HW7 - Huffman Coding Tree

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May 2019

8) Huffman Coding Tree

Find the Huffman Coding Tree of "wild random happenstance" (see pictures below)
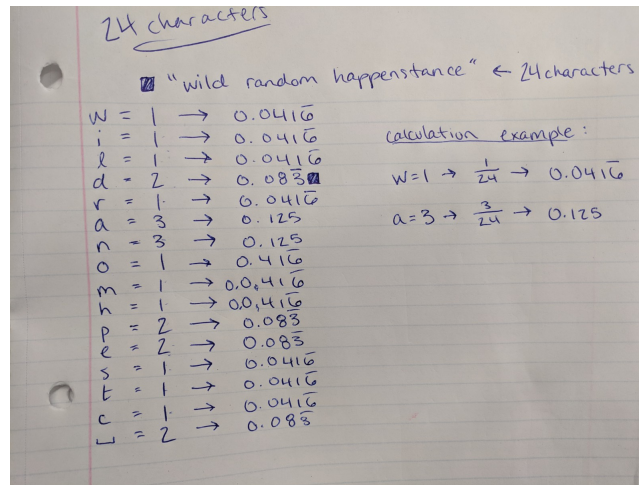
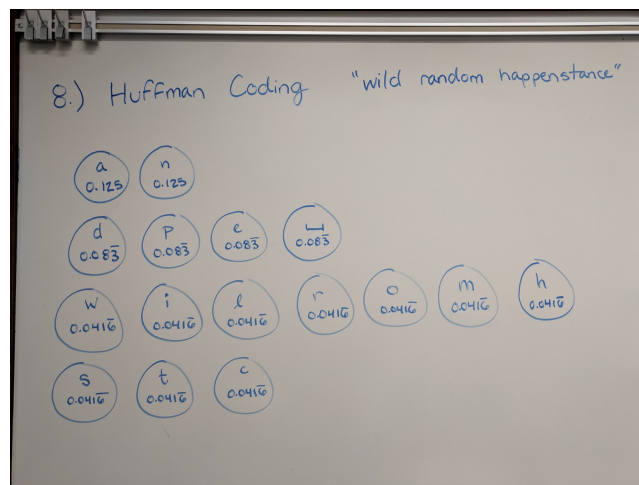Figure 1: The calculated frequencies of the given text.

Figure 2: Lay out all of the nodes that will be used to construct the Huffman Coding Tree.
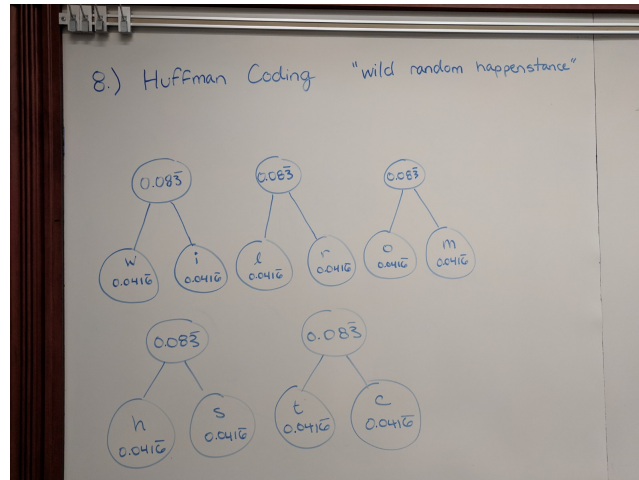
Figure 3: First round, pair the frequencies together and find the sum of each pair to begin building the tree.
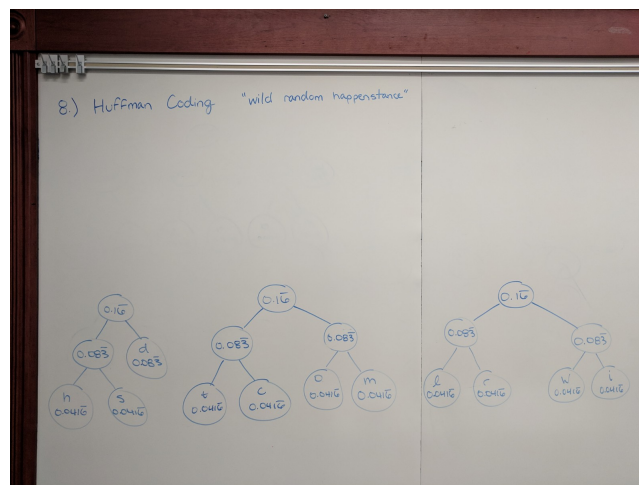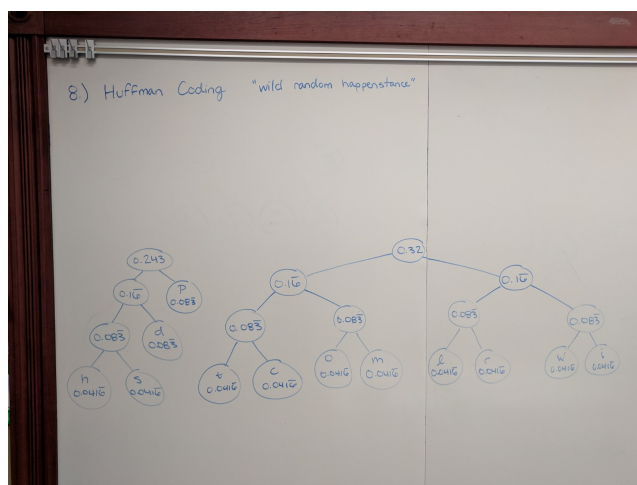

