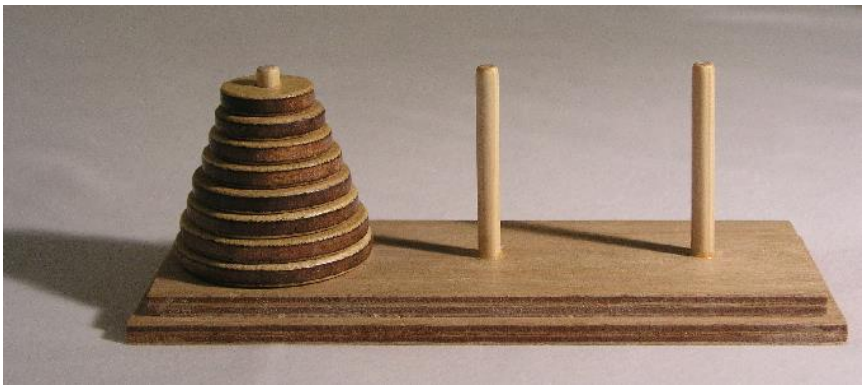
Tutorial / Exercise – Recursive Functions

Exercises:

1. Using recursion write a function that outputs the Fibonacci sequence. 1,1,2,3,5,8,13,21...
2. Using recursion write a function that returns a number to the power of another number e.g. 2 to the power of (2^5) is 32'

Challenge Exercise

3. Using Recursion, write a function to calculate the minimum amount of moves to solve the Tower of Hanoi.
    a. The tower of Hanoi is a mathematical puzzle game. It consists of a set of disks of different sizes placed on 3 spokes.
    b. The game begins with a group of disks in descending order of size stacked on the left most spoke.



    c. The goal of the game is to move the disks such that they are all stacked on one of the other two spokes.
    d. There are a few important rules.
        i. You can only move one disk at a time.
        ii. You can only move the top disk from a stack
        iii. You can only move a disk onto another spoke if it is smaller than the disk already there, or there are no disks on the spoke.