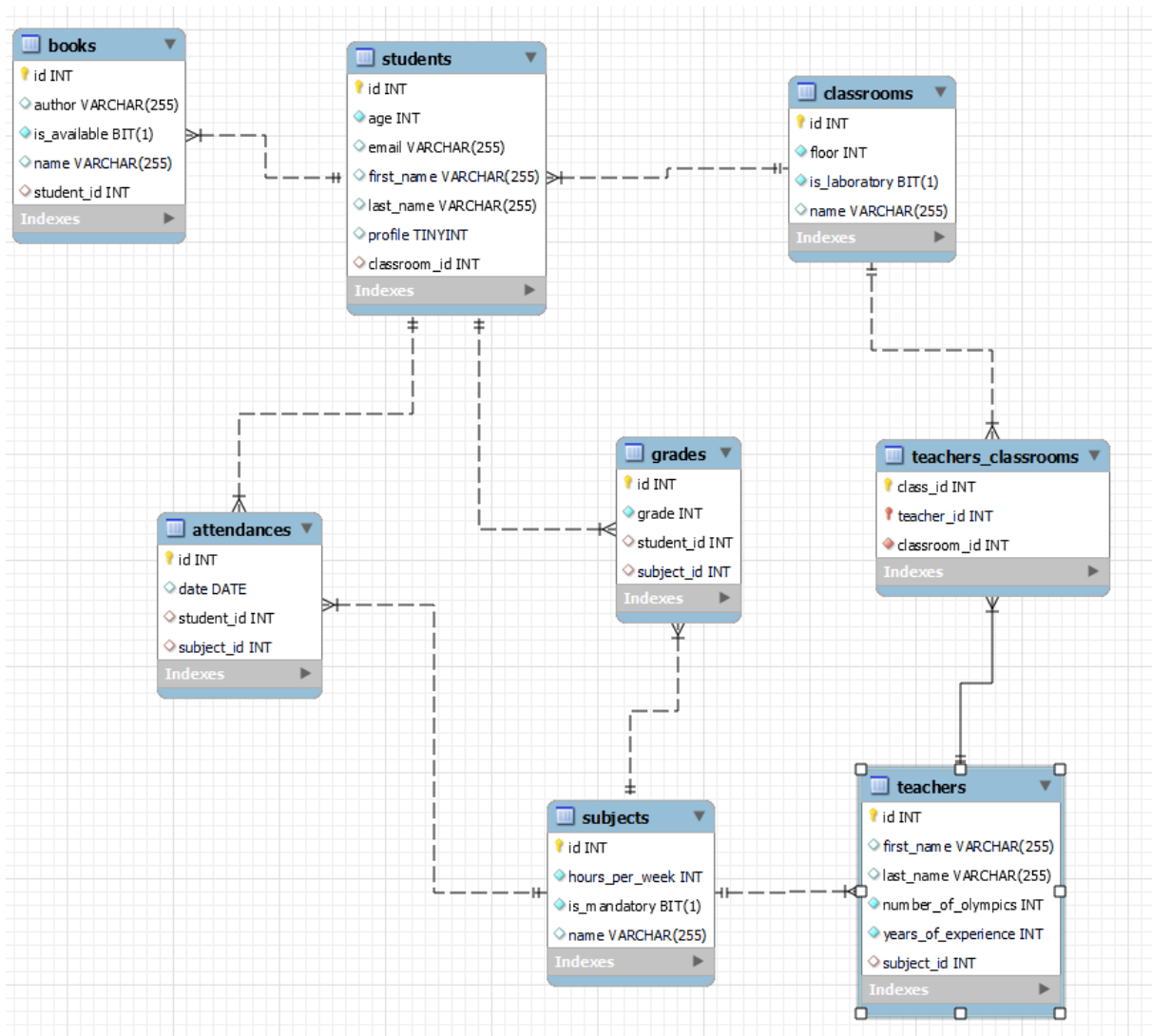# SchoolHub - SCHOOL MANAGEMENT APP

Java - Spring Boot
Lăpăduș Raluca - IS 406

Within the application called SchoolHub, I chose to develop an application that aims to improve the management of a school in the Java programming language using the SpringBoot framework.

This application represents an MVP, which means 'minimum viable product', which means that it is made up of enough functionalities to be used by a group of users. The application is developed for schools, and as target users we have teachers and students.

In what follows, I will present the database scheme from which I started the development, along with the 10 business requirements and the description of 5 functionalities to be implemented.

Relationships between tables:
- **Students (1) - Books (M)**: a student can borrow many books from the school library
- **Students (1) - Grades (M):** a student can obtain many grades in a subject
- **Grades (M) - Subjects(1):** a subject can have many grades
- **Teachers (M) - Subjects (1):** many teachers can be hired for a subject
- **Students (M) - Classes (1):** there are many students in a class (ex: class 5B).
- **Teachers (M) - Classes (M):** there are many teachers that teach in one class
- **Attandances(M) - Subjects(1):** in a subject a student can receive many absences

Bussiness requirements:

Grades management:
1. The application allows us to add a grade for a student to a subject, but also provides us with information related to students' grades
2. The application provides us information related to students' grades for a subject
3. The application calculates the average of a student in a subject
4. The application allows deleting or modifying for grades that were entered incorrectly

Classes and subjects management:
5. The application provides details related to the subjects taught in a class and allows adding a new subject to a class.
6. The application allows adding, deleting or modifying a subject
7. The application allows moving a student from one class to another

Library management:
8. The application offers students the opportunity to borrow books from the library and to view the availability of the books
9. The application offers the possibility to manage the library by offering the possibility to delete, add or modify the name for a book

Teachers management:
10. The application offers students the opportunity to see the teaching staff of the class they are in
11. The application offers the possibility of adding a new teacher within a school and assigning him to a class and deleting a teacher from the school

Attandances management:
12. The application offers the possibility to view a student's absences for a certain subject
13. The application offers the possibility to add a student's absence to a given subject
14. The application offers the possibility to remove an absence that was placed incorrectly

5 main features:

1. **Grades management:** *:* The application allows teachers to input grades for students in various subjects. It provides a comprehensive overview of students' grades for each subject, including the ability to calculate the average grade for a student in a specific subject. Additionally, the system supports the modification or deletion of grades entered incorrectly.

2. **Classes and subjects management:** The application offers information about the subjects taught in each class. It allows the addition, deletion, or modification of subjects. Furthermore, it supports the functionality to move a student from one class to another, ensuring flexibility in class assignment.

3. **Library management:** The application offers students the capability to borrow books from the library and check the availability of books. Library management functionalities include the ability to add, delete, or modify book details, ensuring an organized and up-to-date library inventory.

4. **Teachers management:** The application provides students with access to information about the teaching staff in their class. Administrators can add new teachers, assign them to specific classes, and delete teachers from the school as needed, ensuring accurate and updated information about the teaching staff.

5. **Attendance management:** The application enables users to view a student's absences for a particular subject. It supports the addition of student absences for specific subjects and the removal of incorrectly recorded absences. This feature ensures accurate attendance records and provides insights into students' attendance patterns.