**Project Report: PDF Merger with Reorder GUI**

**Project Title:** PDF Merger with Reorder

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**1. Introduction**

The **PDF Merger with Reorder** is a Python-based desktop application designed to simplify the process of combining multiple PDF files. The tool provides a graphical user interface (GUI) that allows users to add PDF files, reorder them, and merge them into a single PDF file. This project demonstrates proficiency in Python GUI programming, file handling, and PDF manipulation.

**2. Objectives**

* To develop a user-friendly GUI for selecting and managing PDF files.
* To allow users to reorder PDF files before merging.
* To merge multiple PDF files into a single output file efficiently.
* To provide error handling and user notifications for a seamless experience.

**3. Tools and Technologies**

* **Programming Language:** Python 3.x
* **Libraries Used:**
  + PyPDF2 – for PDF merging functionality
  + Tkinter – for building the graphical user interface (GUI)
* **Platform:** Cross-platform (Windows, macOS, Linux)

**4. Functional Description**

The application performs the following functions:

1. **Add PDFs:** Users can browse and select multiple PDF files to include in the merge list.
2. **Reorder Files:** Users can move selected PDF files up or down in the list to arrange the order of merging.
3. **Merge and Save:** Users can merge the selected PDFs into a single file and choose the save location.
4. **Notifications:** Users receive messages when merging is successful or if there are errors, e.g., no files selected.

**5. GUI Design**

* A simple, intuitive GUI using Tkinter.
* **Listbox** – Displays selected PDF files in order.
* **Buttons:**
  + *Add PDFs* – To select and add PDF files
  + *Move Up / Move Down* – To reorder selected files
  + *Merge and Save* – To merge the files into a single PDF
* Provides **real-time feedback** using message boxes.

**6. Code Structure**

- add\_files(): Opens file dialog to select PDFs and adds them to listbox

- move\_up(): Moves selected PDF one position up

- move\_down(): Moves selected PDF one position down

- merge\_pdfs(): Merges all PDFs in listbox and saves the output

- Tkinter GUI: Listbox + Buttons for interaction

**7. Screenshots**

*(Attach screenshots of the GUI: before merging, after adding PDFs, and the merged file saved dialog)*

**8. Advantages**

* Simple and easy-to-use interface.
* Allows reordering of PDFs before merging.
* Provides notifications and warnings for a smooth user experience.
* Lightweight and cross-platform.

**9. Future Enhancements**

* Add a **drag-and-drop** feature for adding files.
* Include **PDF preview** functionality.
* Allow **batch renaming** of PDFs before merging.
* Integrate **password-protection** for merged PDFs.

**10. Conclusion**

The PDF Merger with Reorder project demonstrates practical skills in **Python GUI programming**, file handling, and PDF manipulation. It provides an efficient way for users to merge multiple PDFs in a customized order, making document management easier and more productive.