SNS COLLEGE OF TECHNOLOGY

Coimbatore-37.
An Autonomous Institution

COURSE NAME : 19ITB201 & DESIGN AND ANALYSIS OF ALGORITHMS

II YEAR/ IV SEMESTER

UNIT – 3 DYNAMIC PROGRAMMING AND GREEDY TECHNIQUE
Topic:

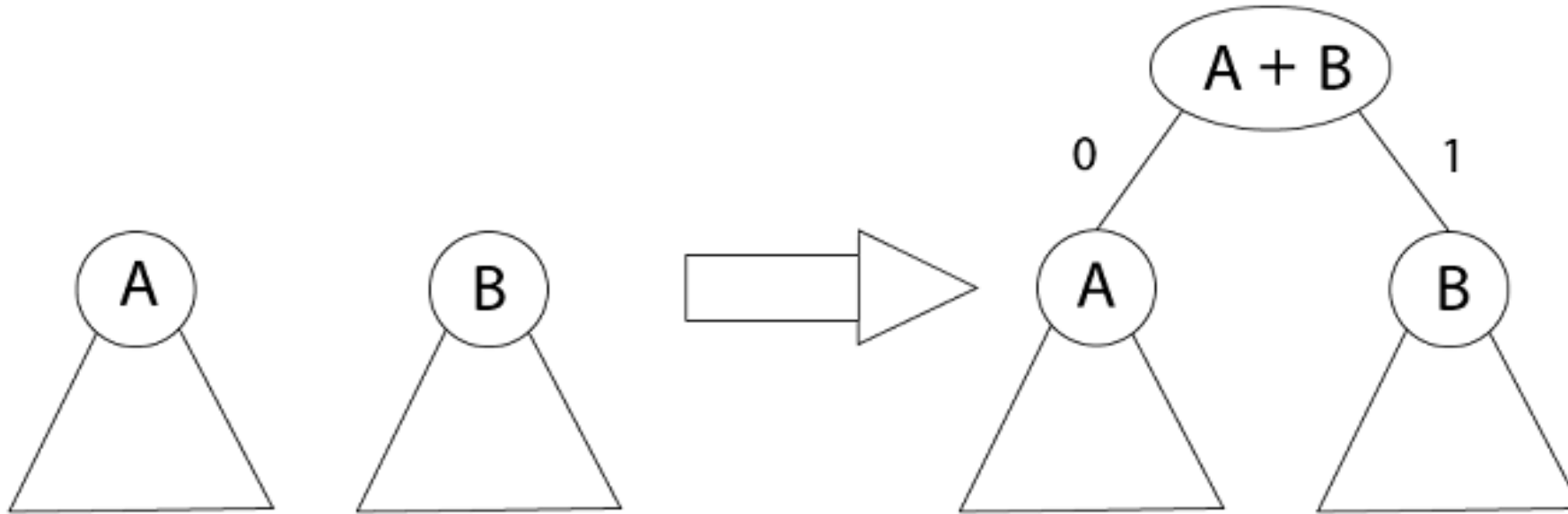### Greedy Technique: Huffmen Trees

