LendInvest Coding Test

Thank you for your interest in LendInvest. In this stage of the recruitment journey, you're going to code (the fun part!).

We'd like to get an idea about how you like to code and if it fits with how we like to code.

Exercise

In LendInvest we think everyone should have the opportunity to invest in property, which is why we're disrupting the status quo. This is lending and investing without the banks. Mortgages simplified. We connect people who want to invest their money, with investments to those who want to borrow.

One of the important parts of our business is to give our investors a way to invest in a loan for them to earn a return (monthly interest payment).

Model

- Each of our loans has a start date and an end date.
- Each loan is split in multiple tranches.
- Each tranche has a different monthly interest percentage.
- Also each tranche has a maximum amount available to invest. So once the maximum is reached, further investments can't be made in that tranche.
- As an investor, I can invest in a tranche at any time if the loan it's still open, the maximum available amount was not reached and I have enough money in my virtual wallet.
- At the end of the month we need to calculate the interest each investor is due to be paid.

Scenario

- Given a loan (start 01/10/2015 end 15/11/2015).
- Given the loan has 2 tranches called **A** and **B** (**3%** and **6%** monthly interest rate) each with **1,000** pounds amount available.
- Given each investor has **1,000** pounds in his virtual wallet.
- As "*Investor 1*" I'd like to invest **1,000** pounds on the tranche "**A**" on **03/10/2015**: "ok".
- As "*Investor 2*" I'd like to invest **1** pound on the tranche "**A**" on **04/10/2015**: "exception".
- As "*Investor 3*" I'd like to invest **500** pounds on the tranche "**B**" on **10/10/2015**: "ok".
- As "*Investor 4*" I'd like to invest **1,100** pounds on the tranche "**B**" **25/10/2015**: "exception".
- On **01/11/2015** the system runs the interest calculation for the period **01/10/2015** -> **31/10/2015**:
    - "*Investor 1*" earns **28.06** pounds
    - "*Investor 3*" earns **21.29** pounds

How to pass the test

- Submit working PHP code fully tested (we prefer to use PHPUnit). We are using PHP 7.

- Don't gold plate.

- Everything should be done without using a database. Consider this test code as a Kata.

- Don't use any framework or external libraries (except composer for dependencies as PHPUnit).

- If you know TDD a red-green-refactoring process would be very appreciative.

- Once done create a git bundle leaving all the commit history (git bundle create lendinvest-test.bundle master).