

# Weekly Progress Report

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Domain: Python

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**Week Ending: 02**

## **I. Overview:**

**This week, I focused on completing a practical Python project titled "Python File Organizer." The aim was to create a utility that automatically sorts and organizes files in a given directory based on their types. This project helped me strengthen my understanding of Python's file handling capabilities and real-world problem-solving using automation.**

## **II. Achievements:**

### **1. Project Completion – Python File Organizer**

- **Developed a Python script that takes a user-input directory path and organizes all the files into folders such as Images, Documents, Videos, Audio, Archives, Scripts, and Others based on their extensions.**
- **Used standard Python libraries like os, shutil, and os.path to:**
  - **Traverse files in the directory**
  - **Identify file types using their extensions**
  - **Create categorized folders if they do not already exist**
  - **Move files into their respective folders**

### **2. Practical Python Skills Gained**

- **Improved my proficiency with:**
  - **File and directory manipulation using os**
  - **Automating repetitive tasks with shutil**
  - **Writing clean and modular code using functions**
- **Learned how to handle edge cases and provide clear user feedback through input prompts and print statements.**

### **III. Challenges:**

- **Initially faced issues when dealing with file types that had no extensions or uncommon ones.**
- **Had to ensure the script didn't interfere with system or hidden files.**
- **Took care to make the tool robust and user-friendly by adding checks like whether the path exists and handling folder creation properly.**

### **IV. Learning Resources:**

- **Referred to the official Python documentation for understanding the behavior of `os.listdir()`, `os.path.splitext()`, and `shutil.move()`.**
- **Watched YouTube tutorials on file automation projects to get inspiration and ideas for structuring my code.**
- **Practiced similar automation challenges on online platforms to reinforce concepts.**

### **V. Next Week's Goals:**

- **Enhance the File Organizer by:**
  - **Adding a feature to undo changes if needed**
  - **Implementing a logging system to track moved files**
  - **Building a simple GUI using tkinter for better usability**
- **Explore converting the script into an executable for ease of use on other machines.**