toddle

Backend Task

Task:

Build a simple stateless microservice with few API endpoints:

- Authentication endpoint
- REST API endpoints for a Class Files app (details below)

Note:

- You are free to use any language (Nodejs, Python etc ..)
- Ideally, we would prefer **Node.js** as it's easier to run.
- There are no restrictions on the frameworks/libraries to use. Choose whichever seems best suited for the task.

API Details:

1. **Authentication endpoint:**
   - This will be a public endpoint.
   - The request body will contain an arbitrary username/password pair. Note: Treat it as a mock authentication service and accept any username/password.
   - Return a signed JSON Web Token (JWT, https://jwt.io/) which can be used for validation in future requests.

2. **Class Files REST API endpoints:**

   The following endpoints should be protected. The JWT obtained in the "Authentication" endpoint will be attached to each request. If the JWT is missing or invalid, these endpoints should reject the request.

   Class Files refers to an online system that allows students and tutors to communicate through files.

   ### Class files will have the following features:

   - There are two types of users in the system
     - Tutor
     - Student
   - Tutors can create classrooms and add students to the classroom.
   - Tutors can share files to a classroom. Files should be visible to only those students who are part of the classroom.
   - Files can only be created, updated, and deleted by the tutor.
   - Each file must consist of a name, description, uploaded at, uploaded by and file details field(You are free to design a system to store files). File type can be Image, Audio, Video or URL.
   - Students must be able to view files.

Create protected REST endpoints for the following:

- Create/Update/Delete and add students to a classroom as a tutor.
- Upload/Rename/Delete a file in a classroom as a tutor.
- Classes feed.
    - If the API is called by a student, then only the student’s classes should be returned
    - If the API is called by a tutor then all the classes created by the tutor should be returned
- Files feed
    - Given a class, all the files which are not deleted in the class should be returned.
    - The feed will have following filters:
        - **fileType** (Type of the file): Applicable for student and tutor feed, which can have values
            - AUDIO
            - VIDEO
            - IMAGE
            - URL
        - **search** (Search by filename): Applicable for student and tutor feed.

Notes:

- You can use any database to store data
- No need to implement a frontend

Important:

- SQL files to create required tables should be present in the project.
- Attach a data model if you are using NoSQL.
- Attach an ER Diagram if you are using RDBMS.
- Attach API documentation with a request which can be executed directly. You can use Postam Collection, Swagger etc for documentation.

Bonus: Extra points for attempting these.

1. Deploy your code and send us the server URL
2. Implement the APIs in GraphQL

   Implement all the above APIs as a GraphQL endpoint

Things we are are interested in:

- Completeness of the APIs - authentication & assignment
- Knowledge of REST APIs, SQL, JWT & using libraries
- Your database design
- Modularity & readability of code
- Attention to details and quality

How to submit:

Please email your submission to the following address

To: internship@toddleapp.com

Subject: <Your Name> - <College shortname> Backend Task

Along with:

1. Google drive link of your source code zip
   - Be careful of the sharing permission.
   - While creating zip, don't include the `node_modules` folder.
2. Hosted URL (Optional) [Netlify, Heroku etc.]

For any clarifications contact: ashish@toddleapp.com

Important:

We condemn plagiarism. Please maintain the dignity and originality of your work. If we suspect any attempt towards copying, we will disqualify all the possible related submissions.

Also, please don't put your code on github.