Python Scripts Project

A collection of utility Python scripts for automation.

Overview

This repository contains a collection of utility Python scripts designed to automate various common tasks, enhancing productivity and streamlining workflows. The scripts cover areas such as web scraping, bulk file renaming, and file organization.

Directory Structure

```
python-scripts/
├── web_scraper.py
├── bulk_renamer.py
├── file_organizer.py
├── requirements.txt
└── README.md
```

Scripts Description

`web_scraper.py`

Purpose: This script is designed to extract information from websites. It can be configured to scrape specific data points (e.g., product details, news headlines, contact information) from given URLs.

Key Features:

- **Customizable target URLs:** Easily specify which web pages to scrape.
- **Data parsing using Beautiful Soup:** Leverages a powerful library for efficient HTML parsing.
- **Output to CSV/JSON:** Saves extracted data in widely compatible formats.

Usage:

```
python web_scraper.py <URL>
```

Example: `python web_scraper.py https://example.com/news`

`bulk_renamer.py`

Purpose: This script provides functionality to rename multiple files within a specified directory based on predefined patterns or rules. It's useful for organizing large collections of files (e.g., photos, documents).

Key Features:

- **Add prefixes/suffixes:** Easily add text to the beginning or end of filenames.
- **Replace text:** Find and replace specific strings in filenames.
- **Numbering files sequentially:** Organize files with numerical order.
- **Regex support:** Advanced renaming using regular expressions.

Usage:

```
python bulk_renamer.py --directory "path/to/files" --pattern "old_text" --ne
```

Example: `python bulk_renamer.py --directory "photos" --pattern "IMG_" --new "Vacation_Pic_"`

`file_organizer.py`

Purpose: This script automates the process of organizing files into categorized folders. It can sort files based on type, date, or custom rules, helping to declutter directories.

Key Features:

- **Sort by file extension:** Automatically move files like `.jpg`, `.pdf` into respective folders.
- **Sort by creation/modification date:** Organize files chronologically.
- **Custom rule definitions:** Define your own rules for file placement.

Usage:

```
python file_organizer.py --source "path/to/unsorted/files" --destination "pa
```

Example: `python file_organizer.py --source "downloads" --destination "documents/sorted"`

Installation and Setup

Prerequisites

- Python 3.x (Recommended: Python 3.8+)
- `pip` (Python package installer)

Dependencies

The project dependencies are listed in `requirements.txt`. To install them, navigate to the project directory and run:

```
pip install -r requirements.txt
```

How to Use (General Instructions)

1. **Clone the Repository:**

```
git clone https://github.com/your_username/python-scripts.git
cd python-scripts
```

Replace `your_username` with your actual GitHub username.

2. **Install Dependencies:**

```
pip install -r requirements.txt
```

3. **Run Individual Scripts:**

Refer to the "Usage" section for each script above for specific command-line arguments and examples.

Contributing

Contributions are welcome! If you have suggestions for improvements, bug reports, or new features, please open an issue or submit a pull request.

- Fork the repository.
- Create a new branch for your feature or bug fix.
- Commit your changes with clear, concise messages.
- Push to your fork and submit a pull request.

License

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Contact

For questions or inquiries, please feel free to reach out:

- Email: your.email@example.com
- GitHub: @your_username