CFS2160: Programming Stream

Tutorial/Practical 14

Using Library Classes

Introduction

There is no Log Book this term.

The exercises in the lab will gradually build up a library of code that you will be able to draw on when you start work on the second assignment.

Activities

1. Complete the League Table program from two weeks ago, if you have not done so already.
2. Likewise, complete last week's "To Do List" application.

If you want, your friendly tutor has sample solutions to both these, and can show them to you. Put your versions somewhere safe (on GitHub, even) so you can refer to them later.

Now create and test the following classes that represent different sorts of bank accounts that might be offered by a bank. Where anything is not clear, just make some sensible assumptions.

1. A `CurrentAccount` class that has a balance, allows deposits and withdrawals, may allow an overdraft, but does not pay any interest. (You probably have most of this class already.)
2. A `DepositAccount` that is the same as a `CurrentAccount`, but which pays interest and which cannot go overdrawn.
3. A `StudentAccount` that has a fixed £500 overdraft.
4. A `YoungSaversAccount` that is the same as a `DepositAccount` but cannot have a balance of more than £100 (unless this happens because of interest being added).

Test each class by adding a simple `main` method in each. Make sure that the program shows that every method in the class works as expected.