



Assignment Title: Bulk Data Upload API

Assignment Description:

You are tasked with creating a Node.js API that allows users to upload a large dataset in CSV format. The API should perform the following tasks:

- Validate the uploaded data to ensure it conforms to specific criteria.
- Handle data loss gracefully in case of validation errors.
- Acknowledge the user once the data upload is completed successfully.

Requirements:

1. Create a Node.js application using Express.js to handle HTTP requests.
2. Implement an endpoint that accepts a POST request for uploading CSV data. The endpoint should accept a CSV file as input.
3. Develop a validation process that checks the CSV data for specific criteria, such as required fields, data types, or constraints. Invalid data should be flagged.
4. If the validation process finds errors, return a response indicating the validation errors for each row, without saving the invalid data. Use appropriate HTTP status codes to indicate the outcome.
5. If the validation is successful for all rows, save the valid data into a database, file, or other storage mechanism. Make sure to handle the case where data might be too large to fit in memory.
6. Acknowledge the user by sending a response with a success message once the data upload is completed successfully.
7. Implement proper error handling for all scenarios, including any unexpected issues that might arise during data handling and storage.
8. Write unit tests for the validation process and the data storage mechanism.

Bonus (Optional):

- Implement pagination or partial data retrieval for the uploaded data.
- Provide an endpoint to check the status of a previously submitted bulk upload.
- Dockerize your application.
- Add authentication and authorization to protect the data upload endpoint.

Submission Guidelines:

- Create a Git repository for your project and commit your code regularly.
- Include a README.md file with instructions on how to run your application and execute the tests.
- Submit your assignment by sharing a link to your Git repository.

Evaluation Criteria:

- Code quality & organisation
- Proper error handling and validation

- Data loss handling and recovery mechanisms
- RESTful API design and adherence to best practices
- Unit testing and coverage
- Documentation
- Optional bonus features (if implemented)

This assignment assesses the candidate's ability to handle bulk data uploads with validation and robust error handling, ensuring that both valid and invalid data are handled appropriately while acknowledging the user upon successful completion.