

Fülöp, L. J.; Iliá, Árpád; Végh, Ádam Zoltan; Hegedűs, Peter; Ferenc, R.

Comparing and evaluating design pattern miner tools. (English) Zbl 1199.68474

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Summary: Several tools are published in the literature which are able to mine design pattern usage from source code. Because a common test database – a benchmark – is not available, the accuracy of the tools is difficult to check and measuring any kind of improvements on the tools is also problematic. As an all-in-one solution we have developed a benchmark for evaluating and comparing design pattern miner tools and for ensuring a test database for them.

In this paper we present some experiments performed with the benchmark. Two design pattern miner tools – Columbus and Maisa – are evaluated and compared. The tools are evaluated on C++ reference implementations of design patterns, on a real software system called NotePad++ and on FormulaManager, which is a software implemented by us to have a test case where the usage of design patterns is well defined and documented. Design pattern instances from NotePad++ recovered by professional software developers are also added to the benchmark.

MSC:

[68U10](#) Computing methodologies for image processing

Keywords:

[design pattern miner tools](#)

Software:

[DEEBEE](#); [Maisa](#); [Columbus](#)