Huffman Code Tree

Huffman code is the code assigned to characters such that frequently used characters are given shorter code whereas rarely used characters are given longer code. For example, the codes for vowels will be shorter and those for q, z, and x will be longer.

In this exercise, you are to write a program to take in a sequence of characters and their frequencies, construct a Huffman code tree and print it.

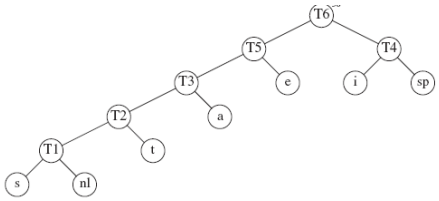
The end of input is specified with "exit".

Sample input

a	*10*
e	*15*
i	*12*
s	*3*
t	*4*
space	*13*
newline	*1*
exit	

Sample output

The tree constructed with internal node labelled arbitrarily with T1 up to T6. The symbol sp is for space and nl is for newline



Print out by BinaryTree class:

```
 (T6,58)
  (T4,25)
    (i,12)
      null
      null
    (space,13)
      null
      null
  (T5,33)
    (e,15)
      null
      null
    (T3,18)
      (T2,8)
        (t,4)
          null
          null
        (T1,4)
```

(newline,1)
null
null
(s,3)
null
null
(a,10)
null
null