# Backend internship Assignment

## Problem Statement

Your task is to develop a backend system using Django-Ninja and LangChain with Google Gemini integration. This system should allow for the uploading of documents and the automatic generation of FAQs based on the content of each document.

## Requirements

1. **Django-Ninja Setup**:
   - Set up a Django project using Django-Ninja as the API layer.
   - Use SQLite as the database for simplicity.

2. **Document and FAQ Generation Models**:
   - Create models for Document and FAQ.
   - Each Document should have attributes like title, description, content, uploaded_by, and upload_date.
   - Each FAQ should link to a Document and have fields like question, answer, and generated_date

3. **LangChain with Google Gemini**:
   - Integrate LangChain with Google Gemini to enable FAQ generation.
   - When a new document is uploaded, the backend should process the document content through Google Gemini to automatically generate relevant FAQs.
   - Save generated FAQs to the FAQ model.

## APIs

1. **Admin Actions**:
   a. **Add Document**: API to upload a document and automatically generate FAQs for it.
   b. **Update Document**: API to update document details.
   c. **Delete Document**: API to delete a document and its associated FAQs.
   d. **List Documents**: API to view all documents and their FAQs.
2. **User Actions**:
   a. **View Available Documents**: API to list all documents, showing title and description.
   b. **View FAQs**: API to retrieve FAQs for a specific document.

## Validation and Error Handling

1. **Validation**:
   a. Validate document upload format and content type.
   b. Ensure FAQs are not duplicated or empty.
2. **Error Handling**:
   a. Provide clear error messages for issues like invalid document format, missing fields, or any failures in FAQ generation.

## Security

- Implement basic authentication for admin actions.
- Restrict the document upload, update, and delete actions to authenticated admin users only.

## Deliverables

1. **GitHub Repository:**
   - Push your code to a public GitHub repository.
   - Include a README.md file with clear instructions on how to set up and run the project.
   - Include a requirements file (requirements.txt).

2. **Demo Video:**
   - Record a short video (2-3 minutes) showcasing the setup, document upload, FAQ generation, and available APIs.
   - Share the link to the video in README.md.

## Evaluation Criteria

1. **Code Quality:**
   - Clean, readable, and well-documented code.
   - Proper use of Django-Ninja and LangChain features.

2. **Functionality:**
   - Proper implementation of document and FAQ models.
   - Correct integration with LangChain for FAQ generation.
   - Robust validation and error handling.

3. **Security:**
   - Appropriate access control for admin actions.

4. **Demo Video:**
   - Clear explanation and smooth demonstration of features.

5. **GitHub Repository:**
   - Well-organized, with clear setup instructions.

## Deadline

Please submit your GitHub repository link and demo video link by **26 November 2024, 11.59 PM.**

Submit your assignment here: https://forms.office.com/r/sPrXEkP6DP