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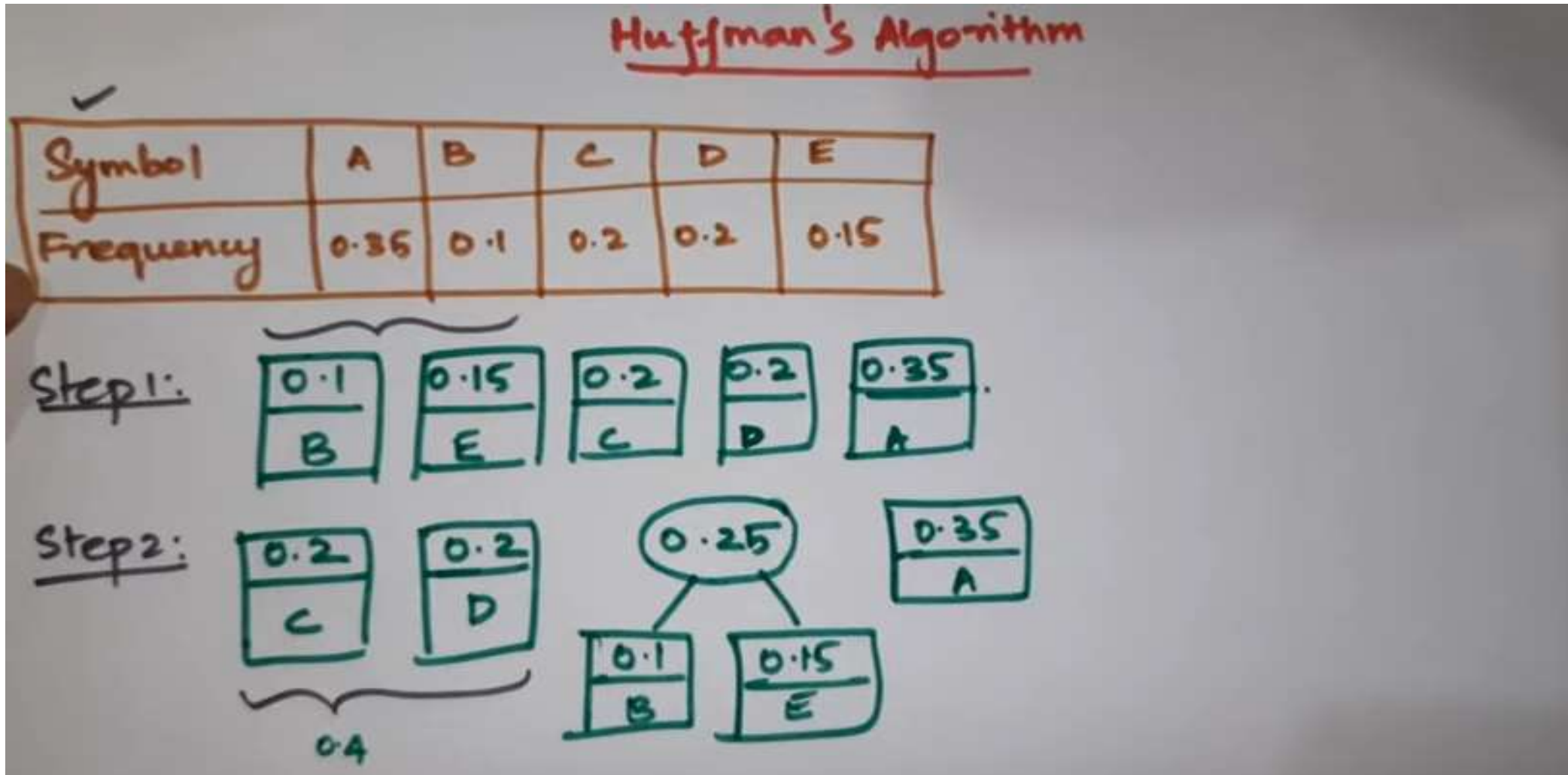
Huffman's Trees and Code

Huffman invented a greedy algorithm that creates an optimal prefix code called a Huffman Code.

