# CIT 232 – Milestone 1 Project Rubric

**Scenario**

Many banks perform batch processing, where the transactions of the day are applied to bank accounts at the end of each business day. There are many types of bank transactions, but for the sake of this scenario we will assume only deposits and withdrawals. Sometimes errors occur in computing systems and these must be handled appropriately, otherwise the system may crash.

For the CIT 232 Final Project, you will write a Python program to perform a batch process for updating bank account balances. Your program will read two files, one for current bank accounts and one for a day’s worth of bank transactions (withdrawals and deposits). There will be invalid transactions that must be handled by the program. After processing all transactions, the program will generate a report and save the new account data to a new file.

This project will be divided into three **Milestones**. For the Final Project, these three milestones will be combined into one. You will also have the opportunity to fix your earlier milestone projects based on feedback from the instructor.

## Milestone 1

Milestone 1 will build on the skills you have learned in the first 5 lessons of the course.

In this project you will write a program that reads a file of bank account data, modifies the data and writes the new data to a new file. This file, named **accounts.csv**, will be a CSV (Comma Separated Values) formatted file that contains the following fields of information:

accountNumber, firstName, lastName, accountBalance

Your program will read from this file, process each line of CSV data into a list, making sure to convert data types properly. This will result in a list of lists, where each sub list represents one account field.

After the file has been read and the accounts list has been created, your program will then add $10 to the accountBalance for each account, then this new data will be written to a new file called **adjustedAccounts.csv**.

This project will require the use of the following skills:

* Data types and conversion
* Strings and processing methods
* Lists and list manipulation
* Reading from and writing to files
* Simple numeric calculation
* Loops and repeating code

You will submit one file, **readAccounts.py**.

You will be graded as follows:

* **Reading/Writing files (8 points) –** Your program must successfully read from a file, and write data to a new file.
* **String Processing (8 points) –** Your program must process each line of CSV data, creating a list for each row with the correct data types. It must also create new lines of CSV data for the new file.
* **List Manipulation (6 points) –** Your program must be able to create lists, retrieve items from them and change them.
* **Using loops (4 points) –** Properly using loops and control structures to process data
* **Comments (4 points) –** Your code must be properly commented, both a top comment block and in-line comments describing what your code is doing