

Huffman Coding

1. Constructing a frequency table sorted in descending order.
2. Building a binary tree
Carrying out iterations until completion of a complete binary tree:
 - (a) Merge the last two items (which have the minimum frequencies) of the frequency table to form a new combined item with a sum frequency of the two.
 - (b) Insert the combined item and update the frequency table.

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3. Deriving Huffman tree

Starting at the root, trace down to every leaf; mark '0' for a left branch and '1' for a right branch.

4. Generating Huffman code:

Collecting the 0s and 1s for each path from the root to a leaf and assigning a 0-1 codeword for each symbol.