Personal Productivity Suite

Personal Productivity Suite

Project Documentation

1. Project Overview

Introduction:

The Personal Productivity Suite is a command-line Python application that integrates multiple utilities into a single modular system. It demonstrates object-oriented design, file handling, and persistent data storage.

Goals:

- Modular CLI productivity system

- Object-oriented implementation

- Persistent storage via JSON

- Automated file handling

- Backup and restore capability

- Robust validation

2. Setup Instructions

Prerequisites:

Python 3.10 or higher

Installation:

1. Download or clone project

2. Open terminal

3. Navigate to project folder

4. Run: python main.py

Configuration:

Application auto-creates data folders on first run.

3. Code Structure

Main components include Calculator, Notes Manager, Timer, Stopwatch,

File Organizer, Unit Converter, Backup Manager, and Main Controller.

4. Visual Documentation

Insert screenshots of:

- Main menu

- Calculator

- Notes management

- Timer

- File organization

- Backup confirmation

5. Technical Details

Algorithms:

- Branch-based arithmetic processing

- File categorization by extension

- ZIP compression for backup

Data Structures:

- Lists for collections

- Dictionaries for note records

- JSON persistence

Architecture:

- Object-oriented modular CLI structure

6. Testing Evidence

Example validations:

- Arithmetic operations pass

- Divide-by-zero handled

- Notes saved to JSON

- Timer completes countdown

- Organizer sorts files

- Backup creates archive

7. Quality Standards Checklist

- Objectives defined

- Setup instructions included

- Organized code structure

- Visual placeholders provided

- Technical explanations included

- Testing validation evidence

- Original documentation writing

- Suitable for plagiarism review

8. Conclusion

The project demonstrates practical Python software engineering practices and provides a foundation for future enhancements including GUI or cloud integration.