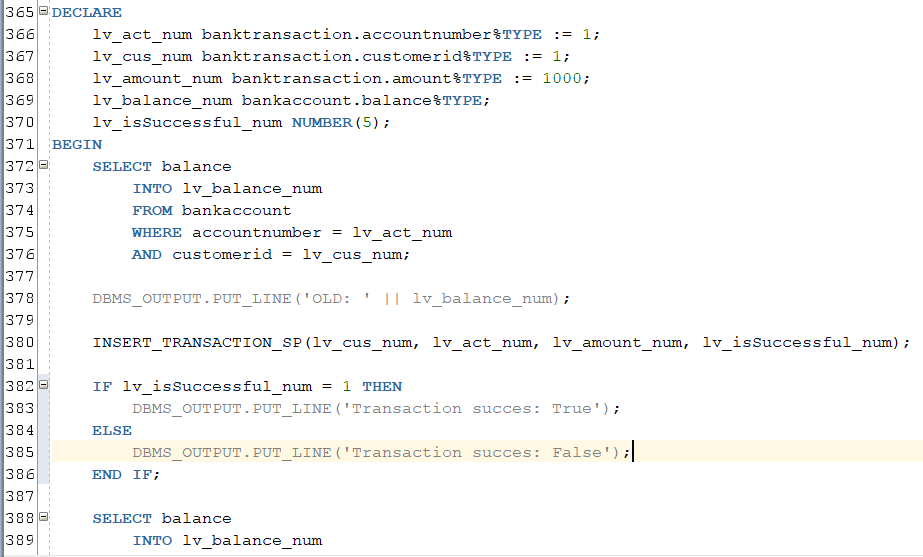
Test for GET\_ACCOUNTS\_SP

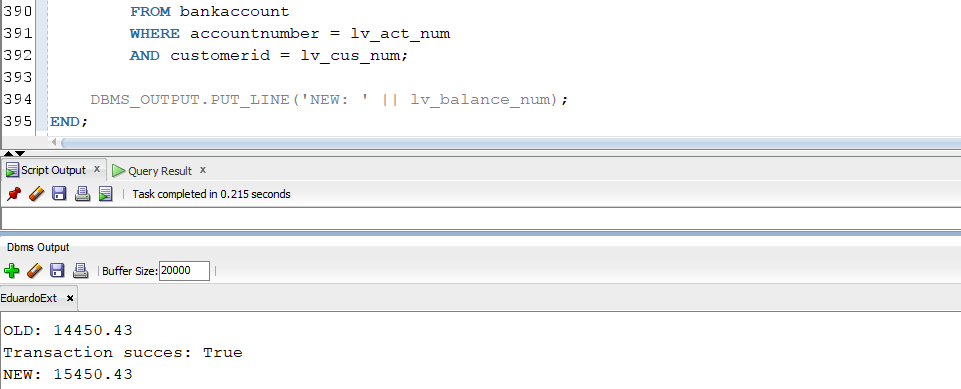


Test for GET\_TOTAL\_TRST\_SP

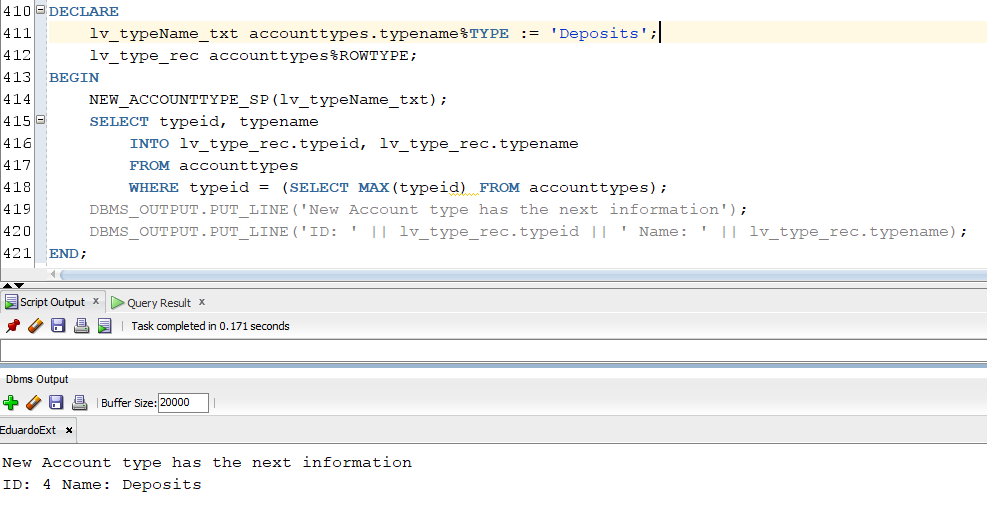


