**Deliverable 2 Report**

**Team Members:**

Wai Fong – 11382065, kuanrya000

Shrunga Mallavalli – 11436985, malaval21

Linh Nguyen – 11563329, linhnguyen14a2

Cary Ott – 11440278, CarlyOtt

Kimi Phan – 11466435, kphanswims15

Kayla Rhodes – 11373485, rhodeskl

**Team Assignments:**

Wai Fong – MaintainabilityIndexTest, MaintainabilityIndexIntegrationTest

Shrunga Malavalli – LoopingStatementCounterTest, HalsteadIntegrationTest

Linh Nguyen – MethodCounterTest, MethodCounterIntegrationTest, LoopingCounterIntegrationTest

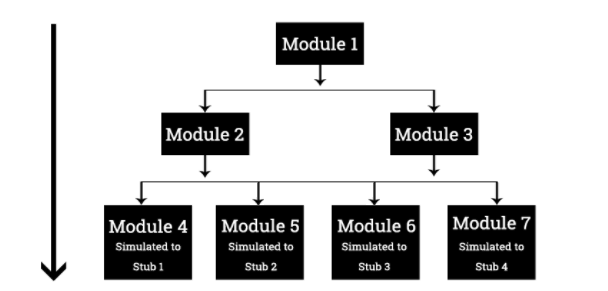
Carly Ott – HalsteadMetricsTest, HalsteadMetricsIntegrationTest (with Driver), MaintainabilityIndexIntegrationTest (with Driver)

Kimi Phan – CastCounterTest, ExpressionCounterTest, CastCounterIntegrationTest, ExpressionCounterIntegrationTest, Milestone Report

Kayla Rhodes – CommentCounterTest, VariableCounterTest, Driver, CommentCounterIntegrationTest, VariableCounterIntegrationTest, Milestone Report

**Testing Framework and Strategy**

The testing framework that we chose was top down integration testing.



We picked this testing process as it seemed the most reasonable for testing this project. In the second deliverable, we first started to test the overall code and then started testing individual components. The order that we tested our components depended on if there were dependencies. We first tested the variable counter, comment counter, cast counter, expression counter, looping counter, and the method counter because they did not depend on any other classes expect for the eclipse checkstyle class. This would be first level in the call graph. The second level of the call graph would be the Halsted Metrics class because it depends on the expression counter. The third level of the call graph would be the Maintainability Index class because it depends on the comment counter and the Halsted Metrics.

**Bugs discovered during unit testing:**

MaintainabilityIndex

* In setMaintainabilityIndex(), when calculating cm, which is a double, the values used in the equation were integers and thus caused an incorrect value to be shown. The integers were then casted as a double to correct his issue.
* Removed “final” from getRequiredTokens() in MaintainabilityIndex, CyclomaticComplexity, and ExecutableStatementCount because it was causing issues to JUint and removing it does not affect the code’s performance.

ExpressionCounter

* While testing the expressionCounter I found out that I had the token LE was in my program twice, so when I was testing each token the uniqueOperators was not incrementing correctly.
* I also found out that I was missing the operator STAR.

**Bugs discovered during integration testing:**

There were no bugs found during integration testing.

**Deliverable 2 Schedule**

Team Meeting: October 9th, 2:00 pm

* Participants: Wai Fong, Shrunga Malavalli, Linh Nguyen, Carly Ott, Kimi Phan, Kayla Rhodes
* Discussed outcome of first deliverable
* Created schedule for deliverable
* Assigned unit testing tasks to each group member

Team Meeting: October 18th, 2:00 pm

* Participants: Wai Fong, Shrunga Malavalli, Linh Nguyen, Kimi Phan, Kayla Rhodes
* Discussed progress with unit testing, unit testing was supposed to be done by this meeting
* Assigned integration testing tasks to each group member

Team Meeting: October 25th: 2:00 pm

* Participants: Wai Fong, Shrunga Malavalli, Linh Nguyen, Carly Ott, Kimi Phan, Kayla Rhodes
* Discussed progress with integration testing, integration testing was supposed to be done by this meeting
* Assigned remaining tasks to each group member: milestone report and refactoring