**Technical Design Document**

*The Lease of Your Worries* will be constructed in the latest version of the Unity4 game development engine.

**Technical Features:**

* Isometric camera
* Wave based mob spawning
* Multiple special mobs with unique attack patterns
* Randomized room arrangement. Rooms will stay unchanged, but which room is entered is not under the player’s control
* Mouse based combat based around a single weapon at a time.
* Eight directional movement
* Weapon access denied based upon in-game reputation level
* Version Control though SourceTree
* Certain enemies become usable weapons upon death
* Achievement hats will be rewarded for high scores

**Level Description:**

A generic level will begin with a player walking into a room in the world. Only the individual room will be viewable. Leaving the room will cause a scene transition. Upon entering a room, mobs are spawned at specific locations and initiate AI behavior. Using WASD to move and the mouse to aim, the player can left click to activate the current held item and deal damage to mobs based on weapon behavior. Enemies will drop candy which the player will collect. Rare enemies will become swappable weapons upon death. When certain enemies are defeated or candy is given to a certain NPC, the player will gain a certain amount of “reputation.” Based on the level of the player’s reputation, weapons will become available for the player to use legally. The player can swap with these weapons by right clicking on them but if he is caught using an illegal item by the wandering NPC, the weapon is taken away and reputation is dropped. The player continues to walk between rooms, killing enemies, and collecting candy. If player health lowers to zero, the current amount of candy is displayed as a high score and the player begins the game again.

**Classes and Methods:**

Player (unique)-

* Move- takes in WASD input, moves player model
* Look- takes in mouse cursor location, rotates model toward cursor
* Attack- takes in Mouse Left input, activates current weapon class
* Pick up- takes in Mouse Right and Mouse cursor location, switches current weapon with clicked weapon if player model is in close proximity
* Speak- upon prompt, interact with Booregard class.

Weapon (generic)-

* Activate- weapons ability will turn on, checking for enemies in range, modifying enemy health

Enemy (generic)-

* Move- take in player location, updates model location and rotation based on mob AI
* Attack- activates mob’s attack animation, updates player health

Achievement System-

* Observe – keeps track of player score, modifies save data to include achievements that will modify start conditions of game.

World-

* Randomize- randomizes locations of rooms at start of game so that the world map is different every time.
* Observe – keeps track of weapons and items in each room. Keeps track of boss status and reputation level, modifies weapon tier and room availability access
* Booregard – tells Booregard class to move across the map based on room activity

Booregard-

* Move- moves model based on simple path finding to a point in a room
* Speak- upon player prompt, initiate communication with player through text.
* Take- Move model to player model, set player weapon to empty

**Things to Research:**

* Version Control- How to use SourceTree
* Enemy AI- Attack patterns, individual attacks and effects
* Dialogue system- How information will be presented to the player
* Weapon Types- How many, what abilities they will have