

syasar

CSE 13S

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ASGN3 WRITE UP

Although the logic of the recursive function was slightly complex, the code was relatively easy to produce and simple. In order to solve the towers of hanoi, you had to create multiple smaller games with lower numbers of discs. Thus, the function called for it to be recursive, with the base case being only one disc, which is the last disc moving to the B rod. However, the recursive function to solve the towers of hanoi is far less efficient than what can be accomplished with a loop. It also takes more time than an iterative solution with its only benefit being far less coding.

The iterative function to solve the towers of hanoi consisted of for loop with several helper functions as well as functions made by stack.c in order to treat each rod as a stack. Logic wise, it was much easier to build and follow what I was doing when programming the for loop. The iterative function also takes far less memory and time when executing. Although its length in code makes it seem complex, it far surpasses the recursive function in time complexity and logic flow. However, both methods were able to solve a game with the minimum number of moves.