THESIS SUPERVISOR'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Back-end part of the process testing data management system**
Author's name:	**Daniel Holotík**
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computers
Thesis reviewer:	Ing. Matěj Klíma, Ph.D.
Reviewer's department:	Department of Computers

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment **challenging**

How demanding was the assigned project?

I evaluate the assigned project as challenging. The student had to develop and document a back-end part of the system that would communicate with other back-ends and the front-end part of the system, which were all developed separately by someone else. Moreover, the student had to design a relatively complex data model and create an oriented graph generator as part of the assignment.

Fulfilment of assignment **fulfilled**

How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.

All the tasks of the assignment were fulfilled without any objections.

Activity and independence when creating final thesis **A - excellent.**

Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.

Mr. Holotík regularly attended all the arranged meetings and performed all the assigned tasks on time. The cooperation with him was outstanding.

Technical level **A - excellent.**

Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?

The initial chapter of the thesis contains a necessary introduction to the field of process testing and System Under Test (SUT) modeling. In the subsequent chapters, there is documentation of the design, implementation, and testing of the back-end part of the system that provides the necessary insight into the development of the system. The design, implementation, and used technologies and tools are correct.

The only objection I have is to Chapter 4, where I miss an explicit description of how was tested the graph generator module.

I would like to highlight that the author introduced and explained various topics throughout the thesis clearly and understandably (Section 1.1 Directed graph, Section 1.4.1 Example of a process test, explanation of the graph generating algorithm in Section 3.6, difference between unit and integration tests in Chapter 4, etc.).

Formal level and language level, scope of thesis **A - excellent.**

Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?

Although the author wrote the thesis in English, which is not his first language, it is on a good level. It is well-readable, and apart from missing or sometimes incorrect articles, it doesn't contain grammatical issues that would make reading difficult.

The figures are described, and abbreviations are introduced first. The organization of the text is correct, and the extent of the thesis is sufficient.

Selection of sources, citation correctness	**A - excellent.**
Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?	
The author cites 17 sources in the thesis, ranging from scientific papers and books to online sources with documentation of technologies and computer science portals. The bibliography has a correct and consistent format. The external sources of figures and statements are properly cited.	

Additional commentary and evaluation (optional)
Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.
The back-end part of the system is deployed to production and available through the front-end (developed in a different thesis) at https://cpt.fel.cvut.cz/manager/. The complete system was already used for propagation purposes of the Open Informatics study branch.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

The author of this thesis proves on this relatively challenging assignment that he knows how to design, implement, test, and document a complex back-end part of a web application that uses modern technologies. While working on the oriented graph generator, he proved his capabilities in designing and implementing graph-related algorithms. The system will be used further in research to gather data and validate the algorithms for system process testing.

As both XML and JSON formats were used in the back-end's communication, I would like to ask the student to explain the advantages of communication using each format as part of his defense.

The grade that I award for the thesis is **A - excellent.**

Date: **27.5.2024** Signature: