Software Engineering Seminar (WS 2015)

Performance Regression Testing

Description

Based on a set of reference test cases and corresponding test results, regression tests aim to ensure that changes from one software version to another do not have undesired impacts to the software behavior. Possible changes may, for instance, result from refactorings. Typically, regression tests focus on functional aspects, e.g., by comparing the results of executed software methods with reference results. However, often code changes also have an undesired impact on performance, i.e., properties like method response times as well as memory and CPU usage. The goal of this seminar topic is to (i) provide an overview of existing approaches for performance regression testing, (ii) detail selected approaches, (iii) and evaluate selected tools supporting performance regression testing, e.g., by integrating them in unit tests. The provided literature can be seen as a starting point and it is expected to extend the literature search and present a coherent view on the state of the specification and its use.

References

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