**Huffman Coding**  
12/02/2015

**Using the code**

**Note:** Code is in Python, version 3.4.2

*Main.py* contains the method *run()* which takes a given filename and reads, encodes, and decodes the associated text file.

* 1. Exact instructions how to execute the code on a Durham networked machine. 2. A clear description of your programs and of any design choices you have made. 3. Analysis of running time of the encoder, running time of the decoder, and compression ratio. 4. Limitations of your design and implementation and possible features that could be included.

**The Code**

**Results**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Tour obtained** | | |
| **Input file** | **Modified brute force** | **Nearest neighbour** | **Genetic** |
| AISearchfile012.txt | 66 | **56** | **56** |
| AISearchfile017.txt | 2148 | 1628 | **1564** |
| AISearchfile021.txt | 4128 | 3130 | **2754** |
| AISearchfile026.txt | 1904 | 1731 | **1664** |
| AISearchfile042.txt | 2140 | 1534 | **1408** |
| AISearchfile048.txt | 33339 | **15172** | 15509 |
| AISearchfile058.txt | 81629 | **27208** | **27208** |
| AISearchfile175.txt | 44203 | **21951** | 22296 |
| AISearchfile180.txt | 659840 | **5420** | 8890 |
| AISearchfile535.txt | 147349 | **50029** | 50270 |

**Discussion**