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Piggy's Adventure

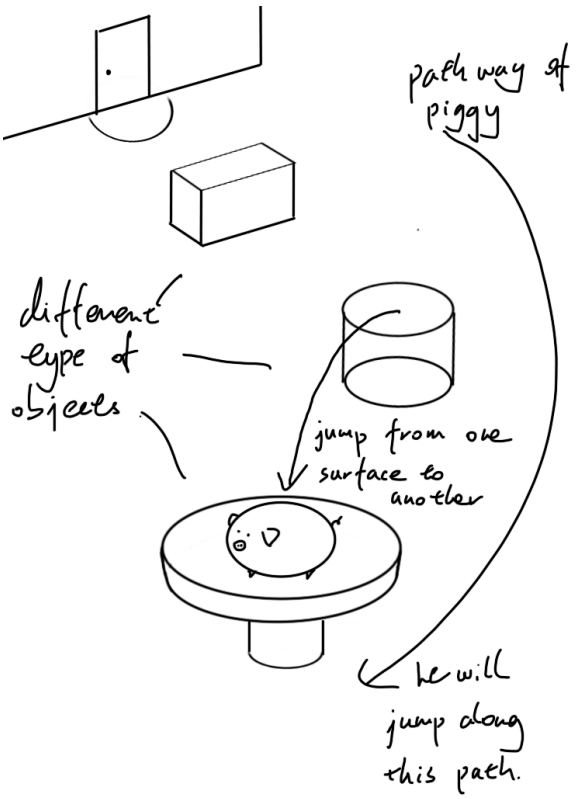
There is a little pig who is taking CS 174A this quarter. One day after he finished his project, he felt so depressed that he wanted to go out for a walk. Then he found a magical road he had never walked down, just a pile of boxes. He could only jump on this road, and his life will be in danger if he fells off the box carelessly. But he still decides to jump on it and start his adventure…

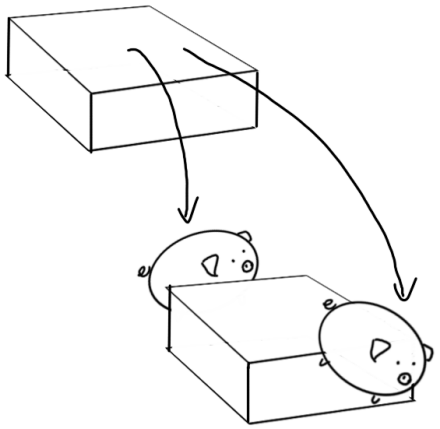
For this project, first we're going to build some random distance objects as the path, and we're going to use tinigraph.js to draw piggy and houses, and we can use some image as the background of the game. The shapes and sizes of these objects are not fixed, such as boxes, cylinders, or even furniture like tables and chairs. We're going to do some physics basics with the rotation and translation that we learned in class. At the same time we will adjust the camera so that the piggy is always in the center of the screen. If there is enough time, we will do ray tracing to reflect the light of the object. We will use physics to simulate falling animations at different locations such as the right side of current object or the left side of next object, etc.

We use a button to control the amount of time it takes to jump. If it takes too long, the pig will jump too far and fall. If it takes too short, it may not jump to the next object and fall. The route of the game is random, meaning that the next object may be on the right or left.

The advanced features are the physics for jumping and falling, and we may build the ray tracing to track the lights on different objects.

The sample graphs are in the next page.





overjump / underjump will fail the game