PDF Splitter and Merger System with Django Backend

Introduction

This report details the implementation of a Django-based system that allows users to split and merge PDF files. The system provides an intuitive interface for uploading PDFs, selecting specific pages for extraction, and merging multiple PDFs into a single document. The backend ensures efficient handling of PDF operations using PyPDF2.

System Overview

The system consists of the following key components:

- A Django backend for handling file uploads and processing user requests.
- PDF splitting functionality to extract and download selected pages.
- PDF merging functionality to combine multiple PDFs into one.

PDF Splitting Process

Upon receiving a PDF file for splitting, the system:

1. Validates the uploaded file to ensure it is in PDF format.
2. Reads the file and extracts the total number of pages.
3. Stores the uploaded PDF in the session for later processing.
4. Allows users to select pages for extraction.
5. Generates and provides a downloadable PDF containing only the selected pages.

PDF Merging Process

When a user uploads multiple PDFs for merging, the system:

1. Validates that all uploaded files are in PDF format.
2. Reads each PDF file and extracts its pages.
3. Merges the pages sequentially into a new PDF document.
4. Provides a downloadable version of the merged PDF.

Technical Implementation

- The backend is implemented using Django, ensuring a scalable and structured architecture.
- PyPDF2 is used for handling PDF operations such as reading, writing, splitting, and merging.
- Session-based storage is utilized to manage uploaded PDFs before processing.
- The system generates dynamic HTTP responses to facilitate PDF downloads.

Key Considerations

- The system ensures efficient handling of user-uploaded PDFs while maintaining file integrity.
- Validations prevent incorrect file uploads and improper page selections.

- Users receive instant feedback and error messages for incorrect operations.

