

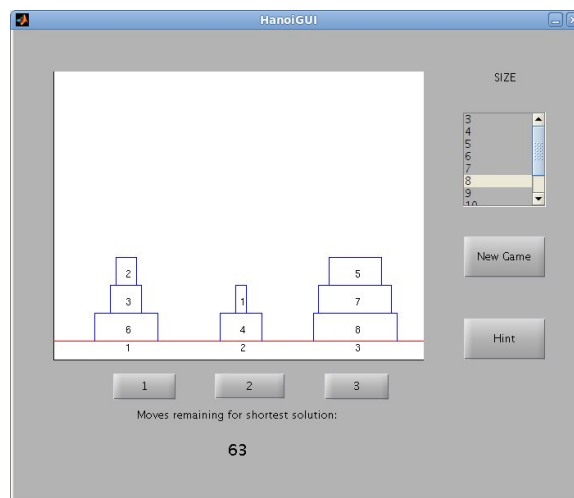
University of Pennsylvania  
EAS 105: Fall 2011  
**MATLAB PROJECT: Towers of Hanoi - part B**  
Instructor: Donna Dietz

This project is the *final* part of three progressive projects you will do this semester. The user will choose (via a GUI) how many discs should be played in a Towers of Hanoi game. An arbitrary valid starting configuration will be drawn on the GUI, and play will begin. The player will click pushbuttons to indicate where the disc should be taken from, and where it should be placed. The logic for this has already been taken care of in the first Hanoi project. Now, the goal is to create a fun GUI.

In addition to the functions you wrote in part A:

**function drawTowers( L , ax)** plots the boxes representing the discs in cellarray L onto the axes *ax*. Things that should help: axis, axes, cla, XTickLabel, XTick, YTickLabel, YTick, line, text. Google search these terms and Matlab. These clues should suffice.

**function varargout = HanoiGUI(varargin)** will be autogenerated by GUIDE. See hints from the Perpetual Calendar assignment. Also, be sure to play with the .p files and enjoy the game a bit. You can alter the game stylistically, so long as the underlying behavior is the same. Feel free to stack other things besides discs, should you feel so inclined! Please print the numbers on the objects, though, to make playing easier.



The “hint” pushbutton should advance the player one step closer to the final solution. The List to control the number of discs should contain the range 3 to 12. The user should be able to bail by starting a new game. You may start the user off with a game, or you may start with some other blank welcoming screen and force the player to pick the options for the first game. Feel free to reward or annoy your users as you desire.