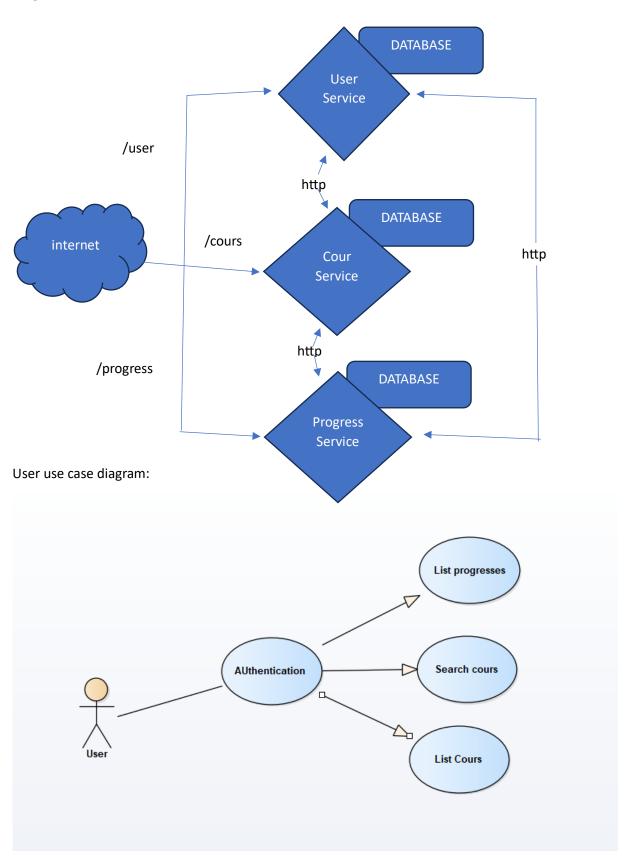
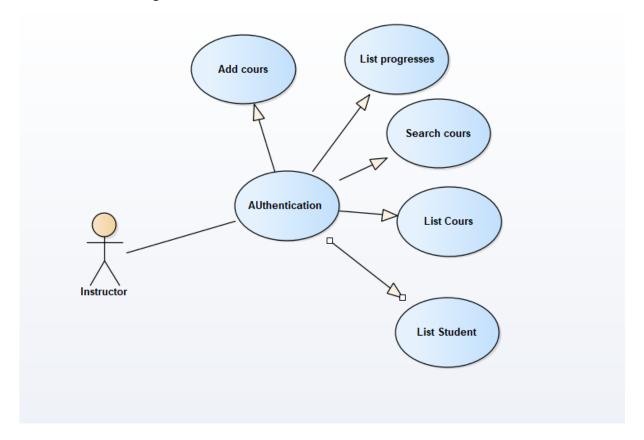
# AMS TP (EL BADRI ACHRAF)

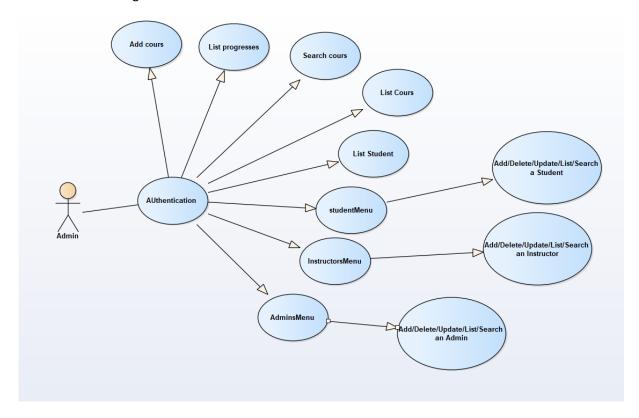
Diagram of the microservice:



## Instructor use case diagram:



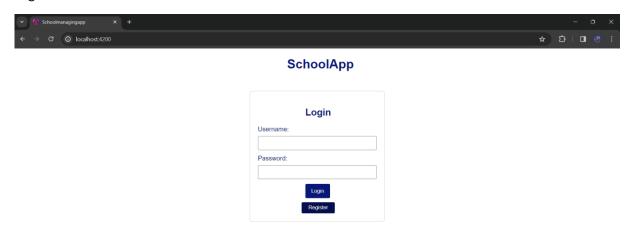
## Admin use case diagram:



### **Angular/Spring boot Web Application:**

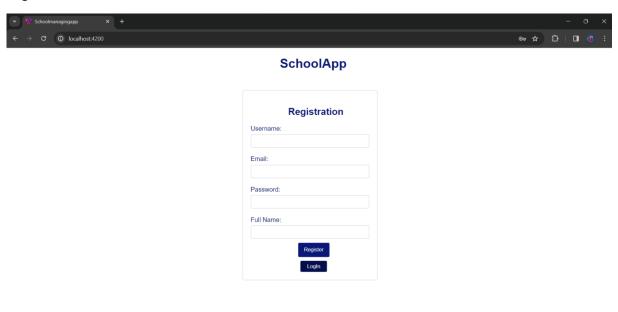
#### **Authentification:**

#### Login Interface:



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#### Registration interface:



There are 3 possible users: a student, instructor or an admin.

