Paper Title: Wodel-Test: a model-based framework for language-independent mutation testing

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Tool Description

Wodel-Test is a tool used for Java Mutation testing. This Mutation Tool parses the program representing it as a model conformant to the language meta-model, applies the mutation operators, and evaluates the test suite on the generated mutants, offering a **rich collection of metrics** about the MT process.

Installation

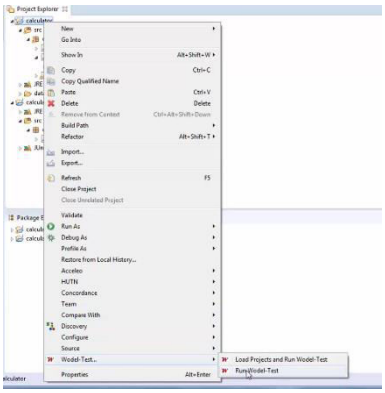
This tool was quite difficult to install since it is only available as an eclipse plugin, and we have encountered some errors during installation. After a few hours of research, we have finally managed to overcome those errors.

Project

The project the tool was used on is a calculator engine which can add, subtract, multiply and divide. The source code is from: https://github.com/DimaSanKiev/Calculator

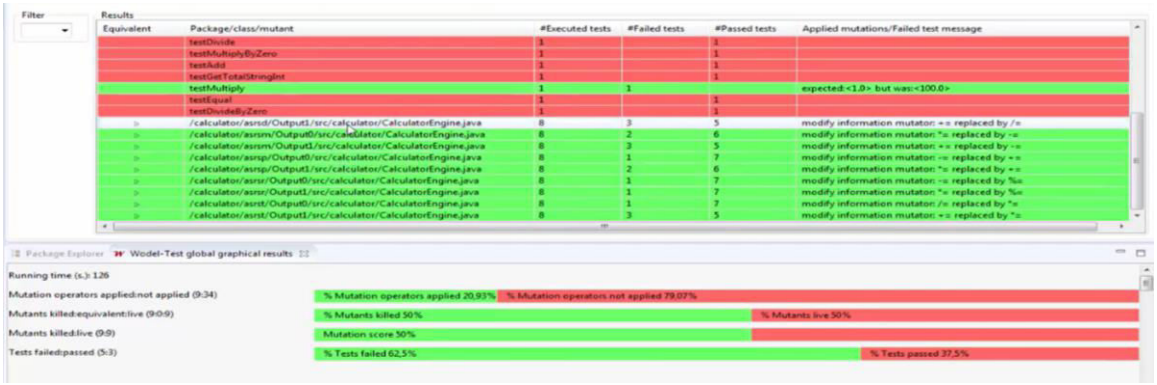
Use of application

You can select the mutation operators you want to apply. The is a wide range of such operators: logic, relational, conditional, shift, assignment, arithmetic operator replacement and others.



After configuring everything it is quite simple to test. Simply right click on the project and run Wodel-Test command as shown in the image.

After generating the mutants models a score is obtained showing how many tests passed and how many failed (with a message of the reason it failed as can be seen on the right side of the table).



A nice feature is that you can filter these tests and select to only see the ones that failed or passed.