

I. IDENTIFICATION DATA

Thesis name:	Identification of Human illnesses and disabilities and adaptation of user interface
Author's name:	Maria Potapova
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computer Science
Thesis reviewer:	Ing. Matěj Klíma
Reviewer's department:	Department of Computer Science

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>Evaluation of thesis difficulty of assignment.</i>	The assignment's first two goals require the student to research a wide area of human disabilities and methods of identifying them. This work to be done correctly involves a time-consuming search, selection, and study of resources. Consequently, the assignment requires the student to propose some methods to change the UI regarding the disability. Lastly, she has to implement those methods into a demo application and verify its functionality on real users. Therefore this assignment I consider to be challenging.
Satisfaction of assignment	fulfilled
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	The student fulfilled in the thesis all requirements specified in the assignment.
Method of conception	correct
<i>Assess that student has chosen correct approach or solution methods.</i>	Even though the assignment was challenging, the student found a way how to do it effectively. She used some external libraries, open systems, and the resulted library seems to be easy to use. Moreover, as proved by user testing described in chapter 7, the implemented library really helps people with disabilities to improve their mobile applications' operation.
Technical level	B - very good.
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	This work contains all the essential parts that the thesis from the software engineering area should have. The system's architecture the student illustrates on several diagrams, the implementation and verification of the system is presented as well. Worth mentioning is the quality of chapter 2, where the student provides an exciting insight into the problem, illustrated on several figures. However, better information about integrating the library into the application is missing in the text. Also, the description of the attachments is missing in the thesis.
Formal and language level, scope of thesis	B - very good.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	The thesis has a perfect typographical arrangement and is very well readable. The text has a decent language level and contains very few typos. On the other hand, some grammar mistakes are present in the thesis; for example, the names of subsections 2.4.3 and 2.4.4 contain the capital letter "I" in the word impairments. Moreover, the chapter and section names do not illustrate their topics very well. For example, in chapter 5 "Implementation," it is unclear that it means instruction about the library's implementation into the application. Also, Chapter 3 is more about the existing approaches to detect disabilities. Moreover, section 2.4.4 speaks about vestibular impairments, not auditory, as the name suggests, and the section about auditory impairments is missing.

Subsequently, some revision of the Czech abstract at the beginning of the thesis would be advantageous.

Selection of sources, citation correctness

A - excellent.

Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.

The thesis contains a respectable number of sources (61), often some credible papers. Websites in the list contain mostly the description of applications or technologies that the student uses in her work. The student uses citation style consistently throughout the text, and most of the statements she backs by some source. The only exceptions I found, where she leaves some statements without a source, are mostly in section 4.1.

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.

The student fulfilled the challenging assignment she had with a very well written work containing all necessary parts. Though, the thesis is missing a better explanation of how to integrate the library into the application. Subsequently, the attachments submitted along the thesis could be better described in the text.

Questions for the defense:

- 1) Why were only the vision-impaired users selected for the user testing?
- 2) Which UML diagram is best suited to describe individual parts of some software and their interactions?

I evaluate the handed thesis with classification grade **B - very good.**

Date: **28.1.2021**

Signature: