

Will Loughlin  
Homework 3 Individual Project  
Wills Game

My Github Project Link: <https://github.com/WillLoughlin/WillsGame>

My Most Recent Commit:

<https://github.com/WillLoughlin/WillsGame/commit/2709011af4c98718c6d39aa850860944a5648762>

This document can also be found in the HomeworkX folder in my repo.

### **Section 1: What I planned on doing for this checkpoint**

For this due date I will complete a functional map in the game with player-wall collision. I will also finish player movement. At this point each player will be able to move freely throughout the map without clipping through the floor or the walls. I will also implement a testing system to make sure the player-wall collision detection system is working correctly mathematically. The map will be rendered using the flyweight design pattern to make it more efficient. (Copied from proposal)

### **Section 2: What I accomplished for this checkpoint**

After considering what is the most important in my game I have changed the order of what I will be developing things in. The three dimensional bullet collision with players is the entire point of the game, and should be completed first so I have more time to refine it. Instead of building the map for this checkpoint I focused on creating the groundwork for the bullet collision algorithm that will be implemented for the next checkpoint. When a player joins a 3d player model is now rendered at the position of the player. The direction and position is updated as the player moves around. If a player leaves the game the model is deleted. I also moved the camera position higher to the face of the model. I added a small floor and a skybox but the real map will be completed for the deadline after the next one.

### Section 3: What I had planned for next deadline, and what plans changed

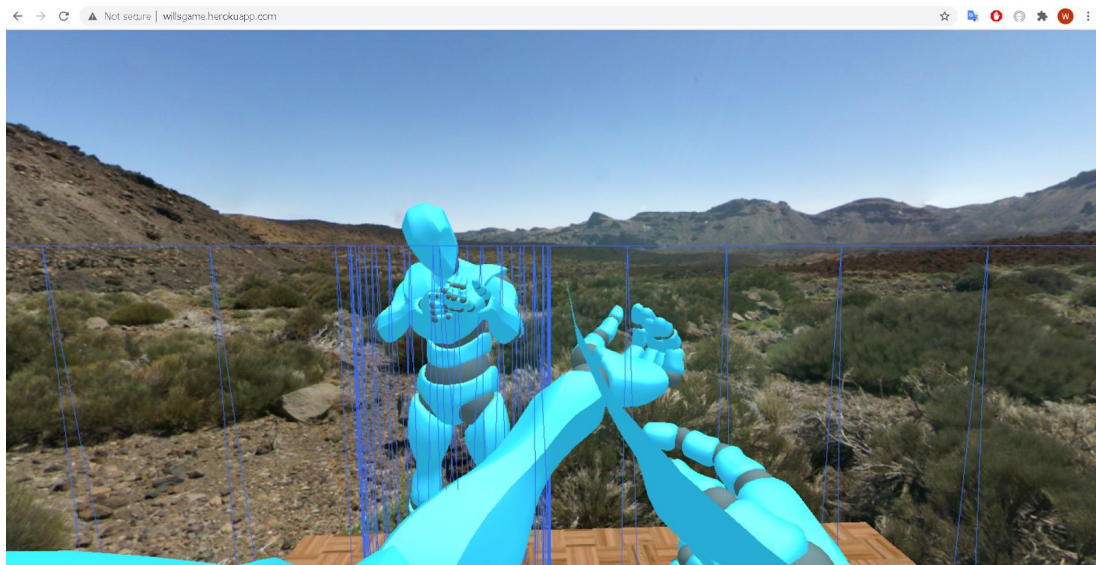
For the next deadline I planned to finish the 3d model rendering, bullet shooting, and a player info database. The 3d collision with bullets was planned for the deadline after next. Since the 3d bullet collision is the most important part of the game I will finish that by the next deadline. Specifically I will add a gun with bullets and finish the 3d collision algorithm. When a player is hit by a bullet their health will be affected, and once health hits zero they will die and respawn. I will move the less important player database and map creation to the deadline after this one. This will allow me to have a working game to build the database, map, and GUI around instead of the other way around.

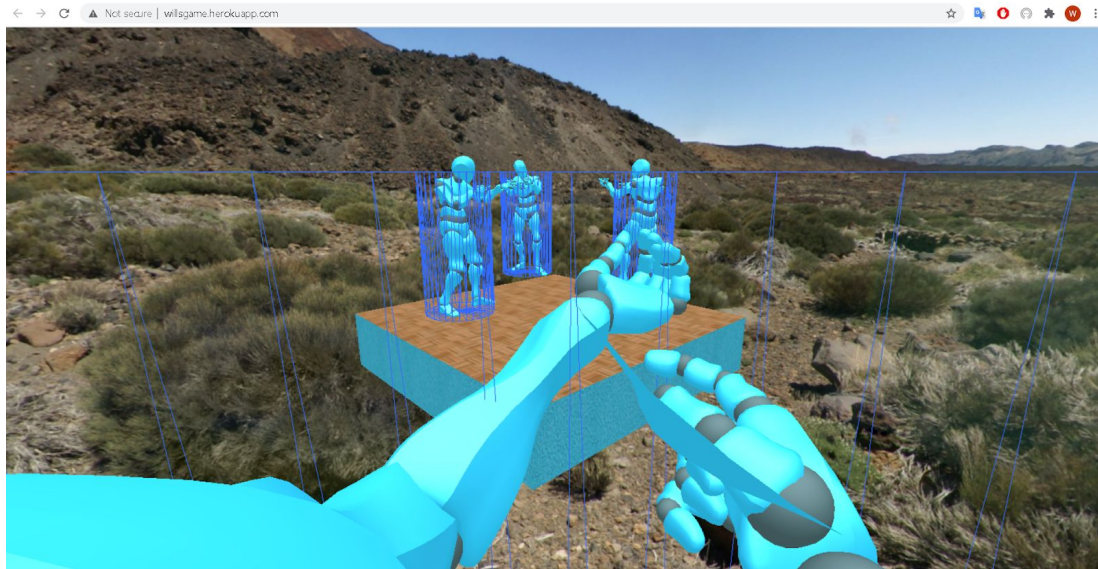
**Old Plan:** 3d models, animations, player database

**New Plan:** Gun firing and 3d collision

### Section 4: Screenshots of current accomplishments

Feel free to explore the current state of the game at <http://willsgame.herokuapp.com>.





In these screenshots we can see the 3d models being generated for each player and the direction changing depending on what direction the player is looking. You can test this for yourself by going to <http://willsgame.herokuapp.com> from several different tabs.