ACIT 2515 Final Project: Banking System Due: 11:00pm Friday April 12, 2018

The ACIT 2515 final project is worth 20% of your grade in the course. This year you will design, code, and test a program that models a banking system. There are multiple components to this system, including

- The set of classes that implement bank accounts (yes, you can refactor and reuse the bank account classes developed earlier in the term if you wish), and
- A GUI that simulates a bank machine (ie: your interface should provide all the capabilities of a typical bank machine, and
- A Bank Management CLI (command line interface) that allows a teller to add users, create accounts for users, and run simple reports.
- Support for transaction logging, and
- Support for login and user authentication.

The structure and style of your Bank Machine and Bank Management interfaces is entirely up to you, and you are encouraged to be creative and devise solutions that are intuitive and easy to use.

Some requirements for your project:

- The project must be developed in Python, by you and your team members only.
- The GUI must be developed using Tkinter.
- Internal program design will be evaluated based on the OOP concepts and techniques discussed in this course.
- You may use existing open-source Python modules with permission of the instructor (in advance of incorporating the package into your project).
- Your interface(s) must connect to your backend classes and files using (minimally) the Model-View-Controller pattern, and (possibly) the Observer pattern. This will be a multiple controller system.
- Banking data must be persistent.
- Users must be authenticated. You will need to devise some way to simulate the use of a bank card.
- All bank machine transactions must be logged.
- The management interface must allow you to create, delete, and report on users, accounts and transactions.
- All methods and classes must be documented using google style docstrings, including the name of the author.
- The project must include documentation explaining how to install and run it on a typical windows PC.

Additional requirements, and clarification of requirements: a D2L Forum has been created for this project. All requests for clarification must be posted to this forum, so that the response can be viewed and shared by all teams.

You may work alone or in a team of *at most three people* from your own set. If you work with others it is expected that every person contributes equally to the project, and that the work is done together. Everyone on the team must be aware of all design decisions, and must be able to explain the purpose and construction of every project component.

Assessment

Each week (during ACIT2515), teams will be asked to present some aspect of their work to the rest of the class. Work and progress will be assessed by the instructor each week.

Your project will be graded on:

- Internal program design and operation (classes and OOP)
- User interface design and implementation (GUI and CLI)
- Use of MVC (and related) design patterns
- Overall program capability (features) and operation (stability and quality)
- In-class presentation(s) and weekly progress (quantity and quality both matter)