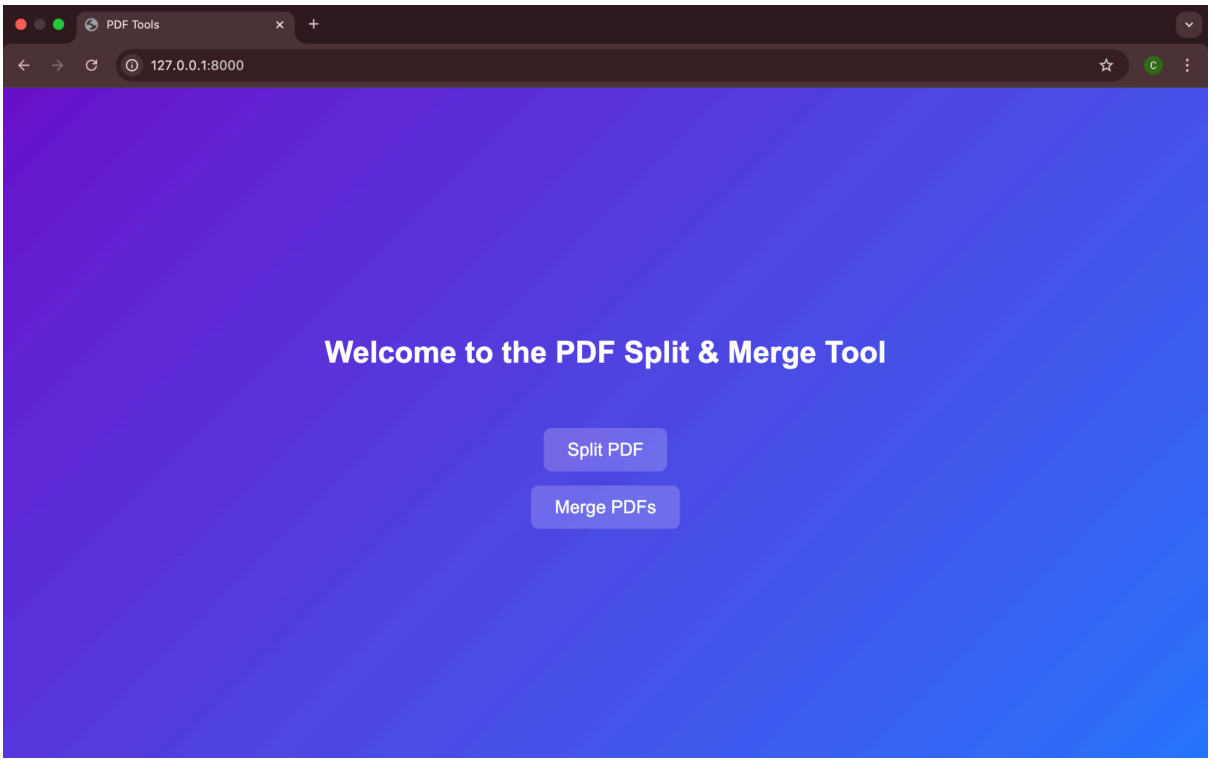
Personal Note

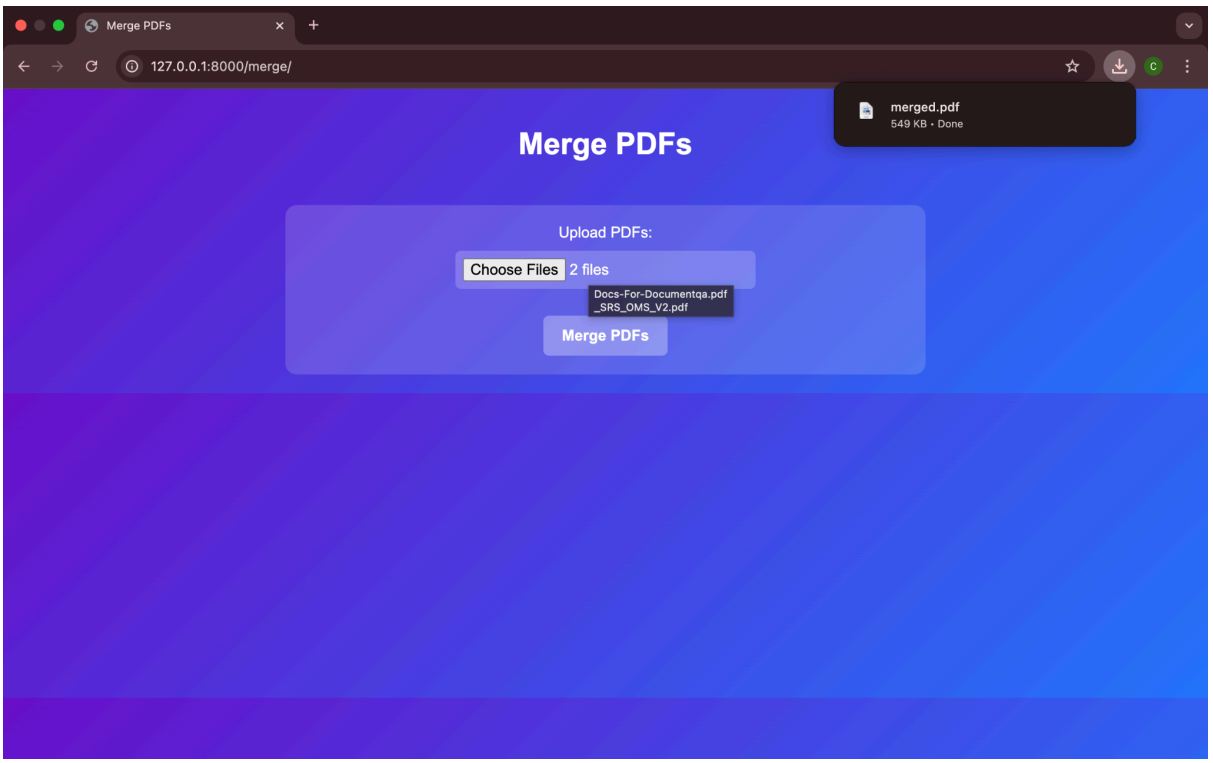
I am into AI solutions and providing a backend with Django. However, I do not have experience with frontend development.

Conclusion

This PDF Splitter and Merger system provides an easy-to-use solution for extracting and combining pages from PDFs. With Django as the backend, the system ensures efficient and reliable processing of user requests, making it a practical tool for document management.

Interface

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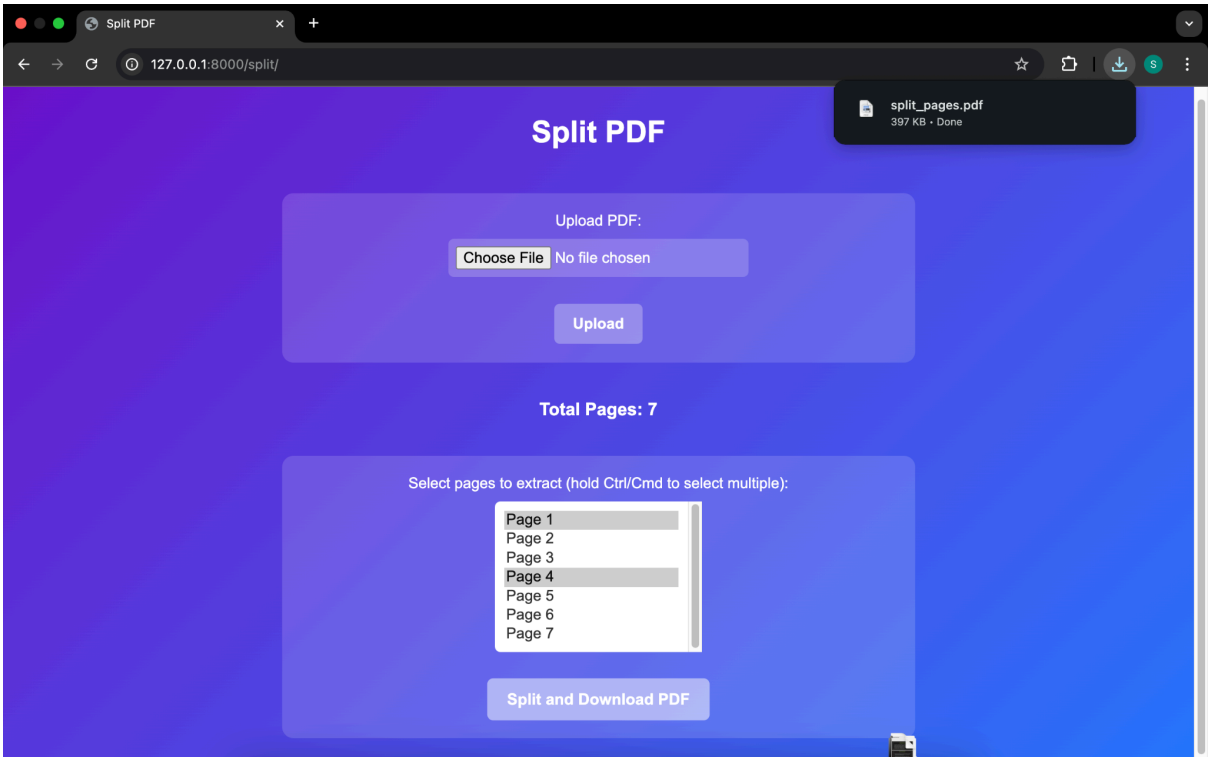
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