

## DIPLOMA THESIS ASSIGNMENT

Student: **Bc. Radek Ježdík**

Study programme: Open Informatics  
Specialisation: Software Engineering

Title of Diploma Thesis: **The Event Sourcing Design Pattern in a Java Enterprise Application**

### Guidelines:

Learn and introduce the event sourcing design pattern [1], the architecture style for application state change processing and persistence. Furthermore focus on implementing this pattern on the Java platform. Familiarize yourself with the application "Integration Portal" created in [2-5], which is based on 3-layered enterprise application architecture implemented using Spring Framework. Perform refactoring on selected modules to take advantage of the event sourcing design pattern. Compare the features of the two application architectures (in terms of configuration complexity, code quality, performance etc.).

Expected outputs of the thesis:

1. Description of the event sourcing architecture style.
2. Refactoring of selected modules in Integration Portal application using event sourcing.
3. Comparison of the event sourcing architecture and the traditional 3-layered enterprise architecture.

### Bibliography/Sources:


1. BETTS, Dominic et al. Exploring CQRS and Event Sourcing: A journey into high scalability, availability, and maintainability with Windows Azure. 2013.
2. STRNAD, Petr. Integrační server pro sdílení a zálohování dat. 2015. Master thesis. ČVUT FEL
3. HAŠLAROVÁ, Kateřina. Front-end pro portál pro sdílení souborů. 2015. Master thesis. ČVUT FEL
4. BLAŽEK, Jiří. Dokončení klientské části integračního portálu. 2015. Bachelor thesis. ČVUT FEL
5. FENGL, Vlastimil. Backend pro integrační portál. 2015. Bachelor thesis. ČVUT FEL

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Valid until the end of the winter semester of academic year 2016/2017

  
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Dean

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