

B-Tree is a self-balancing data structure designed to optimize data searching, addition, and deletion with enhanced memory efficiency. The insertion algorithm's time complexity is $O(t \cdot \log n)$, where 't' represents operations per node in main memory. Proposed by McCreight in 1972 and termed Height Balanced m-way Search Tree by Bayer, it's a specialized tree within data structures. In practice, the dominant time factor is $O(\log n)$, reflecting disk reads and writes.