Bachelor's Thesis Specification/20237/2016/xheger00

Brno University of Technology - Faculty of Information Technology

Department of Intelligent Systems | Academic year 2016/2017

Bachelor's Thesis Specification

For: **Heger Jakub**
Branch of study: Information Technology
Title: **Performance Optimization of Testing Automation Framework Based on Beakerlib**
Category: Software analysis and testing

Instructions for project work:

1. Study how BeakerLib (integration test library) works.
2. Analyze performance of BeakerLib, design the metric of performance which would be optimized and identify the functional areas of BeakerLib and chosen harness to optimize performance (based on architectural review of the system, code review, code performance analysis).
3. Prepare and describe test set and environment for performance measurement.
4. Perform initial base line measurements, select at least one optimization and implement this optimization, e.g., by modification of BeakerLib code.
5. Check implemented optimization and discuss results.

Basic references:

- according to the instruction of the supervisor

Detailed formal specifications can be found at http://www.fit.vutbr.cz/info/szz/

The Bachelor's Thesis must define its purpose, describe a current state of the art, introduce the theoretical and technical background relevant to the problems solved, and specify what parts have been used from earlier projects or have been taken over from other sources.

Each student will hand-in printed as well as electronic versions of the technical report, an electronic version of the complete program documentation, program source files, and a functional hardware prototype sample if desired. The information in electronic form will be stored on a standard non-rewritable medium (CD-R, DVD-R, etc.) in formats common at the FIT. In order to allow regular handling, the medium will be securely attached to the printed report.

Supervisor: **Pluháčková Hana, Mgr. Bc.**, DITS FIT BUT
Beginning of work: November 1, 2016
Date of delivery: May 17, 2017

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