Development Log  
Leprechaun Tears Game Engine, by d20 Productions

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Lab 1 code refactors:

* Glut setup code moved to its own file
* Engine functionality and game management has all been moved into a single class
* Engine has functions that emulate Glut keyboard/mouse/display functions, Glut setup simply calls the engine’s corresponding functions
* Code for reading in level data has been moved into Level class, rather than be stand-alone functions
* Engine does not take in command line arguments at present. Part of an incomplete file system, but for now level names must be hard-coded
* Moved camera functionality into the engine

Lab 1 code changes:

* No code was changed, although plenty was added to allow for physics calculations

Lab 1 code additions:

* Added PhysicsObject class
* Added a Ball class that derives from PhysicsObject
* Added many methods to the Tile class to retrieve data related to wall locations, ID numbers, face normal (for slopes), calculating a given wall’s normal, getting the height of a point on a tile (for the ball’s height), and checking if a point is within the bounds of a given tile.
* Removed the previous, clunky camera controls. Moved camera calls into the engine, set up camera profiles for top-down, 3rd person, and free look. Free look sets camera at a given point, and uses some of the same camera controls as well as new mouse controls.

Additional resources:

http://math.stackexchange.com/questions/13261/how-to-get-a-reflection-vector

http://mathworld.wolfram.com/Point-LineDistance3-Dimensional.html