C Code Analysis

1. **Splint (**http://www.splint.org/**)**

Splint is a tool for statically checking C programs for security vulnerabilities and coding mistakes.

2. **Saturn (**http://saturn.stanford.edu/index.html**)**

The goal of the Saturn project is to statically and automatically verify properties of large software systems.

1. Download and install Splint and Saturn.
2. Report on what type of bugs these tools can detect.
3. Check Splint's source code using both Splint & Saturn and report the results.
4. Use Splint & Saturn to detect potential bugs in the example codes from https://buildsecurityin.us-cert.gov/bsi/articles/tools/code/498-BSI.html (only examples 1, 3, 6, 8, 15, 17, 20, 23, 26, 28, 32, 38) and write a report on that. In your report, compare the tools; state their possible weaknesses and how you can improve them.

Java Code Analysis

1. **Jlint (**http://artho.com/jlint/**)**

Jlint is a tool to check Java code and find bugs, inconsistencies and synchronization problems by doing data flow analysis and building the lock graph.

2. **PMD (**http://pmd.sourceforge.net/**)**

PMD scans Java source code and looks for potential problems like bugs, dead code, suboptimal code, overcomplicated expressions and duplicate code.

1. Download and install Jlint & PMD.
2. Report on what type of bugs these tools can detect.
3. Check Jlint's source code using both Jlint & PMD and report the results.
4. Use Jlint & PMD to detect potential bugs in the code of your projects and write a report on that. In your report, compare the tools; state their possible weaknesses and how you can improve them.