CS130 Computer graphics
Programming Assignment 1
Part 1: Due: Tue. April 24
Part 2: Due: Friday, May 3

In this assignment you will create an interactive scene in openGL.

- **Part 1:** Create the model of a sidewalk. There should be a street on one side, and houses on the other side. You should also add a row of trees in the side walk. Use the `gluPerspective()` transformation to view the scene. The street, the sidewalk and the surrounding surfaces can be flat. You can use stick figures to model the trees. To model the branches you can use a recursive routine, or build them by hand. Use simple boxes to model the houses, with a rectangle for a door.

- **Part 2:** Add controls to the program you built for part 1 to be able to see the same scene from different viewpoints. You can either use `gluLookAt()`, or `glTranslate()` and `glRotate()`. Your controls should be able to place the viewpoint anywhere in the upper hemisphere of the scene.

  In addition, add a figure that moves from one house door to another. You can use just a single box to model the figure. The figure must use the sidewalk to move from one door to the other; if the houses you built have lawns, the figure has to get to the sidewalk first.

  You have to be able to control, using the keyboard or the mouse, when the figure starts its movement. Use double buffering in the rendering.

  You can also add other figures (again, use solid boxes to simulate figures) that move from door to door at random.