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The diagram illustrates the construction of a Huffman tree from a set of characters and their frequencies. The process is as follows:

- Initial Characters and Frequencies:** A list of characters and their frequencies is provided: A (1), B (1), C (1), D (1), E (3), F (3), G (4), H (4), I (4), J (4), K (4), L (4), M (4), N (4), O (4), P (4), Q (4), R (4), S (4), T (4), U (4), V (4), W (4), X (4), Y (4), Z (4).
- Building the Tree:** The characters are merged into a binary tree structure. The two smallest trees are merged at each step, creating a new parent node. This process continues until a single root node is formed.
- Traversal and Coding:** The resulting Huffman tree is traversed to generate the Huffman codes for each character. The codes are binary strings of varying lengths, where the length of the code is inversely proportional to the frequency of the character.

[illegible]

image.png