1 Administrative Topics

- Return the quiz
- Project 8 will be graded by Wed. The only bug I am consistently finding is that the place method code doesn’t check to see if the orientation is None before calling turtle.seth.

2 Proj 9

More advice:

- To add a new capability to your shapes (e.g. controlling the pen width), follow this set of steps:
  1. Add a method to Interpreter (like color) or a parameter to drawString (like text).
  2. Make sure there is no code in Interpreter.drawString that interferes with item #1 (e.g. make sure you don’t reset your color to black after drawing a leaf. Instead, you want to reset it to the color it had before you drew the leaf).
  3. Add an appropriate field to Shape.
4. Update Shape.draw to call #1 (if it is a method) or add the appropriate parameter to drawString.

- For something like leafColors, we should follow the instructions above by adding a parameter to drawString. Here is why: drawString needs access to the list of leaf colors and it can’t get them from the turtle (unlike pensize or color), so we would have to add a field to the Interpreter if we were to have a Interpreter.setLeafColors method. But the set of leaf colors is specific to each tree (at least the way I draw my scenes), so I think that there should be a close temporal and memory-location relationship between the tree string (dstring) and the leafColors. Since the tree string is a parameter to drawString, leafColors should also be a parameter to drawString.

- Even for something that seems Tree-specific like leafColors, add the capability to Shape. Here is why: We should think of Shape as the ultimately flexible object and it is OK if it has fields that not all children use. Also, by adding everything to Shape, we take better advantage of inheritance. For example, because Shape.draw passes leafColors to drawString, Tree.draw can continue to use Shape.draw instead of re-writing the code.

- When writing code for the tile, start with an outline for the tile and make sure you have it drawing correctly (i.e. it is the right size and x, y is the bottom left corner). Then, started adding objects, making sure you “color within the lines”. Then, remove the outline and you will be confident your tile is both interesting and correct.