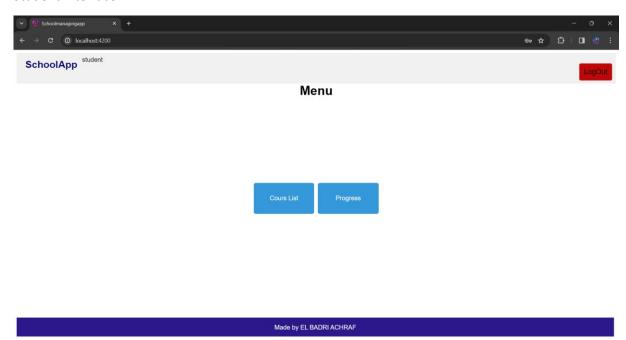
The student can search and list courses, and he can also check his progresses.

The instructor can search, list and add courses and he can check modules and only list student.

The admin can search, list and add courses, he can check modules, list, add, delete students, list, add, delete instructors, list, add, delete admins.

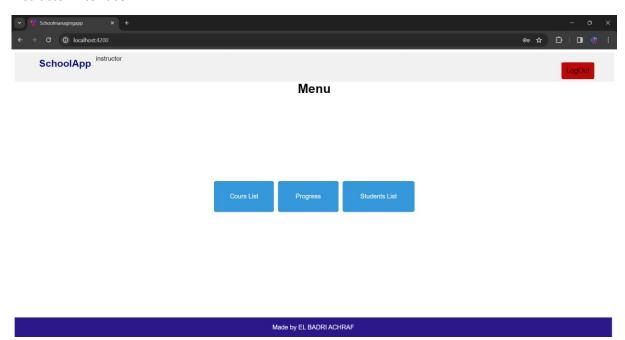
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#### Student interface:



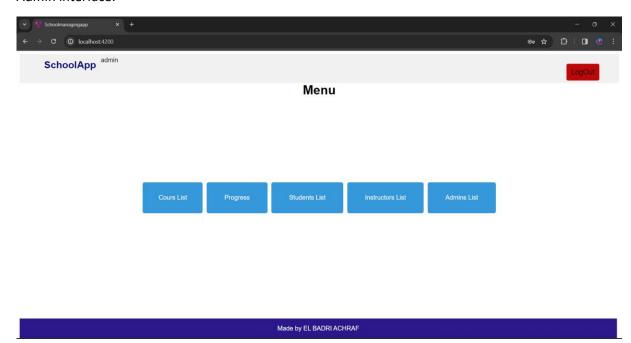
The student can List and search courses or List the his progress.

#### Instructor interface:



The instructor can List, search, add courses or List progress or list students.

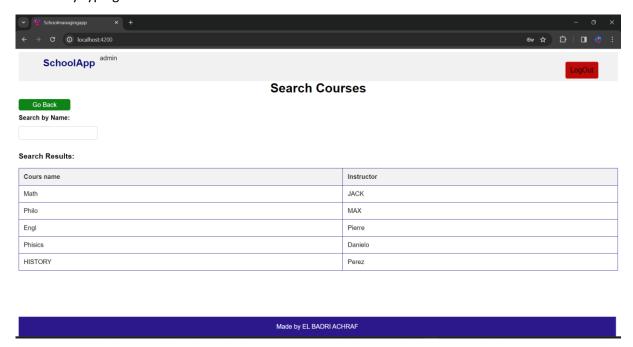
#### Admin interface:



The admin has access to everything, he can List, search, add, delete, update courses or he can List, search, add, delete, update progress or he can List, search, add, delete, update students or he can List, search, add, delete, update instructors or he can List, search, add, delete, update admins.

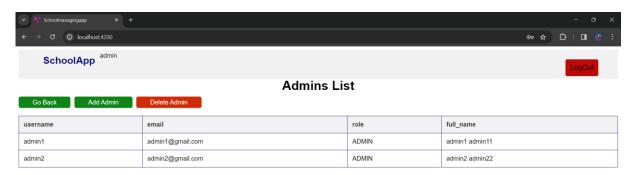
Search and filter courses interface:

It filters by typing the name of the course.



#### List Admins interface:

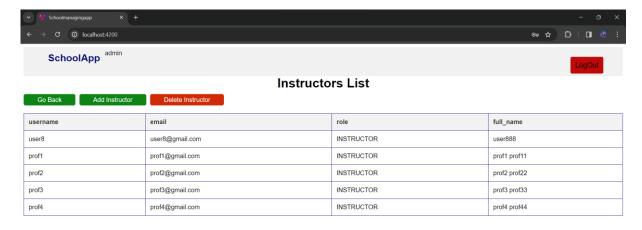
Where the admin can add or delete an admin.



