University Constantine 2 - Abdelhamid Mehri
Faculty of NTIC - Department of TLSI
Academic Year: 2023/2024
Specialty: Software Engineering - Bachelor's Degree (L3)
Course: Advanced Web Application Development

Mini Project

E-learning Platform for the NTIC Faculty

Objective:

The objective of this mini project is to develop an e-learning platform (web application) for our faculty to facilitate the teaching tasks for teachers. This platform will allow teachers to publish educational materials (lectures, tutorials, practical sessions) so that concerned students can access them remotely via the internet. To perform basic tasks and ensure the smooth operation of the platform, an administrator manages it. The platform must provide the following functionalities to its users (Administrator, Teacher, Student):

Administrator: a user who manages the application. By logging into their account, they can perform the following tasks:

1. **User account management:** Creation, modification, or deletion of accounts (Admins, Teachers and Students). This functionality is used to create user accounts for admins, teachers and students, allowing them to access the application.
2. **View the list of users:** This functionality allows the administrator to view the list of users, search and filter the results.

Teacher: By logging into their account, the teachers can perform the following functionalities:

1. **Profile management:** Modify profile information such as name, surname, etc.
2. **View their courses:** This functionality allows the instructor to view the list of their courses.
3. **Manage their courses:** This functionality allows the instructor to manage their courses. By clicking on a course, the instructor can perform the following tasks:
   - View the content of the course (organized over several teaching weeks).
   - Add a teaching week to the course.
   - Modify a teaching week: Publish educational material (lecture, tutorial, or practical session / Google drive links) with a description of that week. Modify educational material. Delete educational material.
   - Delete a teaching week.

Student: By logging into their account, the student can view and download educational materials from the courses in their specialty.

Work to do:

1. Develop the application using spring boot.
2. Use MVC Controller.
3. Develop a RestAPI for this application.
4. Use Spring Security to implement Authentication and Access Control for the application.
5. Use React to develop the front-end (Optional).