Java Puzzle Ball MOOC
Lab 1: Write a `CheckingAccount` class

Overview

Now that you've developed a better understanding of complex computer science concepts and have experience wrestling with class design problems, you're ready to apply that experience to working with Java code. You know enough to knowledgeably make progress with an actual Java program. We'll examine a simple banking software scenario in this lab. Study and play with the existing code to figure out how to finish writing the rest of the program.

Tasks

Download the MOOC's Lesson 1 lab (JPB_MOOC_Lab1.zip). This zip contains a NetBeans project with the start state of your program. Unzip the file and open the project in NetBeans. The program contains a complete `SavingsAccount` class, an incomplete `CheckingAccount` class, and a half-complete `main` method in a `TestClass`. Your goal is to complete the `CheckingAccount` class and test your work through the `TestClass`.

Savings Account

Study the fields and methods of the `SavingsAccount` class. What properties do the fields measure? What behaviors do the methods dictate? You'll later need to make decisions based on your observations.

Checking Account

A `CheckingAccount` is similar to a `SavingsAccount`. However, a `CheckingAccount` has no interest rate and is therefore incapable of earning interest. Based on your study of the `SavingsAccount` class, copy the appropriate fields and methods from the `SavingsAccount` class to build out the `CheckingAccount` class. Make any other necessary modifications to the code you copy.

Test Class and Main Method

The `TestClass.java` file contains a special method called the `main` method. This is where Java code starts executing. This method currently creates a `SavingsAccount` instance and calls a few methods on that instance. It also creates a `CheckingAccount` instance. Study and play with this code to test the behaviors of the `CheckingAccount` instance.

- Can you call methods on the `CheckingAccount` instance, like you did with the `SavingsAccount` instance?
- What happens if you try to withdraw more money than is available in an account?
- What happens if you try to call a `CheckingAccount` method that doesn't exist?