Test for INSERT\_TRANSACTION\_SP

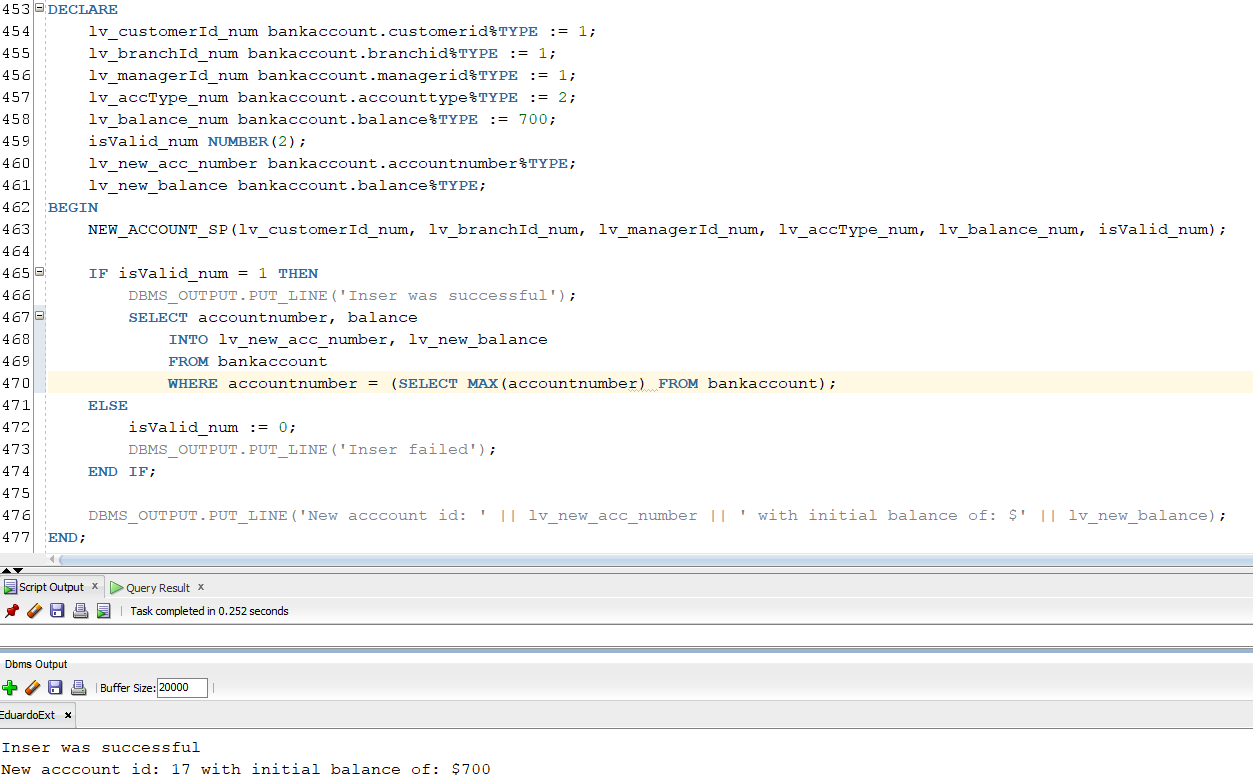




Test for NEW\_ACCOUNTTYPE\_SP



Test for NEW\_ACCOUNT\_SP



## Trigger

Test for trigger UPDATE\_BALANCE\_TRG

