Review report of a final thesis

Student: Bc. Dmitry Vanyagin

Reviewer: Ing. Josef Vogel, CSc.

Thesis title: Homework management system in Jupyter

Branch of the study: Software Engineering

Date: 15. 5. 2020

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:
Graduate student has analyzed, designed and created an application by Assignment of master thesis. His result is an application prototype of the system for a homework management using Jupyter notebook.

System has connection to KOS and is working for teacher and for students, only by web browser, without any installation on PCs. System supports grading and comments of individual cells.

Assignment completely fulfilled.

Evaluation criterion:	The evaluation scale: 0 to 100 points (grade A to F).
2. Main written part	_95 (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:
Thesis contains 68 pages only, but reader can find all needed here. There is nothing unnecessary in the text of thesis. The topic of thesis is not my field, but I was able with no problems read and understand text.
Introduction part describes the goals of project. We find here brief description of Jupyter project and the description of functional and non-functional requirements.
Analysis and design part enumerate and analyze the resources needed to achieve the goal of the work. It is the main part of thesis.
Implementation part deals with use of project resources: OAuth 2, KOSAPI, JupyterHub and Kubernetes. Configuration of resources is described here.
Conclusion part describes project tests a and assesses the prospects for the future.

Evaluation criterion:	The evaluation scale: 0 to 100 points (grade A to F).
3. Non-written part, attachments	_82 (B)_

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:
Application uses modern open source means selected during the analysis.
In the appendices of thesis we can find short Student's and Teacher's guide.
The application has been tested, although not by potential users - teachers and students.

Evaluation criterion:	The evaluation scale: 0 to 100 points (grade A to F).
4. Evaluation of results, publication outputs and awards	*90 (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 practical result of thesis is a prototype application. It could be used even with this condition.

Another benefit is the analysis of the possibilities by solving problems of thesis.

Evaluation criterion:	No evaluation scale.
5. Questions for the defence	

Criteria description:
Formulate questions that the student should answer during the Presentation and defence of the FT in front of the SFE Committee (use a bullet list).

Questions:

Have you tried to apply the system to the homework of a specific course and test it with a sample of students?

Evaluation criterion:	The evaluation scale: 0 to 100 points (grade A to F).
6. The overall evaluation	*93 (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 author had to study a large number of sources (the bibliography contains 36 items) to build the application from existing open source components.

Nevertheless, the included flash drive contains 344 configuration and other source files with a total length of 2.9 MB.

I consider the diploma thesis to be excellent.

Signature of the reviewer: