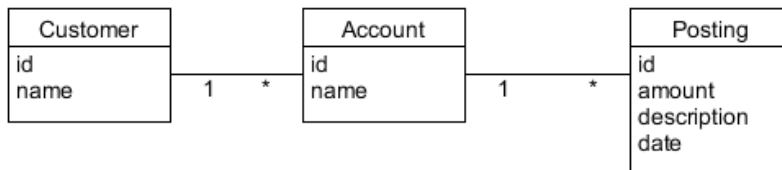
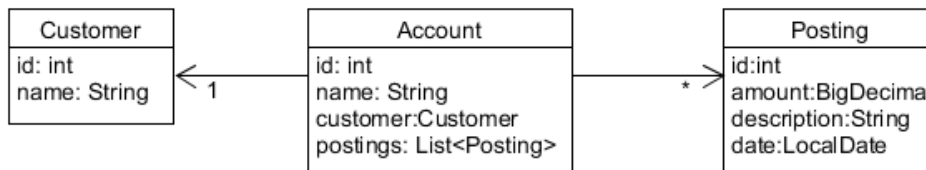


## Exercise Transactions

You are developing a (very simple) accounting software for a bank.  
The domain model looks like this:



The design class diagram looks like this:



### A. Work in SQL Management Studio

Create a database with the following tables. (You can refer to the minibank-setup.sql file. This way, you can skip ahead to exercise B, but you should go back and solve this exercise on your own at a later point.)

customer	
<u>id</u>	Name

account		
<u>id</u>	name	customer_id

posting				
<u>id</u>	amount	posting_date	description	account_id

Insert some default values. In this database, the balance is the sum of all the postings that belong to a given account.

Write an SQL statement that tells you the balance of a given account. Use group by, sum(...), subselects and inner joins to solve this task.

### B. Work from Eclipse

1. Implement the use case: transfer an amount between two accounts. You can get inspiration from the given db and model packages. For the control layer, you need just to have a controller with a transfer method (e.g. `public void transfer(Account accountFrom, Account accountTo, BigDecimal amount) throws SQLException`)

You need to use a transaction to make the transfer.

Test your code with both valid and invalid account\_id values in the insert statements! Check if the postings did appear or not!