

## Diploma Thesis Review (by supervisor)

Thesis author: Anastasia Akhvlediani  
Thesis title: Expanding the Dataspecer Tool for Streamlined API Creation and Management  
Year: 2024  
Study programme: Computer Science - Software and Data Engineering  
Review author: doc. Mgr. Martin Nečaský, Ph.D. (supervisor)  
Department: Department of Software Engineering

### Review text:

The thesis focuses on exploiting a data specification designed in the Dataspecer tool to automate the design of an OpenAPI specification of REST API for the manipulation with the data that correspond to the data specification. In the Dataspecer, a user can design their own data specification (= a set of data schemas) based on a single domain conceptual model (ontology). The thesis consumes this output from the Dataspecer and enables the user to specify the operations (CRUD) that should be callable through an API. It then derives a well-designed API specification in the OpenAPI specification language.

The thesis analyzes the existing literature to formulate what is a well-designed REST API. It also analyzes the information provided in a data specification from Dataspecer. Then it designs a system that asks the user further necessary questions for the API and generates the required OpenAPI specification.

The thesis also describes and evaluates a working software application implementing the proposed method. It was successfully integrated with the Dataspecer tool.

The thesis is easy to follow and written at the very good level. It contains all necessary parts. The student was very active during her work. She regularly attended meetings every one or two weeks and she successfully incorporated all my requirements and comments. I have to say that the way how she incorporated them was quite minimalistic. However, I also have to say that it was always sufficient and resulted in a working solution.

From my point of view, there are no serious defects or problems in the submitted thesis. The author fulfilled the thesis specification and submitted a good piece of academic and software work.

**I recommend the thesis to be defended.**

Date 02 September 2024

doc. Mgr. Martin Nečaský, Ph.D.