Game Engine

1) What limitations do you think your game engine would have? Try to explain what these limitations are.

The limitations our Game engine would have is that it would excel in loading very long levels and stages with linear progression i.e. level one to level two etc., and not short ones like in legend of Zelda on the NES that would require the engine to constantly be loading smaller screens/levels. Due to how our scene manager would work preparing the next level while the player is in the current one. The engine also only allows 2D. There are a limited number of keys for input and no mouse input or gamepad input.

2) How can you adapt your game engine in order to accept a different game genre? You may use diagrams, UML, etc. to help illustrate your example. (if your game genre was FPS pick a different genre for instance RPG and describe how your engine would be different).

We would easily be able to adapt out game engine, which will be made to run side scrolling platformers, to be able to run top down scrolling shooters in the same vein as the Gradius series or the Raiden Series.

Like previously stated our game engine can load long levels which would suit this type of game genre. A few changes we would have to make in order for our game engine to accept these types of games is that we would need to change the physics component for our actors and give our player the ability to shoot projectiles in front of them.

Other than that we would have all the components we would need to make a game of this genre. An Actor that would keep track of player lives, player power ups and enemy AI. An Actor Audio component that would take care of all the different sound effects each actor would make. And an Actor transform component that would keep track of where an actor (player or enemy) is, what their rotation is and their scaling. And our game engine already has a scrolling feature which would just need to be changed to scroll automatically rather than based on player position.

In conclusion it would not take a lot for us to turn our game engine which was made for side scrolling platformers, and change it to be able to accept scrolling shooters.