

Exercise 11

Student Management System

You have been given a simple student management system frontend, and your task is to implement the backend using **Express** and **Mongoose** to establish a RESTful API.

Frontend: You are provided with an HTML file (index.html) that includes:

- An area to display the list of students.
- A form for **adding new students**, including input fields for name, age, and grade.
- jQuery is used to make API calls to interact with the backend.

Note that "index.html" should be placed in the "public" subdirectory for an Express project.

學生列表

Name	Age	Grade
陳傑憲	31歲	10年級
林立	30歲	9年級
黃子鵬	31歲	10年級
徐若熙	25歲	4年級

新增學生

姓名 : 年齡 : 年級 :

Backend:

- Please create a Node.js application and set up a backend server using the Express framework.
- Please connect to a MongoDB database using Mongoose for database operations.
- Please define a model for student data, including attributes such as **name (String)**, **age (Number)**, and **grade (String)**.
- Please implement two API endpoints:
 - GET /students: Return a list of all students.
 - POST /students: Accept data for a new student, add it to the database, and return the newly added student data.

Notes:

- You can assume that the frontend is correctly set up to make API requests to the backend.
- Please ensure that the local MongoDB server is running, and the backend should successfully connect to the database.
- Please zip your folder and submit it to TronClass.

Additional Challenge (Bonus):

- Implement a DELETE /students/:id API endpoint to delete a specific student.
- Implement a PUT /students/:id API endpoint to update a specific student.
- Change the local MongoDB to Atlas.
- Deploy the Web app to Render (render.com).