**Game Engine Assignment #1 Q&A**

**(Engine Noobs)**

**Adam Vandyke - James Allen - Odai Al Kakouni**

**Q.1:**

The biggest limitation our game engine has is its inability to handle large scale projects. It would require much more work to provide an engine capable of handling a more complex game. Similarly, it can only handle 2D games in its current state. In addition, the physics engine is very limited and does not support a lot of interactions between objects. While the component system allows for easy addition and improvement of features, the structure of the engine needs more refinement to allow for even more freedom. For example, it may be better to separate the menus from the “GameEngine.”

**Q.2:**

In order to accommodate other game genres, such as an RPG, several modifications would need to be made to the game engine. For starters, the component classes would need to be modified to include the AI required for all the npcs that are typically found in RPGs. AI required for NPCs in RPGs would be more complex than the humans’ AI found in TMMR, which is coded for avoidance of the monster. An example of this would be the addition of an NPC-player dialog object component. Furthermore, the current system uses “actors” as the base class of most objects in the game. This allows both menus and gameplay to be displayed using the same system. However, problems may arise if you were to display some graphics in 3D and others in 2D. A separation of menus and gameplay, or a system that can support both 2D and 3D objects fluidly would be required. RPGs also are likely to have a large amount of assets, levels/areas, and dialogue. Our game engine would require a more organized way of handling such a large amount of assets as it would become very confusing and inefficient to handle them as it currently is. An XML resource writer/reader, with assets organized by file type and level/location appearance would help keep things well constructed.