

# How to handle duplicates in Binary Search Tree?

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Universal Definition of a *Binary Search Tree* involves storing and search for a key based on traversing a data structure in one of two directions. In the practical sense, It means if the value is ' $<$ ' or ' $>$ ', you traverse the data structure in one of two directions. So, in that sense, duplicate values don't make any sense at all. In Binary search tree, all the left sub tree elements must be less than root element and all the right sub tree element must be greater than root element. So a Binary Search Tree by definition has distinct keys.

But still in your implementation, you can allow duplicates. You can specify left children as  $\leq$  and right children as  $>$ . Practically speaking, A Binary Search Tree which allows either of the right or left children to be equal to the root node, will require extra computational steps to finish a search where duplicate nodes are allowed.