# Project Goals

* Develop a software tool that identifies and automatically corrects file paths and filenames exceeding a specified length limit (traditionally 256 characters for Windows environments).

# Target Audience

* The application will primarily operate in a command-line environment, so it will be targeted for technical users. Documentation and knowledge transfer for applications use will be needed.

# Functional Requirements

1. **Bulk Operations:** Identify and auto-fix long file paths in bulk.
2. **Discovery and Reporting:** Discover all long paths and files with overly long names, reporting them in a CSV file.
3. **Path Shortening Options:** Provide methods to shorten paths, including *abbreviation*, *truncation*, and *selective removal*.
4. **File Attribute Preservation:** Maintain file attributes like creation date, last access date, modified date, hidden, and read-only status.

# Non-functional Requirements

1. **Command Line Interface:** Utilize a command-line interface for interaction.
2. **Logging:** Implement detailed logging of operations for tracking and debugging.

# Constraints

* **Time Constraint:** The entire project lifecycle, from technical analysis to deployment, is limited to 1.5 months.
* **No Registry Modification:** The tool should not modify any Windows registry keys.
* There are no other constraints except for the time limitation and registry modification restriction.

# Existing System

* **Windows Environment:** The application will be developed for Windows environments, compatible with both Windows 10 and Windows 11. Additional details about the OS (versions, constraints) to be added later.