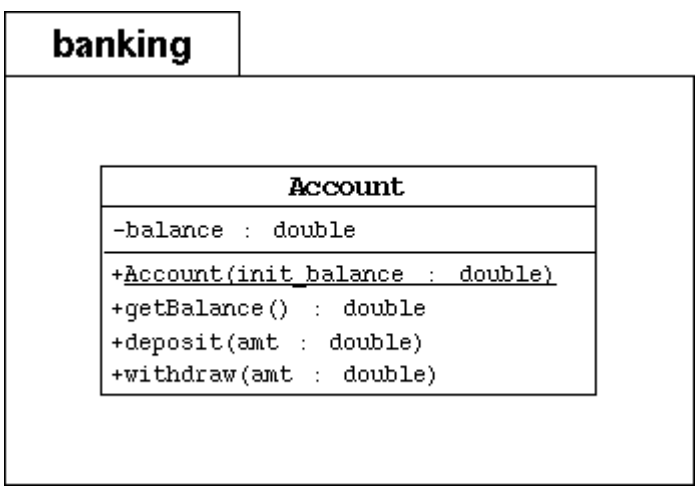
Lab 4. Objects and Classes (1)

Lab Exercise 4-2: Create a Simple Banking Package

Objective

This exercise will introduce you to the banking project which we will return to in several labs. This project will (eventually) consist of a bank with several customers with several account each and a report. These classes will evolve over the next lab exercises.

In this exercise, you will create very simple version of the `Account` class. You will place this source file in the `banking` package. A test program, `TestBanking`, has been written in the default package that creates a single account. It initializes the balance of that account and performs several simple transactions. Finally, the test program displays the final balance of the account.



Directions

Start by changing your working directory to `lab4/exercise2` on your computer.

1. Create the `banking` directory in your working directory.
2. Create the `Account` class in the file `Account.java` under the `banking` directory. This class must implement the model in the above UML diagram.
    1. declare one private object attribute: `balance`; this attribute will hold the current (or "running") balance of the bank account
    2. declare a public constructor that takes one parameter (`init_balance`); that populates the `balance` attribute
    3. declare a public method `getBalance` that retrieves the current balance
    4. declare a public method `deposit` that adds the `amount` parameter to the current balance

    5. declare a public method `withdraw` that removes the `amount` parameter from the current balance
3. Compile the given `TestBanking.java` file. This has a cascading effect of compiling all of the classes used in the program; thus compiling the`Customer.java` and `Account.java` files under the `banking` directory.
   ```
   javac -d . TestBanking.java
   ```
4. Run the `TestBanking` class. You shoud see the following output:

```
  Creating an account with a 500.00 balance.
  Withdraw 150.00
  Deposit 22.50
  Withdraw 47.62
The account has a balance of 324.88
```