CS232 P4
fa2021
streller

PROBLEM STATEMENT:

Implement the Huffman coding algorithm

CODE:

The program is to compress a file using a Huffman code and to decompress a file generated using this code. The program should first read through the file and determine the number of occurrences of each character in the file and the total number of characters in the file. The weight of each character will be the frequency count for that character. The program should then use these weights to construct the Huffman codes for the characters in the file. It should then read the file again and encode it using these Huffman codes and generate a file containing this encoded data. The program should also provide the option of decompressing a file that was encoded using this Huffman code. And displaying the "Huffman tree"

SPECIFICATIONS:

Ignore case and any non alphabetic characters. Input message file will be terminated by a *.
See enclosed files for samples. Your program must be able to read any code table in the correct format.

Conventions
smaller on left
if alpha chars frequency is the same, use lexicographical ordering to determine smaller
if alpha and a Tree still smaller on left
if alpha and Tree have same frequency, alpha on left
if both Trees have same frequency, lower numbered Tree on the left

Thus all projects will generate the same Huffman code. Program must ask for file names and run more than once. Program must ask to encode or decode. The Huffman tree must be outputted. Use Tree.h.

See for screen of program execution in file Huffman_demo_screens.pdf

DELIVERABLES:

soft: in a zipped file, called CS232_P4_yourLastName,zip

1. documented source code
2. user manual.
3. Programmer manual(s) (one for each class also)
4. release version executable

submitted in Blackboard to CS232 P4

Due Date : 6:00am 20 December 2021