**Markdown to HTML Converter**

This program converts Markdown (.md) files to HTML format.

Features:

* Converts standard Markdown syntax to HTML
* Preserves code blocks and inline code
* Adds basic styling for readability
* Includes a footer with generation timestamp
* Handles file validation and error cases

Requirements:

* Python 3.x
* markdown package (install with pip install markdown)

Usage:

1. **Command Line Interface**:

text

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python md\_to\_html.py input.md [-o output.html]

* + input.md: Path to the input Markdown file
  + -o output.html: Optional output path for the HTML file (defaults to same name as input with .html extension)

1. **Interactive Mode**:  
   If run without arguments, the program will prompt for input and output filenames.

Examples:

1. Basic conversion:

text

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python md\_to\_html.py README.md

This creates README.html in the same directory.

1. Specifying output file:

text

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python md\_to\_html.py README.md -o docs/index.html

This creates index.html in the docs directory.

Error Handling:

The program handles and reports:

* Missing input files
* Invalid file extensions
* Permission issues when writing output

Output:

The generated HTML includes:

* Basic responsive styling
* Proper formatting for code blocks
* A footer with the source filename and conversion timestamp

Testing

To test the program, you can use this sample Markdown file (save as test.md):

markdown

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**# Sample Markdown Document**

This is a **\*\*sample\*\*** Markdown file to *\*test\** the converter.

**## Features**

- List item 1

- List item 2

- List item 3

**### Code Example**

```python

def hello\_world():

print("Hello, World!")

```

Inline `code` example.

> Blockquote example

Then run:

text

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python md\_to\_html.py test.md

This will generate test.html with properly formatted HTML output.