IT251 Assignment-10

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TOPIC: HUFFMAN ENCODING

DESCRIPTION:

- The program can be executed by passing one extra argument to ./a.out , that is, input text file name, for eg. “input.txt”. It generates a new file named “output.txt”. The first two lines of the output file correspond to the flattened version of the tree. The third line is the actual encoding of the input text using this encoding tree.
- The program implements Huffman coding. Priority queue C++STL is used for the implementation of min-heaps
- **Time complexity**: (assume ‘n’ as number of elements in heap, that is, the number of unique characters in the input text)
    1. For each insert of a char in heap, it takes logn time. So for ‘n’ such inserts, it takes nlogn time. Hence, the time complexity of Huffman Coding is O(nlogn).

OUTPUT SCREENSHOT:

INPUT: (taken from “input.txt”)

aaabbaedfccddbbabcabacdabbcaa

OUTPUT: (given to “output.txt”) (3 lines only)

11001101000

abdefc

00000001010010101001011111110010001010001110001001110000101110000

NOTE: The output above is taken from “output.txt” that is generated by the program. Nothing is printed to console as informed in the problem statement.

THANK YOU