Huffman Coding Project Testing Plan

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The table below presents an overview of the testing scenarios and the status of running the scenarios.

|  |  |  |
| --- | --- | --- |
| Scenario | Description | Pass/Fail |
| 1 | Test for a known uncompressed input file | PASS |
| 2 | Test for an empty uncompressed input file | PASS |
| 3 | Test for a non-existent input file | PASS |
| 4 | Test for missing key file | PASS |
| 5 | Test for a known compressed input file | PASS |
| 6 | Test for a known invalid compressed input data | PASS |

Each scenario is presented with the steps required to execute the scenario.

## Scenario #1 – Test for a known uncompressed input file

|  |  |  |
| --- | --- | --- |
| Step | Description | Input/Output |
| 1 | Open a command prompt |  |
| 2 | Run the program using the following command: HuffmanCoding.exe compress Test.txt |  |
| 3 | The program should output a correct compressed file |  |
|  |  |  |
|  |  |  |
| EXPECTED OUTPUT | | Correct compressed file |
| ACTUAL OUTPUT | | Correct compressed file |
| RESULTS | | PASS |

## Scenario #2 – Test for an empty uncompressed input file

|  |  |  |
| --- | --- | --- |
| Step | Description | Input/Output |
| 1 | Open a command prompt |  |
| 2 | Run the program using the following command: HuffmanCoding.exe compress Empty.txt |  |
| 3 | The program should display empty input file error message |  |
|  |  |  |
|  |  |  |
| EXPECTED OUTPUT | | Empty input file error message |
| ACTUAL OUTPUT | | Empty input file error message |
| RESULTS | | PASS |

## Scenario #3 – Test for a non-existent input file

|  |  |  |
| --- | --- | --- |
| Step | Description | Input/Output |
| 1 | Open a command prompt |  |
| 2 | Run the program using the following command: HuffmanCoding.exe compress ExistNot.txt |  |
| 3 | The program should display a message indicating that the file ExistNot.txt does not exist |  |
|  |  |  |
|  |  |  |
| EXPECTED OUTPUT | | Non-existent input file error message |
| ACTUAL OUTPUT | | Non-existent input file error message |
| RESULTS | | PASS |

## Scenario #4 – Test for a missing key file

|  |  |  |
| --- | --- | --- |
| Step | Description | Input/Output |
| 1 | Open a command prompt |  |
| 2 | Run the program using the following command: HuffmanCoding.exe decompress NoKey.txt |  |
| 3 | The program should display a message indicating that the key file is missing |  |
|  |  |  |
|  |  |  |
| EXPECTED OUTPUT | | Missing key file error message |
| ACTUAL OUTPUT | | Missing key file error message |
| RESULTS | | PASS |

## Scenario #5 – Test for a known compressed input file

|  |  |  |
| --- | --- | --- |
| Step | Description | Input/Output |
| 1 | Open a command prompt |  |
| 2 | Run the program using the following command: HuffmanCoding.exe decompress TestC.txt |  |
| 3 | The program should output the file in its original form |  |
|  |  |  |
|  |  |  |
| EXPECTED OUTPUT | | Original file |
| ACTUAL OUTPUT | | Original file |
| RESULTS | | PASS |

## Scenario #6 – Test for a known invalid compressed input data

|  |  |  |
| --- | --- | --- |
| Step | Description | Input/Output |
| 1 | Open a command prompt |  |
| 2 | Run the program using the following command: HuffmanCoding.exe decompress TestBad.txt |  |
| 3 | The program should ignore all non-binary characters |  |
|  |  |  |
|  |  |  |
| EXPECTED OUTPUT | | All non-binary characters are ignored |
| ACTUAL OUTPUT | | All non-binary characters are ignored |
| RESULTS | | PASS |