

The background of the slide features a light gray circuit board pattern with various traces and circular components. A solid dark gray horizontal band runs across the middle of the image, serving as a backdrop for the text.

CMSC 131

Fall 2018

Announcements

- Project #7 due Monday at 11PM
- Monday lecture will be review
- No Lab on Monday
- Final Exam Thursday 12/13 from 4:00 to 6:00.

Example: Directory Visitor

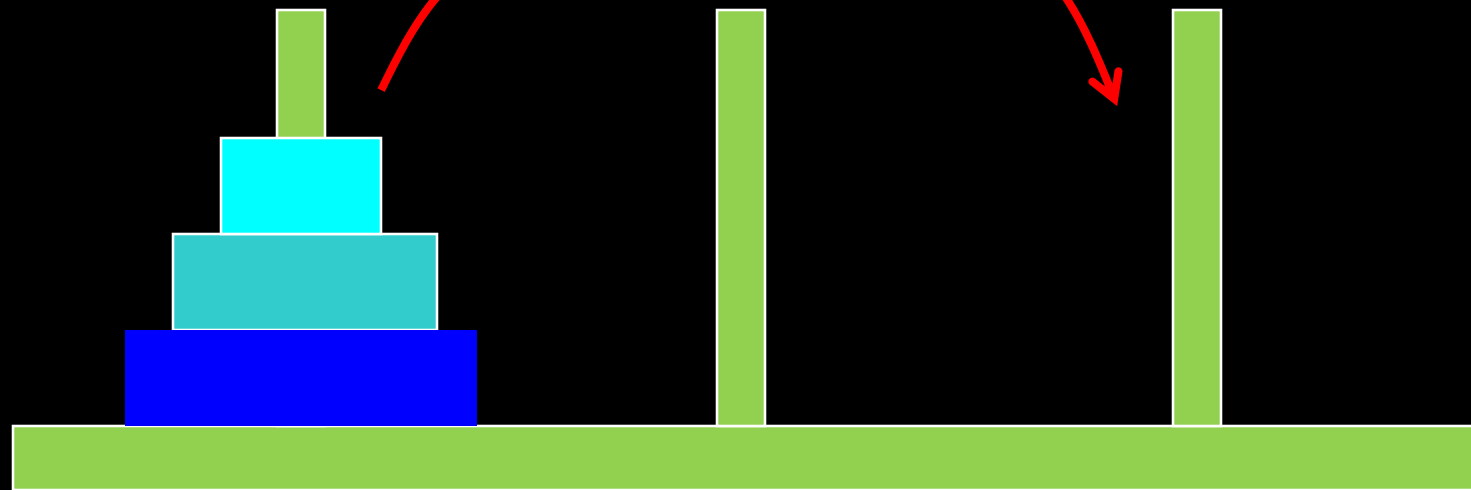
We want to write a program that will explore a directory on a file system (including all descendant directories)

Algorithm?

Example: `DirectoryVisitor.java`

Example – Towers of Hanoi

- Problem
 - Move stack of disks between pegs
 - Can only move top disk in stack
 - Only allowed to place disk on top of larger disk



Example – Towers of Hanoi

- To move a stack of n disks from peg X to Y
 - Base case
 - If $n = 1$, move disk from X to Y
 - Recursive step
 1. Move top $n-1$ disks from X to 3rd peg
 2. Move bottom disk from X to Y
 3. Move top $n-1$ disks from 3rd peg to Y

Iterative algorithm would take much longer to describe!

- **Let's code this up!**