



**FACULTY
OF INFORMATION
TECHNOLOGY
CTU IN PRAGUE**

Assignment of master's thesis

Title: ORM Library for Neo4j Graph Database in .NET Framework
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Study program: Informatics
Branch / specialization: Software Engineering
Department: Department of Software Engineering
Validity: until the end of summer semester 2022/2023

Instructions

The main goal of this work should be to analyze, design, and create an open-source object-relational mapping library (ORM) for a graph database Neo4J in the .NET framework. This solution should enable users to create queries using LINQ.

Steps to take:

- Review EntityFrameworkCore, Neo4j, and Cypher libraries
- Review existing approaches to ORM libraries for graph databases
- Design an ORM library for Neo4J in the .NET framework
- Implement an open-source proof-of-concept of the designed library
- Use test-driven development approach to test the ORM
- Evaluate the results and propose the steps to make the open-source project sustainable for other developers

Electronically approved by Ing. Michal Valenta, Ph.D. on 15 November 2021 in Prague.