REST API Security
Final Project

Guadalupe Ortiz Bellot

Computer Science and Engineering Department

UCA
Universidad
de Cádiz

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Project Description

- In this project you will create a basic REST API for the management of students and courses they are enrolled in.

- Then you will use some of the most important mechanisms for securing REST APIs.

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REST API Implementation

- Create a Dynamic web Project in Eclipse named *StudentSurname_StudentName*.

- Implement at least 3 classes in the service: *Student, CourseDAO y CourseWS*.

- *Student* will have at least *2* attributes–student id and mark; as well as the corresponding *get* and *set* methods.

- *CourseDAO* will keep a static structure or the access to a database with 4 *students with id 1A,2A,3A y 4A* and the methods to get, add and delete students.

- *CourseWS* will offer 4 invocable operations:

  - *welcome* (GET) will not receive any incoming parameter and will return plain text.

  - *obtainStudent* (GET) will receive a JSON with a student ID and return a JSON with the od and mark of the student,

  - *deleteStudent* (DELETE) will receive a JSON with a student ID and delete all the information about him returning a plain text message.

  - *newStudent* (POST) will receive a JSON with all the information about a student and will add it to the static structure returning a plain text message

  - students (GET) will return all the information about the students in the static structure.

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REST API Securitization

- Security Implementation:
    - All the methods have to manage error handling, using the adequate return code and avoiding the submission of sensitive information in the path.

    - Digest security will be forced for all the methods different from GET, GET will not implement any security method.

    - JWT will be implemented for secured methods.

    - Log audit will be provided for all methods.