Lab 11

[valid 2020-2021]

REST Services
Continue the application created at the previous lab integrating the following functionalities:

- Create a database in order to store the *persons* and their *social network* relationships.
- Implement REST services needed to comunicate with the database (CRUD).

The main specifications of the application are:

Compulsory (1p)

- Create a Spring Boot project containing the REST services for comunicating with the database.
- Create the class *Person*.
- Create a REST controller containing methods for:
  - obtaining the list of the persons, via a HTTP GET request.
  - adding a new person in the database, via a HTTP POST request.
  - modifying the name of a person, via a HTTP PUT request.
  - deleting a person, via a HTTP DELETE request.
- Test your services using the browser and/or Postman.

Optional (2p)

- Create REST services for inserting and reading relationships.
- Create services for determining the first *k* most/least connected (popular) persons in the network.
- Integrate the services into your previous project, invoking them using the support offered by Spring Boot.
- Handle the exceptions using a *RestControllerAdvice*.

Bonus (2p)

- Write a service that determines **in linear time** all persons who are so important to the social network such that, if one of them were eliminated, the network would become disconnected.
- Document your services using [Swagger](#) or a similar tool.
- Secure your services using the HTTPS protocol and [JSON Web Tokens](#)

Resources

- [What is REST?](#)
- [Spring Boot Reference Documentation](#)

Objectives

- Understand the concept of application framework.
- Get familiar with Spring Boot.
- Understant REST software architectural style.
- Write programs that communicate with other programs on the network, using HTTP.