

## Summary and discussion

We started the project by creating tables for basic blocks, Lines, Entry and Exit columns for each original method. Then we drew CFG graphs for each table based on these blocks. The CFG enabled us to find the obvious bugs in the program and understand the flow of the program. As suggested by the project description we spend a good amount of time on the correctness of the CFGs and test cases that supposed to achieve edge coverage and the implementation of Junit test cases. To find the faults we used extreme values (max/min or edges) in order to determine whether the method covers these cases. Additionally, the CFG graphs gave us a lot of help to define edges for each method and collect test paths for each CFG to achieve edge coverage. Following that we generated test data for each test path and fixed each fault we found immediately before looking for the next fault.

The main problems we encountered during this project were finding all the possible input values that would detect the faults in each function. Additionally, identifying test paths from the CFG to achieve edge coverage was a bit challenging.

All in all we were able to practice the basic concepts, principles, and techniques covered in this course. Furthermore we got a good experience about testing and maintaining a software that was implemented by someone else.