CSCE 693 Software Evolution

Homework 4 – Implementing a GameObject-based Application (100 pts)

Directions:

- No written report is required, but it is expected that software code should be liberally commented to clearly indicate the program logic that was implemented.
- Use Linux, GCC, and the provided zip file (i.e., csce693-hw-04.zip).
- Complete the following two tasks:
  1. (50) Create a list (e.g., std::vector) of abstract GameObjects that the Game class manages and executes. A game object should call both update() and render() using this list. Redesign the existing GameObject class to be abstract as discussed in class. When the list is deleted it should delete all of its' "contained" GameObjects (hint: store std::unique_ptr<>() to manage a concrete GameObject's lifetimes).
  2. (50) Create 3 concrete subclasses of the abstract GameObject to represent a Tank, Chopper and Pacman. Each of these subclasses should (upon creation) load the image associated with it (Tank -> "tank-big-down.png", Chopper -> "chopper-single.png" and Pacman -> "pacman_32x32.png") which is stored in the assets/images folder.

Submit homework files (in a zip archive named "team0<x>.zip") to my personal email at: doug@sidechannel.net Submit to me ONLY the one project which contains both modifications.

I know the composition of the teams for grading purposes, but cc'ing your team mates on submission is always a nice thing in the case there is some confusion. ONLY submit original source files - do NOT include miscellaneous compiler-generated files (e.g., .o, final executables, etc.).