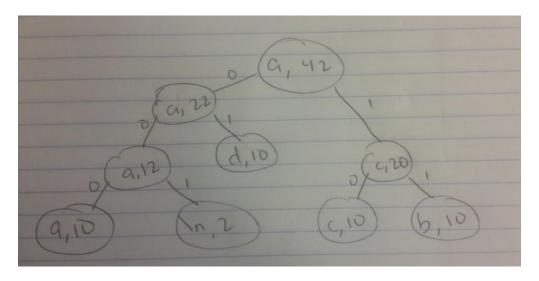
Kimiko Yamamoto A13208241 CSE 100

Checkpoint Writeup

Part 1&2:

./compress on checkpoint1

Part 3:



In my code for checkpoint1, I got 2 newline chars, 10 a chars, 10 b chars, and 10 c chars.

I drew the Huffman tree as pictured above for checkpoint 1. I did this by taking the lowest two nodes by frequency or symbol and then making a mini tree of those two nodes with the left node being larger than the right node. I repeated this process for each of the "root" nodes of the forest.

Following this logic, I got:

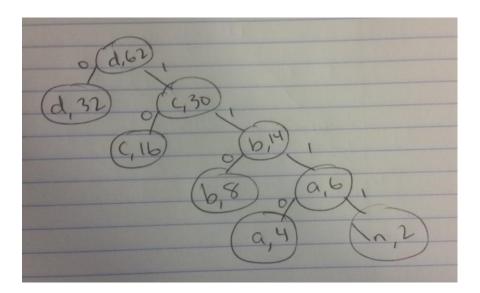
'a' = 000

'b' = 11

c' = 10

d' = 01

Newline = 001



In my code for checkpoint2, I got 2 newline chars, 4 a chars, 8 b chars, 16 c chars, and 32 d chars.

I drew the Huffman tree as pictured above for checkpoint 2 in the same fashion as in the first checkpoint.

Following this logic, I got:

'a' = 1110

'b' = 110

c' = 10

d' = 0

Newline = 1111

Part 4:

The encoded string according to my Huffman tree that I drew is:

Checkpoint1:

Checkpoint2:

I realized my input was backwards. This was because I was making the larger node the right node instead of the left node. Then I just switched the right and left nodes in my build function and got the same encoded message as my manually encoded message.