Assignment 4

Huffman Encoding

You are required to implement the Huffman encoding algorithm.

It is required to print the characters with their encoding.

Input:

The input will just be a text that your program is required to analyze.

Output:

The program should output the characters sorted by the lexicographic order of the encoding of each character.

You should start from the root node to the lowest and from right to left, in each level.

For each character, the format should be like this "<char> (<frequency>) <encoding>"

 Quotes and the brackets are for clarity only.

The frequency is required to ease debugging for you

Sample Run (inputs in green**)**

Enter a string to be encoded:

AABBBBCCCCCCCCDDDDDDDDDDDDDDDD

D (16) : 1

C (8) : 01

B (4) : 001

A (2) : 000

Sample Run (inputs in green**)**

Enter a string to be encoded:

aaaaaaaaaaaaaaaaaaaabbbbbbbbbbbbbbbbbbbbbbbbbhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhyyyyyyyyyygggggwwwwwwwwwwwwwwwttttttttmmmmmm5555555555555555

h (30) : 01

b (25) : 111

a (20) : 110

5 (16) : 100

w (17) : 001

y (10) : 1011

t (7) : 1010

m (6) : 0001

g (5) : 0000