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#### List instructors interface:

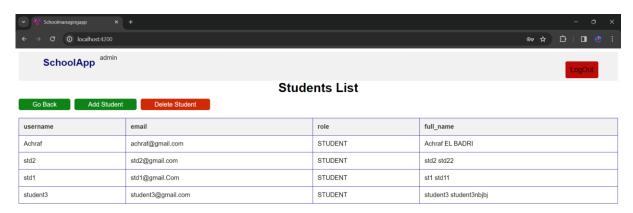
Where the admin can add or delete an instructor.



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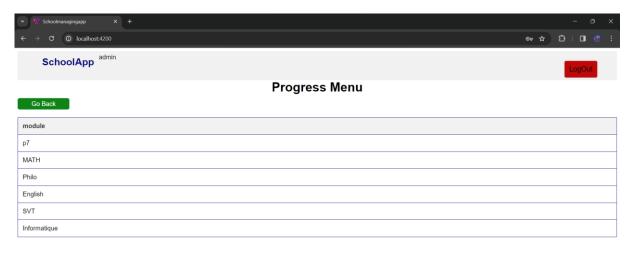
#### List students interface:

Where the admin can add or delete a student.



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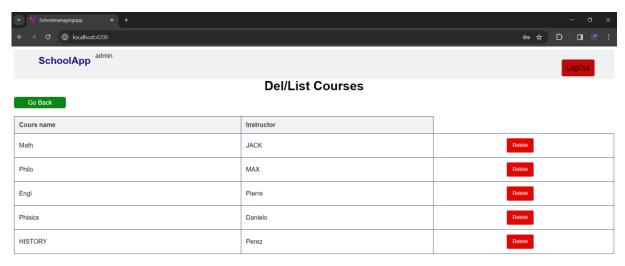
List modules interface for the teacher:



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#### Delete/list Courses interface:

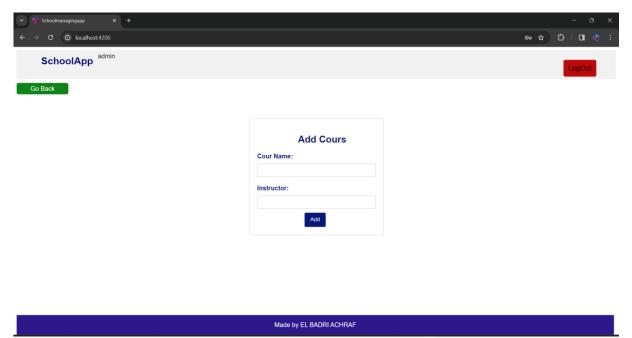
Only the admin can add a new course.



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#### Add a course interface:

Only the admin and the instructor can add a new course.



#### Technologies used for this project:

Spring boot:



Spring Boot is an open-source Java-based framework that is part of the larger Spring Framework. It is designed to simplify the development of production-ready applications with a minimal amount of configuration. Spring Boot provides a convention-over-configuration approach, which means that developers can get started quickly without needing to deal with the complexities of setting up and configuring a Spring application.

NGULAR

Angular:

Angular is a popular open-source web application framework developed and maintained by Google and a community of developers. It is written in TypeScript and is designed to simplify the development of dynamic, single-page web applications (SPAs). Angular provides a comprehensive set of tools and libraries for building complex, client-side applications.

Post man:

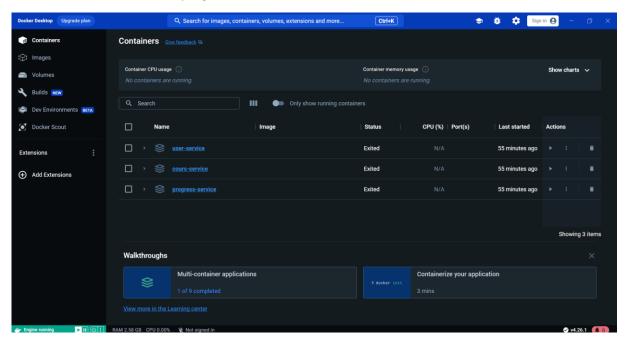


Postman is a popular collaboration platform for API development. It provides tools for designing, testing, and managing APIs, making the API development process more efficient. Postman is widely used by developers, testers, and other stakeholders involved in the API development lifecycle.

Docker: docker

Docker is a platform that enables developers to automate the deployment of applications inside lightweight, portable containers. Containers are standalone executable packages that include everything needed to run a piece of software, including the code, runtime, libraries, and system tools. Docker provides a consistent environment across different environments, making it easier to develop, test, and deploy applications.

The 3 services: user-service, progress-service, cours-service.



## Testing, and managing user, cours, progress APIs using $P \cap S \cap M \wedge N$ :

