

# Create a Huffman tree

## 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)

The letters needed: c, r, e, a, t, u, h, f, m

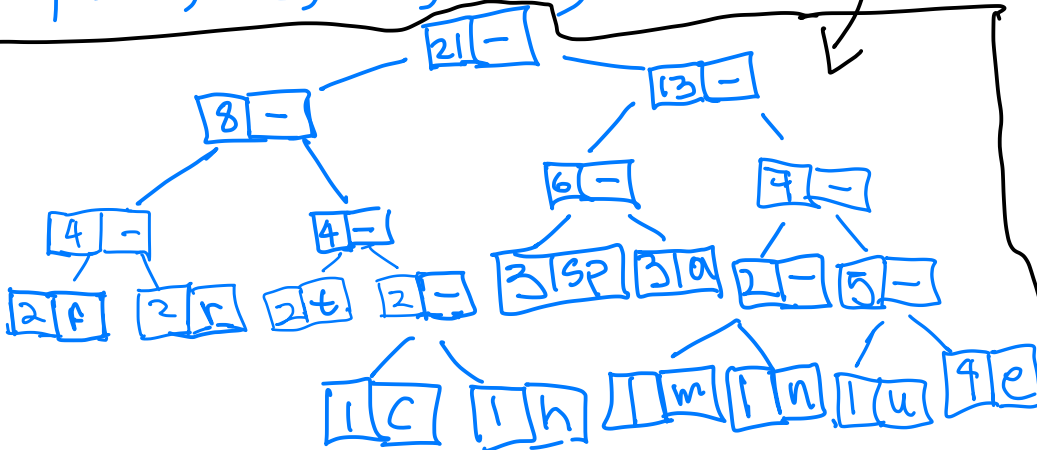
c r e a t u h f m n space

Frequency: 1, 2, 4, 3, 2, 1, 1, 2, 1, 1, 3

Priority queue

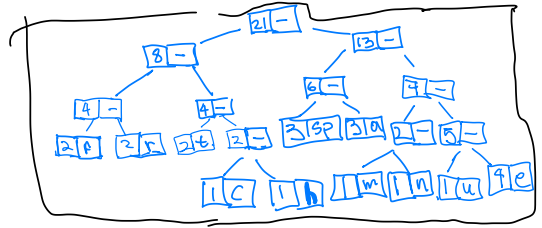
1	c	1	h	1	m	1	n	1	u		
2	f	2	r	2	t	3	sp	3	a	4	e

Huffman tree



# Code for : Create a huffman tree

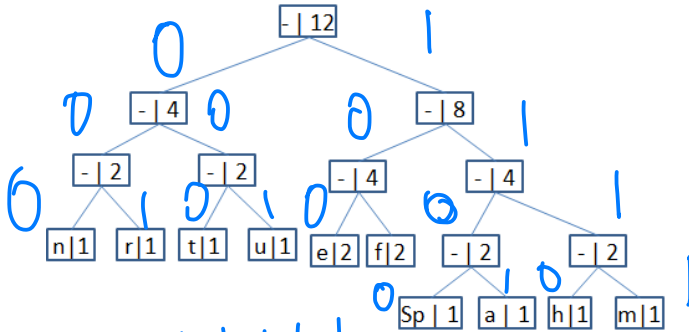
0110 001 1111 101 010 1111 100 101 100 011 1110 0000  
0000 1100 101 1101 100 010 001 1111 1111



Now encode "create a huffman tree"

0110 001 1111 101 010 1111 100 101 100 011 1110 00000000  
1100 101 1101 100 010 001 1111 1111

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



1110011101101111110100011000100001100100

space

huffman tree