|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S. No. | Filename | Original Size | Compressed Size | Degree of compression  (Compressed size/ Original size)\*100 | Data Structure used | Time taken  (millis) |
| 1. | Shortwords.txt | 50 bytes | 56 bytes | 112% | TreeMap | 24 |
|  |  |  |  |  | HashMap | 15 |
|  |  |  |  |  |  |  |
| 2. | Words.html | 2.37 MB | 1.01 MB | 42.61% | TreeMap | 4315 |
|  |  |  |  |  | HashMap | 2347 |
|  |  |  |  |  |  |  |
| 3. | CrimeLatLonXY1990.csv | 277 KB | 133 KB | 48.01% | TreeMap | 1015 |
|  |  |  |  |  | HashMap | 688 |
|  |  |  |  |  |  |  |
| 4. | 01\_Overview.mp4 | 23.8 MB | 32.2 MB | 135.29 | TreeMap | 52389 |
|  |  |  |  |  | HashMap | 26158 |
|  |  |  |  |  |  |  |

README

This program works correctly for all file formats and can compress any file size as long as the system on which that program is running has enough memory. The program can compress/decompress audio/video files and even files in other languages like Chinese.

The program speed analysis is detailed in the table above. The program runs faster when HashMaps are used than when TreeMaps are used. This is expected behavior because tree maps spends extra effort in sorting all the entries in it at each insertion while hash maps insert data in random positions.