Overview:

You are tasked with building an API using TS and Node.js. This API will accept an image, process it through a 3D rendering model using a third-party service (you can find AI models on Replicate), and return a rendered 3D image based on the input sketch.

> *Don't spend too much time on the AI portion of the task you will not be assessed on it heavily, your goal is to integrate with a 3rd party API, showcase your research skill, and have 3 sentences justifying we you picked this specific model*

Primary Objectives:

API Development:

- ☐ Develop an API using Node.js.
- ☐ The API should accept image uploads.
- ☐ Integrate with a third-party service (e.g., Replicate) to convert the uploaded image into a "3D render" image.
- ☐ Ensure the API returns the rendered image as a response.

Asynchronous Processing:

- ☐ Demonstrate handling of asynchronous operations efficiently.
- ☐ Ensure smooth integration with third-party services without blocking the main thread.

Unit Testing:

- ☐ Write comprehensive unit tests for your code.
- ☐ Ensure that all major functionalities are covered by tests.

Documentation:

- ☐ Provide detailed documentation for the API.

- [ ] Include setup instructions, API endpoints, usage examples, and any other relevant information.
- [ ] Document your thought process, design decisions, and challenges faced.

Code Quality:

- [ ] Your code should be clean, well-organized, and follow best practices.
- [ ] Ensure that the code is easily readable and maintainable.

Submission Guidelines:

- Submit your code in a zip file or provide a link to a GitHub repository.
- Include a README file with detailed instructions on how to set up and run your API.
- Ensure that all dependencies are properly listed and easy to install.

Evaluation Criteria:

- [ ] Functionality and correctness of the API.
- [ ] Efficiency and handling of asynchronous operations.
- [ ] Quality and coverage of unit tests.
- [ ] Clarity, thoroughness, and organization of documentation.
- [ ] Code readability, structure, and adherence to best practices.