FACULTY OF INFORMATION TECHNOLOGY CTU IN PRAGUE

Supervisor's statement of a final thesis

Student:	Remy Rojas
Supervisor:	Ing. Milan Dojčinovski
Thesis title:	Blockchain Based RDF Management
Branch of the study:	Web and Software Engineering

Date: 28. 1. 2019

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 main goal of the thesis is to adapt and apply the blockchain technology in the context of RDF. The student had to 1) get familiar with the blockchain technology, 2) identify several use cases of using blockchain technology on RDF, 3) design and implement a blockchain solution for RDF, and 4) validate it on the identified use cases. The student has successfully fulfilled these tasks.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
2. Main written part	*92 (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 thesis is well structured and provides only information relevant to the topic. In general, the thesis is well written and the individual parts logically follow. However, often the student used long and complex sentences, which although grammatically correct, they are hard to follow and understand. The related work is well covered and commented with proper citations.

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 solution developed as part of the thesis is built on top of appropriate software, i.e. CORDA open-source blockchain platform. The solution is well developed and implements four use cases: basic manipulation with RDF (CRUD), tracking changes, notifications, and subscription management.

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 addresses a relatively new topic and provides novel findings/results in the context of using blockchain technology and RDF. In particular, within the thesis, the student developed a blockchain based solution for RDF management, which, at the time of writing, it is first of its kind.

However, use of the solution in an industrial/commercial environment would require some further work.

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:

The student came always well prepared at the agreed regular meetings. At the meetings, the student reported on the progress and discussed the open problems and future directions. Higher support was required in the writing phase of the thesis.

In general, the student has shown exceptional independence.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
6. The overall evaluation	*94 (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:

The main goal of the thesis was the development of a blockchain based solution for RDF management. The student has fulfilled the requirements and successfully implemented and validated the solution. The student had to pay more attention to the style of the writing. However, this has no significant impact on the final quality of the thesis.

I recommend assessment of the thesis with grade A.

Signature of the supervisor: