Documentation for Garbage File Creator Program

# Introduction

The Garbage File Creator Program is a Python script designed to generate a file of a specified size in megabytes (MB). It is particularly useful for testing purposes, such as evaluating storage space, upload/download speeds, or application file handling. The program includes robust error handling, progress monitoring, and Ctrl+C interrupt management for a smooth user experience.

# Purpose

This program's primary purpose is to assist in creating dummy files of varying sizes to simulate or test scenarios involving file storage, system performance, or file processing.

# Key Features

1. Create a garbage file of the desired size in MB.
2. Real-time progress monitoring during file creation.
3. Execution time display after the file creation process.
4. Graceful handling of errors and Ctrl+C interruptions.

# Libraries and Dependencies

The script uses the following Python standard libraries, which do not require additional installations:

* **sys**: For handling command-line arguments.
* **signal**: For handling Ctrl+C interrupts.
* **time**: For tracking execution time.

# Usage

1. Save the script as a Python file, e.g., garbage\_creator.py.
2. Run the script from the command line with the following usage format:
3. python garbage\_creator.py -s <size\_in\_MB>

Replace <size\_in\_MB> with the desired size of the file in MB. For example:

* + python garbage\_creator.py -s 1 - will create a file of 1 MB.
  + python garbage\_creator.py -s 1000 - will create a file of 1000 MB.

1. Ensure you have the necessary permissions to write a file in the directory where the script is executed.

# Use Cases

1. **Testing Storage Devices**: Check the performance of storage devices by creating dummy files of various sizes.
2. **Simulating Application Scenarios**: Use large files to test applications handling big data.
3. **Network Speed Tests**: Create files to test upload or download speeds over a network.

# Test Cases

| **Test Case ID** | **Input** | **Expected Output** | **Actual Output** | **Status** |
| --- | --- | --- | --- | --- |
| TC01 | python garbage\_creator.py -s 1 | A 1 MB file named garbage\_1MB.txt is created successfully. |  |  |
| TC02 | python garbage\_creator.py -s 500 | A 500 MB file named garbage\_500MB.txt is created successfully. |  |  |
| TC03 | python garbage\_creator.py -s -5 | Displays an error message: "Invalid size. Please enter a positive number in megabytes (e.g., 1, 1000)." |  |  |
| TC04 | Ctrl+C during execution | Displays a message: "Process interrupted with Ctrl+C. Exiting gracefully." |  |  |
| TC05 | Invalid argument (e.g., -x 10) | Displays usage instructions: "Usage: python script.py -s <size\_in\_MB>" |  |  |

# Example Run

