Calculating Design Quality Metrics with

JavaNCSS

Overview

Curious about the size of your own projects - or do you want to keep track of your work-progress. According to the creators of JavaNCSS, that's exactly what JavaNCSS is for! Also, it is entirely written in Java!

JavaNCSS Calculated Design Quality Metrics

JavaNCSS, or Non Commenting Source Statements for Java, is a tool that provides the user with many features and metrics. These features and metrics consist of, but are not limited to, Non Commenting Source Statements (NCSS), cyclomatic complexity number, packages, classes, functions and inner classes are counted and the number of formal Javadoc comments per class and method.

Unlike JDepend which does its analysis of the program as a whole, JavaNCSS studies the source code of each class, looking for the number of lines, if its global. JavaNCSS is specific in the code, and the functions of the each class.

Meaning of the Calculated Metrics

Aforementioned is that one of the metrics calculated by JavaNCSS is the number of non commenting source statements which refer to the number of lines used in statements and declarations as defined by JavaNCSS. Second, cyclomatic complexity of a system refers to the independent of the physical size of the component. The Cyclomatic complexity mainly depends on the decision structure present in the component, according to Umesh TiwariEra and Santosh Kumar in Cyclomatic complexity metric for component based software. Cyclomatic complexity in a more general meaning is the number of linearly independent paths within the system. For instance, if the source code contained no control flow statements (conditionals or decision points), such as IF statements, the complexity would be 1, since there is only a single path through the code. If the code had one single-condition IF statement, there would be two paths through the code: one where the IF statement evaluates to TRUE and another one where it evaluates to FALSE, so complexity will be 2 for single IF statement with single condition.