AP Computer Science Homework 5

Due date: Thursday, November 5, 2015
Instructor: Mr. Alwin Tareen

Part A: Create the `BankAccount` class

Create a class called `BankAccount`. It should have the following properties:

- Two instance variables, declared as `private`:
  - `double balance` This is how much money there is currently in the account.
  - `String name` The name of the person owning the account.
- A single constructor that accepts two parameters:
  - One of the parameters should be a `double` variable that is used to initialize the instance variable, `balance`.
  - The other parameter should be a `String` variable that is used to initialize the instance variable, `name`.
- A single accessor method called `getBalance`:
  - This method returns a `double` data type, and takes in no parameters.
  - This method returns the value of the instance variable `balance`.
- A mutator method called `deposit`:
  - This method returns nothing, and accepts a `double` parameter that is the amount of money being deposited. It is added to the `balance` instance variable to produce a new balance.
- A mutator method called `withdraw`:
  - This method returns nothing, and accepts a `double` parameter that is the amount of money being taken out of the account. It is subtracted from the `balance` instance variable to produce a new balance.
- Download the `Homework05.zip` file from the course website, and unzip this file, which produces the `Homework05` BlueJ project.
- Open this project in BlueJ by clicking on the `Project` menu, and then selecting `Open Project...`
- Write your solution in the place where it says `//YOUR CODE HERE`.
- Run your program by right-clicking on the `BankAccountTest` class, then selecting `void main(String[] args)`.
- If your code is correct, you should see the following output on the terminal window:

```
Initial balance: 1000.0
After deposit: 1505.22
After withdraw: 1405.22
```

- On your `BlueJ` project window, you should see a button labelled `Run Tests`. Press this button to run the `JUnit` tests.

- You should see a `BlueJ: Test Results` window pop up. If everything is correct, you should see a green bar that indicates that your code has passed the `JUnit` tests. If your program is incorrect, you will see a red bar. You can click on the method name to get more information about the problem. Otherwise, just click on the `Close` button, and you can go ahead and upload this program to `Web-CAT`.

Part B: Submission

- Submit your Java program `BankAccount.java` by uploading it to the Web-CAT automated grading platform.