CS 415 Level Design Report

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The most challenging task is to create three enemies. Pursuer can switch between two statuses: petrol and chase. Petrol requires the Pursuer to follow certain path between different target points, but it will constantly scan the exitance of player, so I use an event to do that. Once it scouts the player, it will immediately switch to chase state. When the player is far away from the Pursuer (like 200m), it will switch back to petrol statue. The Mortar is not too difficult, but the trajectory generation of the projectile is tricky. At first, I tried the "set physical linear velocity" and "add force" commends. They are part of the physics simulation, but it doesn't work for me. Then I find out that I can set the target point first, and inversely generate the trajectory. The third enemy is just the upgraded version of the player code in the first MP: it can shoot bullets in one direction.

The knock back mechanism is not too difficult once I find out how to implement it. The attack caused by enemy has a starting point and the player has another point. If we connection these two points to generate a vector, then it points out the direction that the player should be knocked back. Then the rest work is just to apply an extra velocity for the player.

Even though developing the mechanism and enemies consumes many times, I also find out that the game design is also important and time-consuming, especially when I want to make the game both challenging and interesting. I divided the whole level into three different platforms, so player has to complete them one by one. Player has to collect all collectibles in order to win. Collectibles serve as both targets and guides. If I find out one platform is too difficult, I will try to add more health pack to lower the difficulty of the game.