CMSC 204
Huffman Lab

1) Create a Huffman Tree and generate the codes for each character of the following input:

create a huffman tree

For consistency:
1. If same frequency – put in priority queue alphabetically; put space before other characters of the same frequency
2. Add subtrees to end of group with same priority
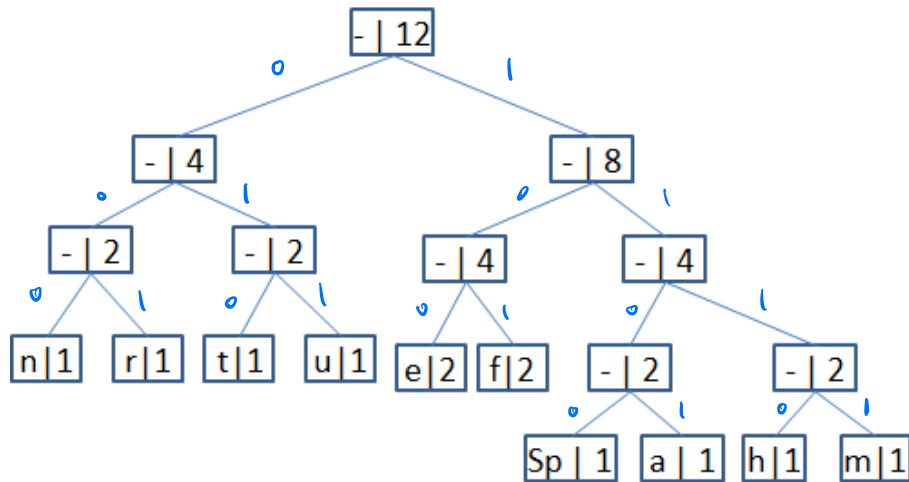3. Lower number has higher priority (goes to front)

$C:1 / r:2 / e:4 / a:3 / t:2 / h:1 / u:1 / f:2$

$m:1 / n:1 / Space:3$
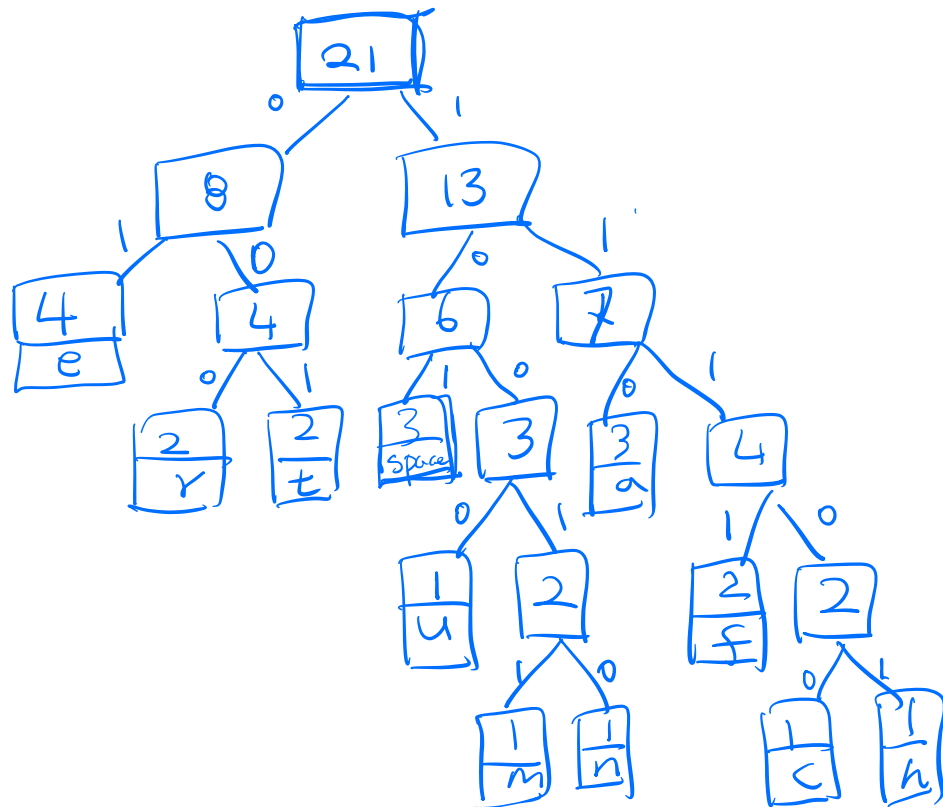
Now encode "create a huffman tree"

111 0 0 0 0 0 0 111 0 00 1 01 101 110 101 1110 1 1 000 1111 1111 1001 1 110

10010 101 001 000 0101

2) Based on the following Huffman tree and binary sequence, what is the text

```
                         - | 12
                  0              1
           - | 4                      - | 8
         0      1                   0        1
      - | 2    - | 2            - | 4          - | 4
     0    1   0    1          0     1        0      1
   n|1  r|1 t|1  u|1      e|2  f|2   - | 2      - | 2
                                   0    1      0    1
                               Sp | 1  a | 1  h|1   m|1
```

1110011/101/101/111/110/000/1100/0100/01/100/100

h u f f m a n   t r e e

Huffman tree! ˎ