**Sysadmin Tool**

Building a command-line system tool like this will not only strengthen your knowledge of Python’s standard library modules (os, platform, subprocess, shutil, glob, sys, argparse), but also simulate real-world system administration scripting.

## **🔧 CW: sysadmin\_tool.py**

### **✅ Features to implement:**

1. **System Monitor**
   * system-monitor
   * Optional --verbose to display OS info, CPU, memory, etc.
   * Uses: platform, subprocess, os
2. **Backup Directory**
   * backup-dir <source> <destination>
   * Copies all contents, preserves structure
   * Uses: os, shutil, glob
3. **Delete Empty Directories**
   * delete-empty <target-dir>
   * Optional --recursive for depth search
   * Uses: os, os.walk
4. **List Python Files**
   * list-py <directory>
   * Lists all .py files (using glob)
   * Uses: glob, os
5. **Sys Info Summary**
   * sys-info
   * Combines platform, os, sys info
   * Uses: platform, sys, os

## **🧪 Practice Areas per Module**

| **Module** | **Usage Examples** |
| --- | --- |
| os | Directory traversal, checking/creating/removing files |
| platform | OS, architecture, system-related metadata |
| subprocess | Shell commands (e.g., CPU stats using top, tasklist) |
| shutil | Copying, archiving, disk usage |
| glob | File pattern matching (\*.py, \*/\*/) |
| sys | Access to script arguments, platform info |
| argparse | Full-featured CLI parser for the tool |

## **🖥️ CLI Usage Examples**

./sysadmin\_tool system-monitor --verbose

./sysadmin\_tool backup-dir ./myfolder /mnt/backup

./sysadmin\_tool delete-empty /var/log

./sysadmin\_tool delete-empty /home/user/projects --recursive

./sysadmin\_tool list-py /home/user/scripts

./sysadmin\_tool sys-info