1. What are the possible solutions for this problem?

Understand definition of MinHeap in Huffman and minimum distance in Dkjkstra

1. How do you solve this problem?

For question 1, need to understand about MinHeap. Make tree and make nodes. Compare frequency. It compares the frequencies, finds the node with the smallest frequency and the node with the second smallest frequency, and creates a node with the sum of the two frequencies.

Then, the node with the lowest frequency is connected to the left child of the created node, and the node with the second lowest frequency is connected to the right child.

The left edge of the completed tree node is weighted by 0 and the right edge by 1 weight.

One node of the trees becomes the character to be compressed, and when the characters are searched from the root, the sum of the weights of the past edges becomes the Huffman code (variable length code).

Encoding can be done by substituting the Huffman code from the strings.

For question 2, I saw a lot of times about logics and knowledges but still can’t…

1. Why is your solution better than others? (Some test results can be included)

I haven’t saw others solution don’t know how short or how long they are, and I used my own logic to finish. However, I don’t know mine is better than others because mine is long and has pretty high memory. Furthermore, I couldn’t do question 2 even java and C++ both so, even though I saw basic knowledge, I can’t figure out.

1. How do you test your program?

Both I kept used OJ to solve my questions.

Of course, if it had some problems, I used index to fix bugs.

1. What are the possible further improvements?

For question 1, I don’t know about further improvement. maybe after the assignment deadline, need to see what others thought first. After that should study myself about how to make it more shortly and their logic to practice myself.

For question 2, I don’t know…