Supervisor's statement of a final thesis

Student: Ivan Demchenko
Supervisor: doc. Dr. André Sopczak
Thesis title: Feasibility Study of Portal to Provide Knowledge about Supersymmetry to Experts
Branch of the study: Information Systems and Management

Date: 18. 1. 2021

Evaluation criterion:

1. Fulfilment of the assignment

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 clearly and sufficiently defines the objectives. Information of the requirements is gained by two conducted interviews, one theorist and the supervisor as experimentalist. A larger statistics of interviews would have been desirable to gain more information of the requirements and potentially prioritize them from repeated suggestions. The sources of information were well studied and evaluated, and two options for the storage of data were proposed. More details on the structure for the database would have been desirable. A test code how to extract the information from the web was well performed. The outline of the webpage on Supersymmetry is very well performed. The suggested technical realization is outlined and can serve a future implementation. The evaluation of usefulness is clear and sound. The evaluation of the number of potential users is performed only based on uncertain assumptions, thus the estimated numbers seem uncertain. The cost estimate naturally has a large uncertainty and this is clearly stated. The usefulness to the general public of the portal was addressed briefly. Overall, the thesis result is useful for a future development of the studied web portal.

Evaluation criterion:

2. Main written part

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 content and scope of the thesis is adequate, and all parts are meaningful and necessary. The thesis has no mistakes, and some inaccuracies as the estimation of the number of users is essentially based on assumptions. Another point which could have been evaluated in more detail is the categorization of the articles in the database. The described procedure is too simplistic to give a reliable categorization. This is noted in the thesis, and a more sophisticated method would have been desirable. The flow between the sections and chapter is natural. The text is comprehensible and largely without language mistakes after a few iterations of the draft. Sources are properly used and cited. The results are clear and genuine. No specific copyrights and licenses were needed.

Evaluation criterion:

3. Non-written part, attachments

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 software and technologies used are in order. Positively, the layout of the webpages for the proposed portal are developed very suitable and professional. For the method of categorization the limitations of the chosen method were recognized, and a better tool could have been used. The suggestions made for improvements are correct and useful.

4. **Evaluation of results, publication outputs and awards**

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

- **80 (B)**

**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 results of the these are well suited for implementation in practice. They extend the current knowledge and bring new findings. The feasibility has been established, however, the uncertainties on the number of potential users, and the challenge on the categorization precision remain to be investigated further. Furthermore, the need of Human Resources for maintaining the web portal after implementation could have been addressed further.

5. **Activity and self-reliance of the student**

**Evaluation criterion:** The evaluation scale: 1 to 5.

- **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 has been very eager to work on his project. He has been very reliable in attending in person and online meetings. Very positive was his timing to be ready well in time with his thesis draft(s) before the submission deadline. He has a good time management. Ivan followed well the suggestions, more initiatives would have been welcomed. He advanced systematically with guided research.

6. **The overall evaluation**

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

- **85 (B)**

**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 thesis conclusion is clear and the arguments convincing. Some inaccuracies are noted and some aspects would have required a deeper evaluation. The student is a good communicator in English and meetings with him were always fruitful in advancing the research. He worked very regular on his thesis project and respected the deadlines.

Signature of the supervisor: