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Algorithm Implementation

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Assignment 3 Writeup

LZW Compression allows programmers to compress files using a symbol table lookup. In this Assignment, we created an LZWmod.java program and used TST.mod as our symbol table implementation. The purpose of this Assignment was to compare the compression ratios obtained from using the given LZW.java, compress.exe, and the program we made, LZWmod.java. Here is a graph that compares the original size, compressed size, and compression ratio (original size/compressed size).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| File Name | LZW.java  (Original/Compressed/Ratio) | LZWmod.java w/o Reset  (Original/Compressed/Ratio) | LZWmod.java w/ Reset  (Original/Compressed/Ratio) | Compress.exe  (Original/Compressed/Ratio) |
| all.tar | 2,960 KB | 2,960 KB | 2,960 KB | 2,960 KB |
| assig2.doc | 85 KB | 85 KB | 85 KB | 85 KB |
| bmps.tar | 1,080 KB | 1,080 KB | 1,080 KB | 1,080 KB |
| bogusInput.txt | 0 KB | 0 KB | 0 KB | 0 KB |
| bogusOutput.txt | 0KB | 0KB | 0KB | 0KB |
| code.txt | 71 KB | 71 KB | 71 KB | 71 KB |
| code2.txt | 57 KB | 57 KB | 57 KB | 57 KB |
| edit.exe | 231 KB | 231 KB | 231 KB | 231 KB |
| Frosty.jpg | 124 KB | 124 KB | 124 KB | 124 KB |
| gone\_fishing.bmp. z | 9 KB | 9 KB | 9 KB | 9 KB |
| large.txt | 1,193 KB | 1,193 KB | 1,193 KB | 1,193 KB |
| Lego-big.gif.temp | 92 KB | 92 KB | 92 KB | 92 KB |
| medium.txt | 25 KB | 25 KB | 25 KB | 25 KB |
| texts.tar | 1,350 KB | 1,350 KB | 1,350 KB | 1,350 KB |
| wacky.bmp | 901 KB | 901 KB | 901 KB | 901 KB |

winnit256 154 KB 154 KB 154 KB 154 KB