



# Backend Engineering [Python] - Assignment

## Objective:

The aim of this assignment is to evaluate your proficiency in Language Model (LLM) comprehension and backend REST API development. You will be tasked with creating a straightforward NLP-based backend system. This system should facilitate document uploads and enable question-and-answer functionalities. You can choose to support either one of or all of these file types: PDFs, documents, spreadsheets for this purpose. Additionally, you are expected to deliver a Postman collection demonstrating and testing the API's capabilities.

## Requirements:

- Utilize Python and Flask to construct a RESTful API for managing user interactions.
- The user should be able to perform the following actions:
  - Upload supported file types.
  - Pose queries in simple English related to the uploaded document.
  - Query using either Cloud-based LLMs (such as OpenAI or Gemini) or Local on-device LLMs (of your choice) via HF transformers for question answering on the uploaded document through two separate endpoints.
- Include endpoints for uploading a file and querying on the file by passing user queries.
- Employ an appropriate data storage method (e.g., in-memory storage, NoSQL or SQL, Vector databases, or any other database of your preference) to optimize functionality if necessary.
- Incorporate error handling for common scenarios.
- Provide a Postman collection illustrating the API's functionality. Include examples.

## Submission Guidelines:

- Avoid plagiarism.
- Demonstrate your original thinking and work.
- Make assumptions and utilize dummy data and text as necessary.
- User authentication features are not expected.

This assignment solely focuses on backend development; frontend/UI development is not required.

Feel free to reach out if you have any questions or need clarification on the requirements.

Share your Github repo link and Postman collection along with your contact details by mailing to [careers@themangojelly.com](mailto:careers@themangojelly.com)

***All the best!***