Now we need to put it all together.

1. Using the code you wrote in the preparation section, your program should read in five L-System files, "[lsys1.txt](https://web.cs.wpi.edu/~emmanuel/courses/cs543/f18/homework/HW3/lsys1.txt)," "[lsys2.txt](https://web.cs.wpi.edu/~emmanuel/courses/cs543/f18/homework/HW3/lsys2.txt)," "[lsys3.txt](https://web.cs.wpi.edu/~emmanuel/courses/cs543/f18/homework/HW3/lsys3.txt)," "[lsys4.txt](https://web.cs.wpi.edu/~emmanuel/courses/cs543/f18/homework/HW3/lsys4.txt)," and ONE OF YOUR OWN, and store them in instances of your *grammar* class. You should then apply the re-writing rules for each grammar according to the values specified for this in each grammar file. Your five L-System files should be drawn on the (a,b,c,d,e) keystrokes respectively. For instance, hitting keystroke a draws [lsys1.txt](https://web.cs.wpi.edu/~emmanuel/courses/cs543/f18/homework/HW3/lsys1.txt), etc.

Finished. Keystroke a,b,c,d,e will draw different files

1. Choose a random location on the ground plane to start drawing on e of the randomly selected trees, using a random color, and draw it.  
   **HINT**: You should apply a translation and a rotation to move to the correct start location.

Finished

1. Repeat Step 2 (at least) 5 times in order to draw your forest. For inspiration, you can look at the gallery of forests created by students in a previous CS 4731 class [HERE](http://web.cs.wpi.edu/~gogo/courses/cs4731_2006b/lsys/) Some of the students in that class used a checkerboard floor. You can just make a plain floor.

Finished

1. Make your park look more realistic by adding in more PLY mesh models such as a car and any other objects you think would make your park look realistic. Use some of the PLY files from homework 2. You can get the PLY files [[ here ]](https://web.cs.wpi.edu/~emmanuel/courses/cs543/f18/homework/HW3/ply_files.zip)Be creative. You don't have to add 3D effects like texturing yet since we haven't covered them in class, although people who decide to add any effects won't have points taken off.

Finished

1. Keystroke f draws park including your forest of trees, ground plane and car.

Finished,and keystroke p will generate a plane.