Comenius University Bratislava
Faculty of Mathematics, Physics and Informatics

THESIS ASSIGNMENT

Name and Surname:	Bc. Miroslav Baluch
Study programme:	Applied Computer Science (Single degree study, master II. deg., full time form)
Field of Study:	Computer Science
Type of Thesis:	Diploma Thesis
Language of Thesis:	English
Secondary language:	Slovak

Title:	Access control for client-side graph-based queries
Annotation:	Modern full-stack web development approach favours data access via graph-base query languages such as GraphQL and JSON-LD-Query. Client-side query composition offers flexibility for the developers but introduces security risks as queries composed on the client are executed on the server.
Aim:	The goal is to propose an access control mechanisms that enables to verify and pass only such data to the client for which the current user actually has access. This will be implemented and tested in the existing system courses.matfyz.sk which uses JSON-LD data representation.The goal of this thesis is to propose an access control mechanisms that enables to verify and pass only such data to the client for which the current user on the client side has permissions. This will be implemented and tested in the existing system courses.matfyz.sk which uses JSON-LD data representation.
Literature:	1. Homola, M., Kľuka, J., Kubincová, Z., Marmanová, P. and Cifra, M., 2019. Timing the Adaptive Learning Process with Events Ontology. In International Conference on Web-Based Learning (pp. 3-14). Springer. 2. Antoniou, G. and Van Harmelen, F., 2004. A semantic web primer. MIT press. 3. Taelman, R., Vander Sande, M. and Verborgh, R., 2019. Bridges between GraphQL and RDF. In W3C Workshop on Web Standardization for Graph Data. W3C. 4. Taelman, R., Vander Sande, M. and Verborgh, R., 2018. GraphQL-LD: Linked Data Querying with GraphQL. In International Semantic Web Conference (P&D/Industry/BlueSky).

Supervisor:	Mgr. Ján Kľuka, PhD.
Consultant:	doc. RNDr. Martin Homola, PhD.
Department:	FMFI.KAI - Department of Applied Informatics
Head of department:	prof. Ing. Igor Farkaš, Dr.
Assigned:	21.10.2018
Approved:	13.10.2021

prof. RNDr. Roman Ďurikovič, PhD.
Guarantor of Study Programme

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Student   Supervisor