

Master's Thesis Assignment



153935

Institut: Department of Information Systems (DIFS)
Student: **Škrášek Michael, Bc.**
Programme: Information Technology and Artificial Intelligence
Specialization: Application Development
Title: **Developing Modular Information System with Domain-Driven Design**
Category: Information Systems
Academic year: 2023/24

Assignment:

1. Study monolithic information system architectures with a focus on modularity (Modular Monolith), study DDD (Domain-Driven Design) and its connection to information system architecture.
2. In coordination with the supervisor, select two architectures, less and more modular, and design a solution for a chosen demonstration application.
3. Implement the server side of the application in both architectures, implement the domain as a rich domain according to DDD.
4. Implement the front end of the application. During development, consider cloud deployment, unit and integration testing, server-side or client-side caching, and other extensions in agreement with the supervisor.
5. Evaluate the results achieved.

Literature:

- Martin, R. C.: Clean Architecture: A Craftsman's Guide to Software Structure and Design, Pearson, 2017
- Evans, E.: Domain-Driven Design: Tackling Complexity in the Heart of Software, Addison-Wesley Professional, 2003

Requirements for the semestral defence:
Items 1 and 2.

Detailed formal requirements can be found at <https://www.fit.vut.cz/study/theses/>

Supervisor: **Burget Radek, doc. Ing., Ph.D.**
Head of Department: Kolář Dušan, doc. Dr. Ing.
Beginning of work: 1.11.2023
Submission deadline: 17.5.2024
Approval date: 30.10.2023