FACULTY OF INFORMATION TECHNOLOGY CTU IN PRAGUE

Supervisor's statement of a final thesis

Student:	Mikuláš Poul
Supervisor:	Ing. Miroslav Hrončok
Thesis title:	Efficient and secure document rendering from multiple similar untrusted sources
Branch of the study:	Web and Software Engineering

Date: 9. 6. 2018

Evaluation criterion:	*The evaluation scale: 1 to 4.*
1. Fulfilment of the assignment	***1 = assignment fulfilled,*** *2 = assignment fulfilled with minor objections,* *3 = assignment fulfilled with major objections,* *4 = assignment not fulfilled*

Criteria description:
Assess whether the submitted FT defines the objectives sufficiently and in line with the assignment; whether the objectives are formulated correctly and fulfilled sufficiently. In the comment, specify the points of the assignment that have not been met, assess the severity, impact, and, if appropriate, also the cause of the deficiencies. If the assignment differs substantially from the standards for the FT or if the student has developed the FT beyond the assignment, describe the way it got reflected on the quality of the assignment's fulfilment and the way it affected your final evaluation.

Comments:

The thesis defines the objectives sufficiently and in line with the assignment. The objectives are formulated correctly and fulfilled sufficiently. All points of the assignment were met. The student had developed parts of the thesis beyond the assignment, especially the tool for rendering HTML fragments was developed in a more general way allowing to run arbitrary Python callable from a git repository; the quality of the assignment's fulfillment was increased substantially by this and other details put into the work, such as focus on Continuous Integration and Delivery.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
2. Main written part	*99 (A)*

Criteria description:
Evaluate whether the extent of the FT is adequate to its content and scope: are all the parts of the FT contentful and necessary? Next, consider whether the submitted FT is actually correct – are there factual errors or inaccuracies? Evaluate the logical structure of the FT, the thematic flow between chapters and whether the text is comprehensible to the reader. Assess whether the formal notations in the FT are used correctly. Assess the typographic and language aspects of the FT, follow the Dean's Directive No. 26/2017, Art. 3. Evaluate whether the relevant sources are properly used, quoted and cited. Verify that all quotes are properly distinguished from the results achieved in the FT, thus, that the citation ethics has not been violated and that the citations are complete and in accordance with citation practices and standards. Finally, evaluate whether the software and other copyrighted works have been used in accordance with their license terms.

Comments:

The extent of the thesis is more than adequate, it extends all expectations for a bachelor's thesis. This would have been an excellent master's thesis as well. The written part of the thesis has 90 pages from Introduction to Conclusion, where all the parts are both contentful and necessary. The submitted thesis is (actually) factually correct, I found no factual errors or inaccuracies. The logical structure is excellent, the thematic flow between chapters as well. The text is both comprehensive in its scope and comprehensible to the reader. All formal notations are used correctly. The typographic and language level of the thesis is extraordinary. All relevant sources are properly used, quoted and cited. There are 120 sources. All facts that haven't been discovered by the student are quoted from relevant sources. All quotes are properly distinguished from the results achieved in the thesis, the citation ethics has not been violated and the citations are complete and in accordance with citation practices and standards. Finally, all the software and other copyrighted works have been used in accordance with their license terms, in all cases open source and free software/content. N.B. The results of the thesis are open source as well. I found 1 typo on page 28, hence 99 points only.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
3. Non-written part, attachments	*100 (A)*

Criteria description:
Depending on the nature of the FT, comment on the non-written part of the thesis. For example: SW work – the overall quality of the program. Is the technology used (from the development to deployment) suitable and adequate? HW – functional sample. Evaluate the technology and tools used. Research and experimental work – repeatability of the experiment.

Comments:

The overall quality of the attached software is exceptionally good. The amount of work the student put into this is clearly visible both on the result and on the code quality. All the used technology (Python, Git, Docker, Vagrant…) is both suitable and adequate. The focus on Zen of Python, tests as first class citizens and Continuous Integration makes the software an excellent fit for the Python ecosystem. N.B. The created tool (Arca) has extensive user facing documentation on https://arca.readthedocs.io/

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
4. Evaluation of results, publication outputs and awards	*100 (A)*

Criteria description:
Depending on the nature of the thesis, estimate whether the thesis results could be deployed in practice; alternatively, evaluate whether the results of the FT extend the already published/known results or whether they bring in completely new findings.

Comments:

The thesis result is deployed in practice. The https://naucse.python.cz/ website relies on it heavily and we are moving all current courses (runs) to arbitrary branches. I can imagine the Arca tool can be used in different projects as well. It is available from GitHub, PyPI (Python Package Index) and available to everybody under the terms of the MIT license.

Evaluation criterion:	*The evaluation scale: 1 to 5.*
5. Activity and self-reliance of the student	*5a:* ***1 = excellent activity,*** *2 = very good activity,* *3 = average activity,* *4 = weaker, but still sufficient activity,* *5 = insufficient activity* *5b:* ***1 = excellent self-reliance,*** *2 = very good self-reliance,* *3 = average self-reliance,* *4 = weaker, but still sufficient self-reliance,* *5 = insufficient self-reliance.*

Criteria description:
From your experience with the course of the work on the thesis and its outcome, review the student's activity while working on the thesis, his/her punctuality when meeting the deadlines and whether he/she consulted you as he/she went along and also, whether he/she was well prepared for these consultations (5a). Assess the student's ability to develop independent creative work (5b).

Comments:

Mikuláš has been one of the best software engineers I've ever mentored. This goes not only for other students at FIT but also significant number of junior contributors to open source projects I work on as part as my job at Red Hat and involvement in the Czech Python Community and Python Software Foundation. He has been creative, enterprising, reliable. His ability to develop independent creative work while not running loose and working in sync with me (and the community) was great.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
6. The overall evaluation	*100 (A)*

Criteria description:
Summarize which of the aspects of the FT affected your grading process the most. The overall grade does not need to be an arithmetic mean (or other value) calculated from the evaluation in the previous criteria. Generally, a well-fulfilled assignment is assessed by grade A.

Comments:

This thesis is excellent and given the points above (excellent written part, excellent attached software, excellent activity and self-reliance), I have no other choice than 100 points and grade A. I'd like to kindly suggest this thesis for the dean's award.

Signature of the supervisor: