ICS 161 – Winter, 2016 – Homework 8

Start this homework in your Wednesday, Feb. 24 lab session (you may check in by emailing Phani, pmantrip@uci.edu, during your discussion period), and continue on your own time. Upload your files to the EEE Dropbox "ICS161-HW 8" before 11:55pm on Wednesday, March 2.

Eventful Pong

1. Currently all GE161 events are from SDL_PollEvent(). Add the capability for code within the game to generate events. (Nystrom distinguishes between an event, which is something that already happened, and a message or a request, which can cause an action in the future; we won't worry about that distinction and will use the term "event" for all varieties.) Specifically, in GE161::Game, add a method named sendEvent() which causes an Event object to be put on the EventQueue object. You should determine the parameters for sendEvent, and also what changes need to be made to other classes.

2. Modify your Pong game to create an event every time the ball hits the paddle. Some code in your game should respond to this event, using the EventQueue and onEvent system, with an funny image of your design; the image should only stay on the screen for a few moments;

3. Let's face it, this Pong is pretty dull. Add some pizazz of your own design to the game, following these guidelines:
    - At least four new "characters" should appear on the screen, of at least two new types (ball and paddle are the two existing types). These characters should have some "life" of their own – perhaps they chase the ball, or attack the paddle, or react to keypresses, or the player gets a point for knocking the ball into a moving goal. Update the scoring and the speed of the ball and paddle and anything else, in the interests of playability.
    - You should find or draw sprites for these characters.
    - **Your should create at least two new event types (in addition to ball-paddle collision), which are sent and received by these characters though GE161's event queue.**

Make sure to follow the existing style of GE161, including the design goals discussed in class.

Turn in a Word or PDF file named Event (.doc, .docx, .pdf) that contains the following:

- Two or three screen shots showing your super Pong game in action.
- A discussion of any design issues you faced regarding the events – what was the issue, how did you resolve it?
- An short overview of your additions to Pong.
- Mention if your implementation is incomplete or buggy.
- A listing of all the code you modified or added, copy and pasted from Visual Studio. Indicate what file each code snippet is from.