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Search

Comparison between binary and ternary search.

Binary and Ternary are similar in their philosophical approach the main difference would be how they partition their search. As binary suggests it cuts searching in half. On the contrary, Ternary would cut the searching up into 3 parts instead of 2. This would mean that Ternary would have 2 midpoints compared to Binary's one midpoint. The recursive approach is similar as well. However, the main thing to realize is that for Binary we only have to choose the lower or the upper half of the sub array that we sliced up. However, for the Ternary search we'd need to make this choice between 3 different sub arrays. The arrays would be as follows: the lower half array, the mid half array and the upper half array. Once we pick a sub array, we'd treat it as the main array and divide this newly picked sub array into 3 equal parts and repeat the process until we've found our element we've been searching for. In terms of time complexity, I'm just making an educated guess here, I'd say that it'd be $\log_3(n)$ instead of log(n) which is impliciting implying base 2, though in math class it implicitly implies base 10.

Sources

Didn't use any sources.