



Long File Path Shorten Script Documentation

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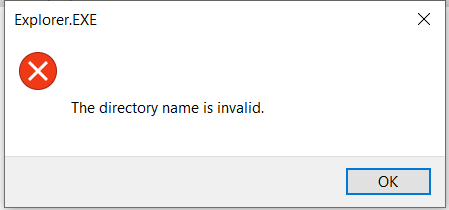
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# Overview and Purpose

## Purpose

This document serves as the official guide for using the **FilePathShortener** script, designed to identify and shorten long file paths and filenames within a Windows environment. Its primary goal is to mitigate issues related to path length restrictions.


## Main Features

FilePathShortener provides three primary features: **Scanning**, **Shortening Long Filenames**, and **Shortening Long Nested Folders**.

### Main Feature – Scanning

The scanning feature methodically examines directories and their subdirectories for files and folders with paths exceeding predefined length thresholds.

**Output:** The scan results are outputted into two distinct files, categorizing the findings into long filenames and long directory paths, respectively.

A close-up of a document

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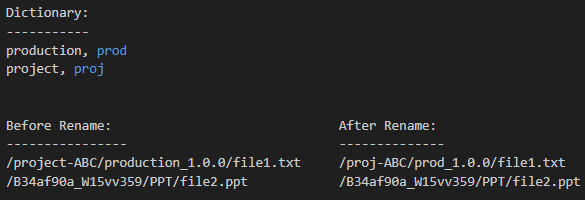
### Main feature – Shorten Long Filenames

Upon identifying filenames that surpass the length limit, the script employs an abbreviation strategy to shorten these names. This process involves:

* Breaking down filenames into identifiable components
* Applying abbreviations based on a customizable dictionary
* Ensuring the uniqueness of the shortened names to avoid conflicts

A close-up of a diagram

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### Main features – Shorten Long Nested Folders

For directories with paths that exceed the length threshold, the script executes a similar abbreviation strategy to shorten folder names within the path. Key steps include:

* Analyzing the entire directory path and identifying segments that can be abbreviated
* Utilizing the dictionary to replace long segments with their abbreviated forms
* Maintaining the structural integrity of the file system by carefully managing changes

A close-up of several arrows

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# Getting Started

## Installation

1. **Prerequisites**: Ensure Python 3.6.4+ is installed on your system
2. **Script Download**: Download the latest repo of FilePathShortener from the official repository
3. **Configuration**: Extract the repo to your desired location and open the **config/config.ini** file in a text editor to adjust the settings according to your environment.

## Configuration

### config.ini

The **FilePathShortener** script is highly customizable through its **config.ini** configuration file. Below are the default settings and their explanations:

| **Key** | **Default Value** | **Description** |
| --- | --- | --- |
| base\_dir | C:\Users\JohnDoe\Desktop\LongPathTest | Root directory for the scan. |
| config\_dir | config | Directory for configuration files. |
| log\_dir | logs | Directory for log files. |
| output\_dir | output | Directory for output files. |
| dir\_scan\_dir | dir\_scan | Subdirectory for directory scan outputs. |
| filename\_scan\_dir | filename\_scan | Subdirectory for filename scan outputs. |
| filename\_length\_threshold | 150 | Max length for filenames before flagging/shortening. |
| dir\_length\_threshold | 200 | Max length for directory paths before flagging/shortening. |
| scan\_entry\_threshold | 50 | Max entries in a scan output file before splitting. |
| number\_of\_retry | 10 | Attempts to rename with conflicts before stopping. |
| dictionary\_path | abbreviation\_dictionary.csv | Path to abbreviation dictionary CSV file. |
| long\_dir\_path\_scan\_output | long\_dir\_path\_scan\_output | Prefix for output files listing long directory paths. |
| long\_filename\_scan\_output | long\_filename\_scan\_output | Prefix for output files listing long filenames. |
| long\_dir\_path\_modified\_output | long\_dir\_path\_modified\_output | Prefix for output files listing successfully shortened directories. |
| long\_filename\_modified\_output | long\_filename\_modified\_output | Prefix for output files listing successfully shortened filenames. |
| long\_dir\_path\_modified\_error | long\_dir\_path\_modified\_error | Prefix for output files listing directories that could not be shortened. |
| long\_filename\_modified\_error | long\_filename\_modified\_error | Prefix for output files listing filenames that could not be shortened. |
| dry\_run | False | Enables dry run mode; no actual changes made. |
| dry\_run\_dir | dry\_run | Directory for dry run reports. |

### abbreviation\_dictionary.csv

The **abbreviation\_dictionary.csv** file plays a critical role in the script's ability to shorten long filenames and directory names. It contains key-value pairs that define how specific words or segments within paths should be abbreviated.

**Format:** Each line in the CSV file should contain two values separated by a comma:

* The **key** (the original word or segment to be abbreviated).
* The **value** (the abbreviation to replace the key).

**Example:**

documentation, docs

information, info

configuration, config

**Guidelines for Customization:**

1. **Additions:** To add a new abbreviation, simply include a new line with the key-value pair.
2. **Modifications:** To change an abbreviation, update the value part of the respective key-value pair.
3. **Deletions:** Remove the entire line corresponding to the abbreviation you wish to delete.

# Usage Instructions

## Running the Script

### Scanning for Long Paths and Filenames:

* + To initiate a scan, use the following command:

python long\_filepath\_filename\_shortener.py -p scan

* + Alternatively, running the script without any options defaults to this scan mode:

python long\_filepath\_filename\_shortener.py

### Shortening Folder Names:

* + To shorten long folder names within the specified **base\_dir**, execute:

python long\_filepath\_filename\_shortener.py -p dir

### Shortening Filenames:

* + For shortening long filenames, use:

python long\_filepath\_filename\_shortener.py -p filename

## Option Flags

* **-p or --process**: Specifies the operation mode (**scan**, **dir**, or **filename**). If omitted, the script defaults to **scan**.

## Dry Run Mode

To preview the changes the script would make without applying them, enable the dry run mode by setting **dry\_run = True** in the **config.ini** file. This mode is particularly useful for reviewing potential changes and ensuring accuracy before making any modifications to file or directory names.

### Enabling Dry Run:

* + Open **config.ini** in a text editor.
  + Locate the **dry\_run** setting and change it to **True**.
  + Save the changes and run the script as described above to see what actions would be taken.

**NOTE: Remember to revert dry\_run back to False in config.ini when you're ready to apply the changes.**

# Understanding Output

## Scan Results

The script outputs scan results into two files:

1. **Long File Names**: Listed in long\_filenames\_scan\_output.txt.
2. **Long Directory Paths**: Detailed in long\_dir\_path\_scan\_output.txt.

Each file may further split into multiple parts if the number of entries exceeds a set threshold (scan\_entry\_threshold in config.ini), enhancing readability.

## Shortening Process – What to Expect?

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# Troubleshooting and FAQs

## Basic Troubleshooting

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## FAQs

### Question 1

Answer: Blah blah

### Question 2

Answer: Blah blah

### Question 3

Answer: Blah blah

### Question 4

Answer: Blah blah

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