The algorithm builds the tree T analogous to the optimal code in a bottom-up manner. It starts with a set of |C| leaves (C is the number of characters) and performs |C| - 1 'merging' operations to create the final tree. In the Huffman algorithm 'n' denotes the quantity of a set of characters, z indicates the parent node, and x & y are the left & right child of z respectively.
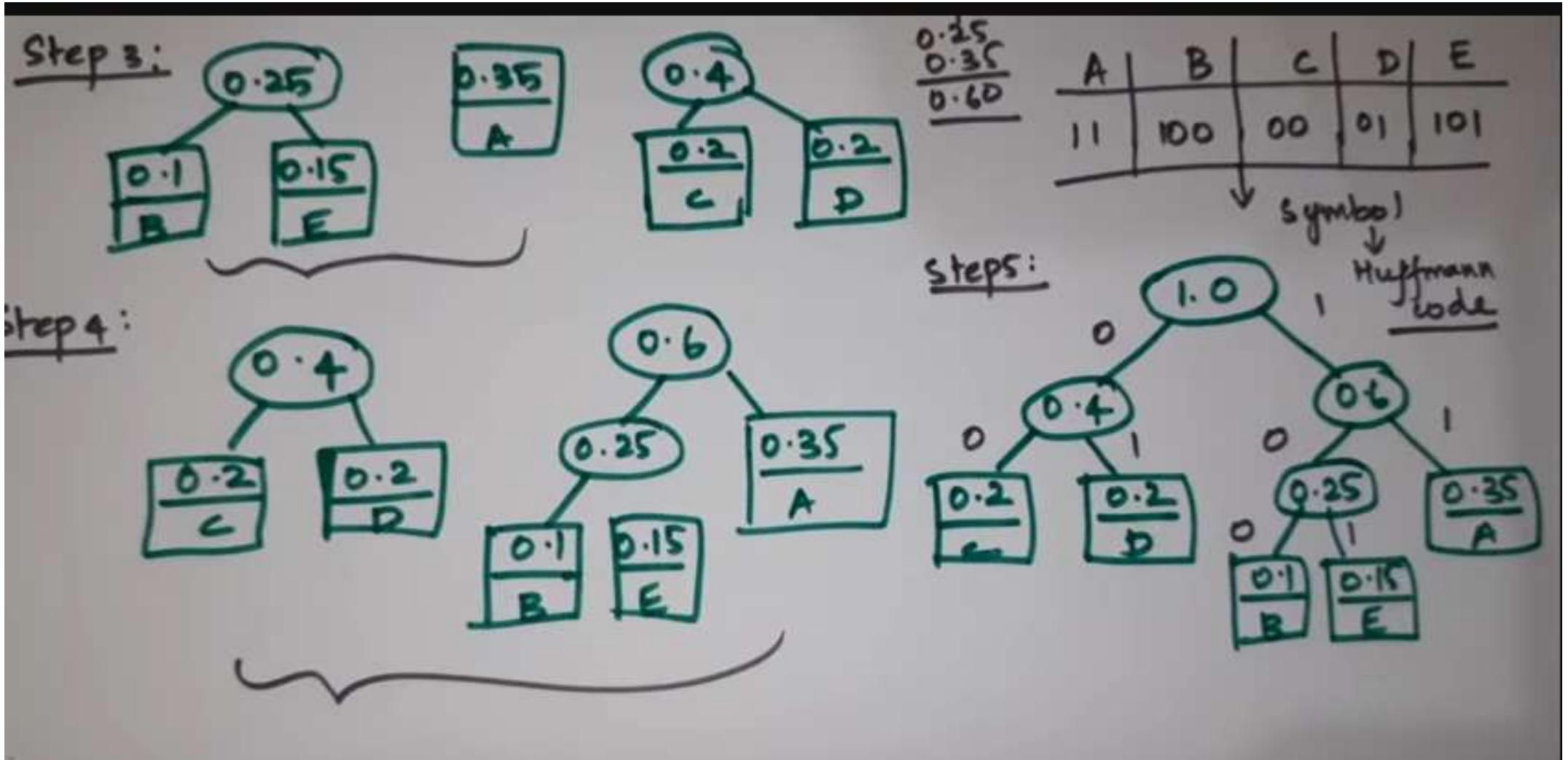
Huffman's Trees and Code

Huffman's Trees and Code

1. Anany Levitin, "Introduction to the Design and Analysis of Algorithms", Pearson Education, 3rd Edition, 2012

2. Ellis Horowitz, SartajSahni and SanguthevarRajasekaran, "Fundamentals of Computer Algorithms", Galgotia Publications, 2nd edition, 2003