

## **CS3307 – Assignment 3 – Deliverable 8 – Quality Trend Across R1 and R2**

### **By: Group 6**

Because of great modularization the report generated by CCCC only produced 1 yellow cell in the OO Metrics table of both releases. It was for the CBO (Coupling Between Objects) metric of our User class in the second release. CBO represents the number of modules that inherit directly from the current module. Due to the additions of the credit card and purchase and payment functions it jumped from 7 in release 1 to 13 in release 2. While still not in the red this flag shows us that if we were to expand the program anymore the User class would approach dangerous levels of inheritance and should then be split into smaller classes to avoid too many classes relying on it.

Besides the CBO of the User class there were several other changes across our releases:

- The AccountTable's WMC in release 2 increased because more functions were necessary to handle the credit account actions
- Methods were added to the ManagerMethods class that were needed to handle retrieving a list of frozen cards and accepting credit account payments from customers
- Additional classes such as CreditAccount, Payment, PaymentTable, Purchase, and PurchaseTable were added to accommodate the new possible tasks of the banking system
- Methods were also added to FundMovementValidation, UserMethods, UserTable, and Utilities to ensure proper implementation of the given requirements
- Release 2 also caused an increase in CBO for the Account and FundMovementValidation classes. By adding the new credit account type it would inherit from both of these to be fully functional so the additional coupling is necessary

In conclusion, our second release of the banking system application has been produced to meet the new requirements established by the client while still keeping these CCCC metrics under control. In a project of this size that is a very reasonable thing to do but still keeping all aspects of the program level would allow us to keep adding to the program in the future as requirements change.