

SE Factory

Week 6 - Assignments

version 02BD_1703

Change Log

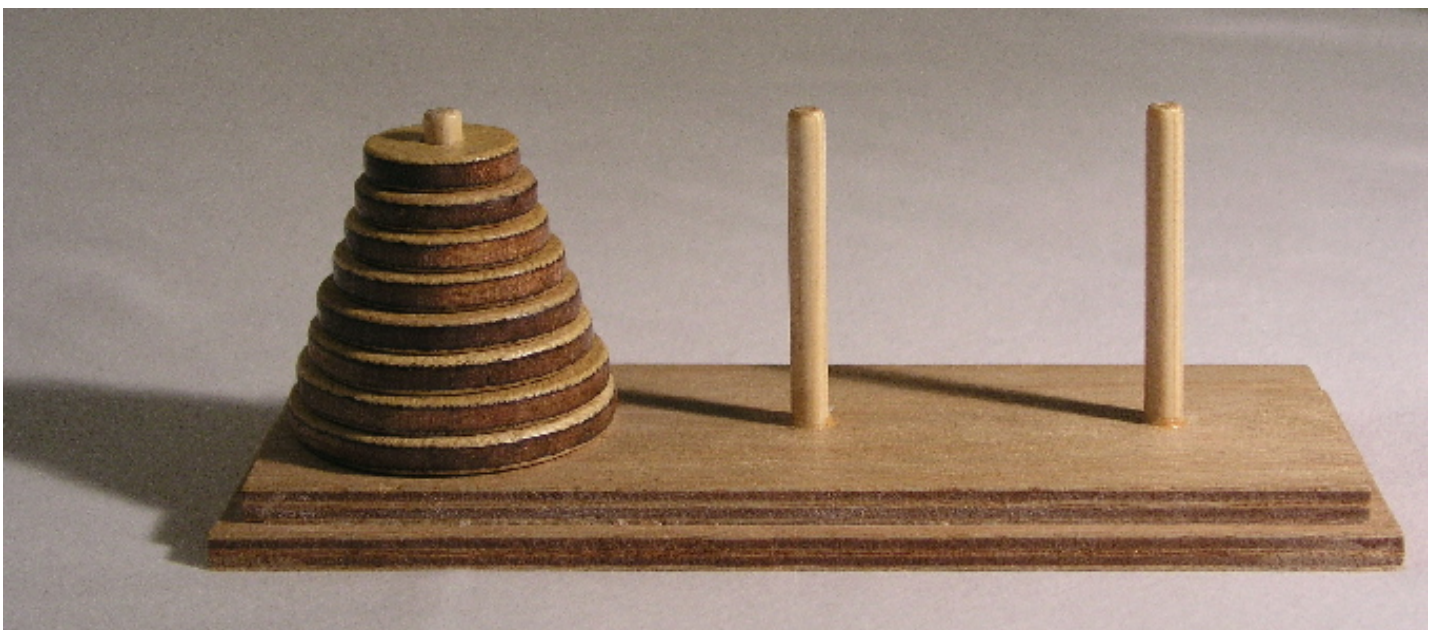
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Javascript

Exercise 1

Tower of Hanoi

The Tower of Hanoi puzzle was invented by the French mathematician Edouard Lucas in 1883. He was inspired by a legend that tells of a Hindu temple where the puzzle was presented to young priests. At the beginning of time, the priests were given three poles and a stack of 64 gold disks, each disk a little smaller than the one beneath it. Their assignment was to transfer all 64 disks from one of the three poles to another, with two important constraints. They could only move one disk at a time, and they could never place a larger disk on top of a smaller one. The priests worked very efficiently, day and night, moving one disk every second. When they finished their work, the legend said, the temple would crumble into dust and the world would vanish.



Rules

Assuming the above model with a set of 8 disks, move all the disks from the first rod (on the left) to the last rod (on the right) while obeying the following rules:

1. Only one disk can be moved at a time.
2. Each move consists of taking the upper disk from one of the stacks and placing it on top of another stack i.e. a disk can only be moved if it is the uppermost disk on a stack.
3. No disk may be placed on top of a smaller disk.

You need to develop a visual animation for the moving towers. However, the solution to your problem should be written in Javascript and it should run efficiently in any browser. The solution output should be displayed in an HTML page.