Comparing Software Metrics Tools

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- This paper shows that metric based assessment of a software system and measure taken to improve its design differ considerably from tool to tool.
- Four tools and five metrics applied to three different system is
- calculated metrics values using the same set of standard metrics for three software systems of different sizes.
- defined a software quality model for "maintainability" based on the metrics selected.
- ranking of the classes that are most critical wrt. maintainability. Results showed that even the ranking of classes in a software system is metrics tool dependent.
- They considered software metric is mathematical definition mapping the entities of software system to numeric values.
- The goal of the paper to answer two questions namely:
    1. Do the metrics values of a given project and metrics definition depend upon metrics tool used to compute them?
        - There exists difference in the measured values for different metrics tool, client analysis to analyze whether these differences really matters!

    2. Does the interpretation of metrics values of given software system as induced by quality model depend on metrics tool?
        - Yes, it does depend depend upon tool and might lead to different results.

Positive Aspects:

1. This study helps understanding software engineers that they need to be aware of the fact that metrics result are too dependent
2. Metrics result are strongly dependent on the implementing tools.
3. Practical and scientific view of validation of software metrics

Negative Aspects:

1. Cannot measure each metric with each tool, metrics differ from tool to tool
2. Selected only those tools without legal restrictions hence lacking generalizability
3. Study restricted itself to open source projects which were limited to java or C/C++
4. No baseline for comparing software metrics
5. Four tools and five metrics applied to three different system is not representative of all other possibilities