

## CSCE 693 Software Evolution

### Homework 6 – Entity-Component Pattern w/Lua-based Content (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 files “csce693-hw-06.zip” and “csce693-deps-assets.zip”.
- Complete the following tasks associated with the “sprite\_01” project using the “sol” template library:
  1. (50) Improve the code base so that an explicit “void initialize()” method is defined in the game class, which calls initialize() in the entity manager class which calls initialize() in each entity being managed in its list – finally, each entity should call all of its components to initialize – the game object’s initialize method should be called in main() just after the game object is created. This turns the creation and initialization of entities (and its associated components) into a two-step process. This should also fix the Sprite component so that it does not search for a transform component which might not exist until later. This means the template method to “add\_component” should no longer be calling “initialize()”!
  2. (50) Write sol-based lua code to read and parse the “config.lua” file to create the entities defined. In other words, update the Game load\_level method so that it reads and processes the config.lua file.

Submit homework files (in a zip archive named “team0<x>.zip”) to my personal email at: [doug@sidechannel.net](mailto: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.).