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Compsci 201

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Huffman Analysis

1. ***Which compresses more, binary files or text files?***

   Below is the output from calgary and waterloo respectively:

```
calgary

total bytes read: 3251493
total compressed bytes 1827067
total percent compression 43.808
compression time: 6.583


waterloo

total bytes read: 12466304
total compressed bytes 10197058
total percent compression 18.203
compression time: 32.332
```

   Based on the above results, it concluded that text files compress more, as we expected. Because text files have share many bit patterns as it is made from the alphabet.

2. ***Can you gain additional compression by double-compressing an already compressed file? If so, is there eventually a limit to when this no longer saves space on ordinary files? What if you built a file that was intentionally designed to compress a lot...when would it be no longer worthwhile to recompress?***

   I compressed the melville.txt multiple times and the resulting compressed files actually increased in size after I compressed it a second time. There thus is definitely is a limit. You will always hit a point where the compressed version is the most optimal it can be in order to preserve the information accurately.