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CS 1632 - DELIVERABLE 5: Static Analysis

<https://github.com/alexhoneygosky/StaticAnalysis>

**Summary**

We approached this project by implementing the new function to do prime number monkey passing before running the static analysis tools (FindBugs and Checkstyle). After the new functionality was added, we started to test the project with FindBugs first because we figured that this tool would ask for more involved changes. That assumption was proved correct when we came across the one bug that asked to change the static counter variable monkeyNum in Monkey to a non-static variable. Simply changing monkeyNum to non-static was not going to solve the problem here, which presented us with a couple issues because we had to change some of the existing code and tests. As for the other changes that FindBugs wanted, removing code from certain places that was not doing anything important or anything at all got rid of the remaining bugs.

Upon finishing with FindBugs, we moved on to analyzing the project with Checkstyle through the command line. In order to handle all of the warnings given by this tool, we broke up the warnings by java files and handled them one at a time. Naturally, MonkeySim, which holds the main method of the project, had the most warnings. With this tool, however, once you start to see the same errors showing up in the command line and have fixed that error in other places, looking at the command line no longer becomes necessary after fixing each error, which saves on the overall time of statically analyzing the project. The nicest part of Checkstyle is that it allows the programmer the chance to see exactly how code should be structured in java and subsequently, documented.

**FindBugs/Checkstyle Final Screenshots**



