



CFS2160: Programming Stream

Tutorial/Practical Week 16

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

Create and test the following entity 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.

Consider the attributes needed for each of the classes, can you spot any potential issues with attributes?

Add `deposit()` and `withdraw()` methods to the classes with some logic to ensure correct changes to the account balance.

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 class with a `main` method, at this point you do not need to store the classes so an `ArrayList` is not needed. The controller class (`Bank`) will be created at a later date.

These classes will form part of next week's work so it is important that the task is completed in good time.

Extra Activities

Once completed, continue to work on the following if not completed.

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.

There are sample's for both of these projects on BrightSpace