



### **Laboratory 7**

#### **Advanced Deployment**

During seventh laboratory students should get familiar with advanced concepts of deploying web services and configuring environment.

The following tasks should be completed and configured using Docker Compose:

1. All services (Spring Boot applications for categories and elements) register in single discovery service. Configuration should contain two instances of elements service. (2 point)
2. Gateway and services use discovery service with load balancer in communication with other services. Use logs to present execution in different instances. (2 point)
3. Category and elements services use external database (database server of student's choice) with volume configuration. Multiple instances of the same service use the same database instance. (1 point)
4. Database tables are created automatically using migration framework when application starts. (1 point)
5. Services use centralized configuration service for obtaining database and discovery service configurations. Localization of configuration service and instance id are configured with environment variables. (1 point)

**Attention:** To pass tasks 1 and 2, Angular application must be able to communicate with services (at least categories or elements listing) through gateway.