**Background**

Teachers need a system where they can perform administrative functions for their students. Teachers and students are identified by their email addresses.

**Your Task**

Develop a set of API endpoints for teachers to perform administrative functions for their classes. Assume that login and access control have already been handled.

1. A Github (or any other online code repository) link to the code repository for the completed assignment should be provided to us (daniel.goh@ufnity.com), with your README.md containing:
   * A link to the completed assignment hosted on any public cloud. (We will test your API via the provided link.)
2. You may only use NodeJS for your backend.
3. You may only use a SQL database.
4. Your code should include unit tests.
5. Your code should handle error situations, returning appropriate responses.
6. (Optional) Provide a Postman collection for the APIs that you've implemented.
7. You are given **5 days** to complete this assignment.

**Queries**

If you have any queries, feel free to post them to [daniel.goh@ufinity.com](mailto:daniel_goh@ufinity.com).

**Assessment Criteria**

We will be looking at the following criteria for assessing you:

* Readability and code cleanliness
* Secure coding practices
* Class design (modularization). Do design your models/classes to be easily extensible and modular.

**User stories**

**1. As a teacher, I want to be able to register one or more students to a specified teacher.**

A teacher can register multiple students. A student can also be registered to multiple teachers.

Endpoint: POST /api/register

Headers: Content-Type: application/json

Request JSON:

{

"teacher": "teacherken@gmail.com"

"students":

[

"studentjon@example.com"

]

}

Response: HTTP Code 204

**2. As a teacher, I want to be able to provide a list of teachers and retrieve a list of students common to all of them (i.e. students who are registered to ALL of them).**

Endpoint: GET /api/commonstudents

Headers: Content-Type: application/json

Example 1:

Request: GET /api/commonstudents?teacher=teacherken%40example.com

Response JSON:

{

"students" :

[

"commonstudent1@gmail.com",

"commonstudent2@gmail.com",

"student\_only\_under\_teacher\_ken@gmail.com"

]

}

Example 2:

Request: GET /api/commonstudents?teacher=teacherken%40example.com&teacher=teacherjoe%40example.com

Response JSON:

{

"students" :

[

"commonstudent1@gmail.com",

"commonstudent2@gmail.com"

]

}

**3. As a teacher, I want to be able to suspend a specified student.**

Endpoint: POST /api/suspend

Headers: Content-Type: application/json

Request JSON:

{

"student" : "studentmary@gmail.com"

}

Response: HTTP Code 204

**4. As a teacher, I should be able to retrieve all student emails that can receive notifications from a teacher's email.**

Conditions for receiving notification from i.e. '[teacherken@example.com](mailto:teacherken@example.com)': has not been suspended, and at least one of the following:

1. Is registered with “[teacherken@example.com](mailto:teacherken@example.com)"
2. has been @mentioned in the notification

Response should also not contain duplicate student names.

Endpoint: POST /api/retrievefornotifications

Headers: Content-Type: application/json

Request JSON:

{

"teacher": "teacherken@example.com",

"notification": "Hello students! @studentagnes@example.com @studentmiche@example.com"

}

Response JSON:

{

"recipients":

[

"original\_student\_under\_teacher\_ken@example.com",

"studentagnes@example.com",

"studentmiche@example.com"

]

}