Figure 4: Pair the trees together. Since there is an odd amount of trees, add the lowest frequency node to the lowest frequency root of one of the trees.

Figure 5: Repeat previous step (Figure 4)

Figure 6: Pair two trees into one and add another tree of lowest frequencies
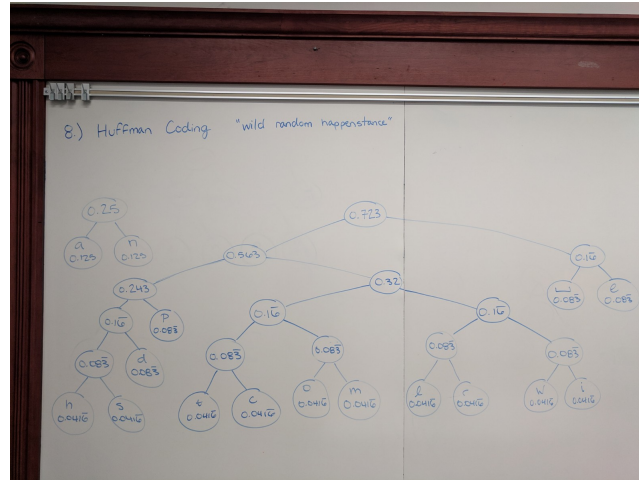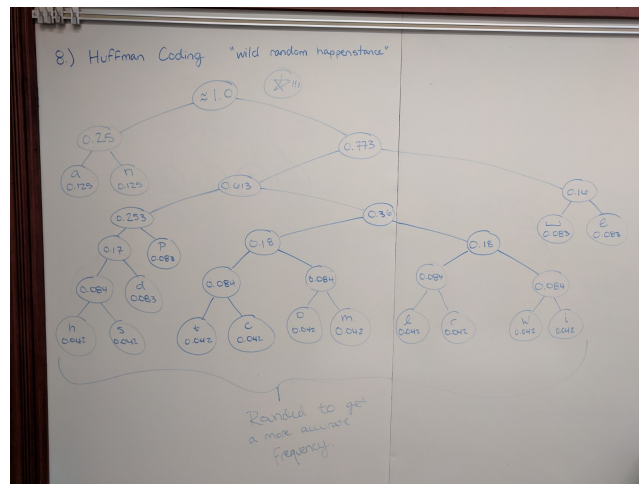
Figure 7: Repeat previous step (Figure 6)

Figure 8: Pair the trees. Since the frequency adds up to approximately 1.0, we have used all of the available nodes and are now finished with the Huffman Coding Tree! (In the picture above, I have rounded all of the original nodes to get more accurate frequencies and to hit closer to 1.0 at the root of the entire tree).