

Bank Account



The goal of this lab is to create a class that models a bank account. The `BankAccount` class is fairly simple – it has two private properties: a `String` variable that stores the `name` of the account owner and a `double` variable that stores the current `balance` of the account. These two fields (instance variables) are what **describe** a `BankAccount`.

Create a new package file called `bankAccount` and put both classes in there.

The `BankAccount` class should have the following:

1. Two private instance variables (fields), `String name` and `double balance`.
2. A constructor that has two parameters: a `String name` and a `double balance`. The constructor should initialize the fields to the values of the parameters.
3. `public void deposit(double amt)` – this mutator method doesn't return anything, and has one `double` variable parameter. The parameter represents the amount of money that will be added to the account's `balance` field.
4. `public void withdraw(double amt)` – this mutator method doesn't return anything, and has a `double` variable parameter. The parameter represents the amount of money that will be withdrawn from the account's `balance` field.
5. `public double getBalance()` - this getter method simply returns the value of `balance`.
6. `public String getName()` - this getter method simply returns the value of `name`.
7. `public String toString()` - this method returns a `String` representation of the object. Feel free to format it however you like, just make it clear. It can be a complete sentence or a listing of the details.

For Example:

```
<name>'s account balance is $<balance>.
```

or

```
Account Owner: <name>
```

```
Account Balance: $<balance>
```

Next, create a new class, `BankAccountRunner`, with a `main()` method. Inside the main method, you should create 3 new `BankAccount` objects (remember, objects are a *specific instance* of a class). Initialize the `BankAccount` objects with whatever names and values you want.

Creating a new object follows this format:

```
ClassName objectName = new ClassName(<constructor's parameters>)
```

Using the BankAccount objects you created, solve the following problems:

1. Using if statements, print the `balance` of the BankAccount object that has the largest amount of money (based on the values you chose). If you're crafty, you can do this in one line (without if statements).
2. Get the value of a double variable called `amt` from the keyboard. Using the `withdraw()` method, remove `amt` from the `balance` of one account, and print the new `balance` of that account.
3. Get the value of a double variable called `balance` and a String variable called `name` from the keyboard. Create a new BankAccount object using the value of these variables as the constructor's parameters, and print its `name` and `balance` (to ensure it worked).
4. Finally, print the `toString()` details for all 3 accounts. Remember: you don't need to type `toString()`.