Laboratory 3

Spring MVC

During third laboratory students should get familiar with basic components of Spring MVC (REST services implementation). Project should be based on the code developed during previous laboratories.

The following tasks should be completed:

1. Implementation of DTO classes for creating/updating and reading all entity classes. Additionally separate DTO classes for reading collections of entity classes. DTO classes for creating/updating need to contain only those fields which can be set. For example: primary keys and categories are set by sending request to specified resource and are not present in the request body. DTO classes for reading collections should not contain all original fields but only identifiers and some user friendly name or description. (3 point).
2. Implementation of rest controllers as `@RestController` for each entity class. Controllers should utilize services for business operations and translate between business entities and DTO objects. Each controller must allow for creating/updating, deleting and reading elements and categories as well as reading whole collections. The resource addresses of the REST services must be well formed and hierarchical. Appropriate HTTP methods must be used as well as appropriate response codes. Removing categories must remove all elements (this can be done with appropriate JPA configuration). Elements are always added to category. Client can both fetch all elements and elements from single category. Remember that fetching elements from empty and not existing categories will result in two different responses. Situations like adding element to not existing category must result in appropriate response code. (4 points)
3. All HTTP request must be documented and tested using standard `request.http` file. Those files can be used with IntelliJ IDEA HTTP Client plugin or Visual Studio Code REST Client plugin. (1 points)