Nathaniel Anderson - 011762300
CPTS 411 – Deliverable 2
Due: 11/13/2022

Deliverable 2 Report

The purpose of this report is to go over the implementation of the rest of the metric checks. This report will go over the overall coverage.

Checks/Coverage:
I implemented white-box tests using Mockito.spy and methodologies learned in class.
The coverage percentages are broken down as follows (assuming branch coverage is lumped into overall coverage, I am not sure, I may be misinterpreting the instructions.)

aCheck: overall 84.2%
HDifficulty – 88.5%
HEffort –   72.2%
HLength –   70.8%
HVocab –   65.8%
HVolume -   93.3%
Explanation: I had multiple issues testing finishTree(). I reached out to two other students and they also had no idea what to do for this. This is really where I lost most of, if not all coverage for this deliverable. No matter what, I couldn't mock or get the test to work, I have a couple comments about this in the code.

bCheck: overall 56.2%
Expression – 60.4%
NumComments – 66.3%
NumOperands – 63.6%
NumOperators – 57.1%
LoopingState. – 32.4%
Explanation: Again, finishTree issues. Except for LoopingStateCheck, it mostly was covered but I had a problem with visitAST, even though I included the dependency of Mockito-inline in my pom.xml…

optional: overall 60.4%
Explanation: same thing, finishTree() issues.

Takeaways/Conclusion:
- I found it very helpful to create a package for the tokens (operands and operators)
- I was unable to find how to test finishTree() and had problems with the VisitToken() tests
- I found it was beneficial to use get"Variable"() for tests, for refactoring or if I needed to make changes. This helped for tests as I was mocking a function rather than pulling the actual variable.
- Refactoring my code for the first two checks from Del1 helped me better test.

Overall, this was a big exercise, tough but doable. I ~~want~~ *need* to figure out the finishTree() problems, as this will affect me moving forward. (And it's driving me crazy…)