VRcade

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Executive Summary

VRcade is a game that is designed to be an introduction to the possibilities of VR functionality. It is a multiplayer experience, with several mini-games which each hope to show off a different aspect of the capabilities of VR.

Intended Experience

The player will spawn in their own private home area, in which they are able to select their avatar and decide their display name. Through this home area they are able to join a public lobby that they can interact and socialise with other players. Within this lobby the player is able to move around through teleportation, here there are multiple portals that will allow players to teleport to different experiences with other players, areas for communication such as seating areas, as well as a scoreboard to show the current standings within the session. After going through one of the portals there player will be taken to an experience in which they can participate in with or without other players.

Details

Home

With the home being the first thing you see and interact with once starting up the game, here you are allowed to input your name and select the avatar you want, before connecting to a lobby.

Home Lower
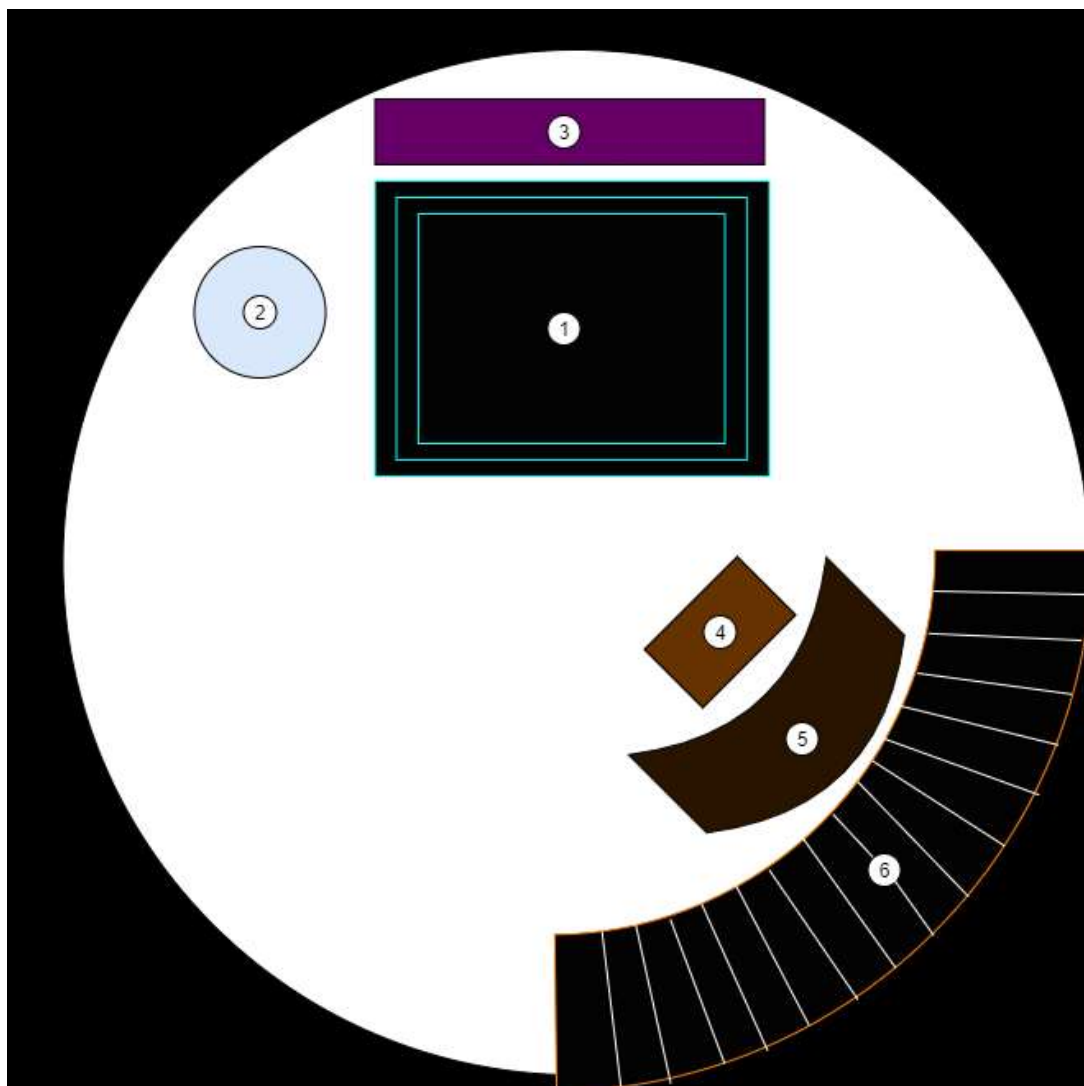
The home scene is split up between two levels, the lower and upper home areas. On the Lower level it consists of a middle platform(1) for where the player spawns in. To the right of the middle platform**(1)** there is an avatar changer**(2)** that allows

you to cycle through different avatars that are available for use. In Front of the middle platform**(1)** there is a world selection screen**(3)** where you are able to select with experience you would like to choose from. In the bottom right of the room near the stairs**(6)** there is a table**(6)** and sofa**(5)** set that is there to put a better game feel in this level. Behind the sofa**(5)** there is a staircase**(6)** that leads to the upper area of the home level.

Home Upper
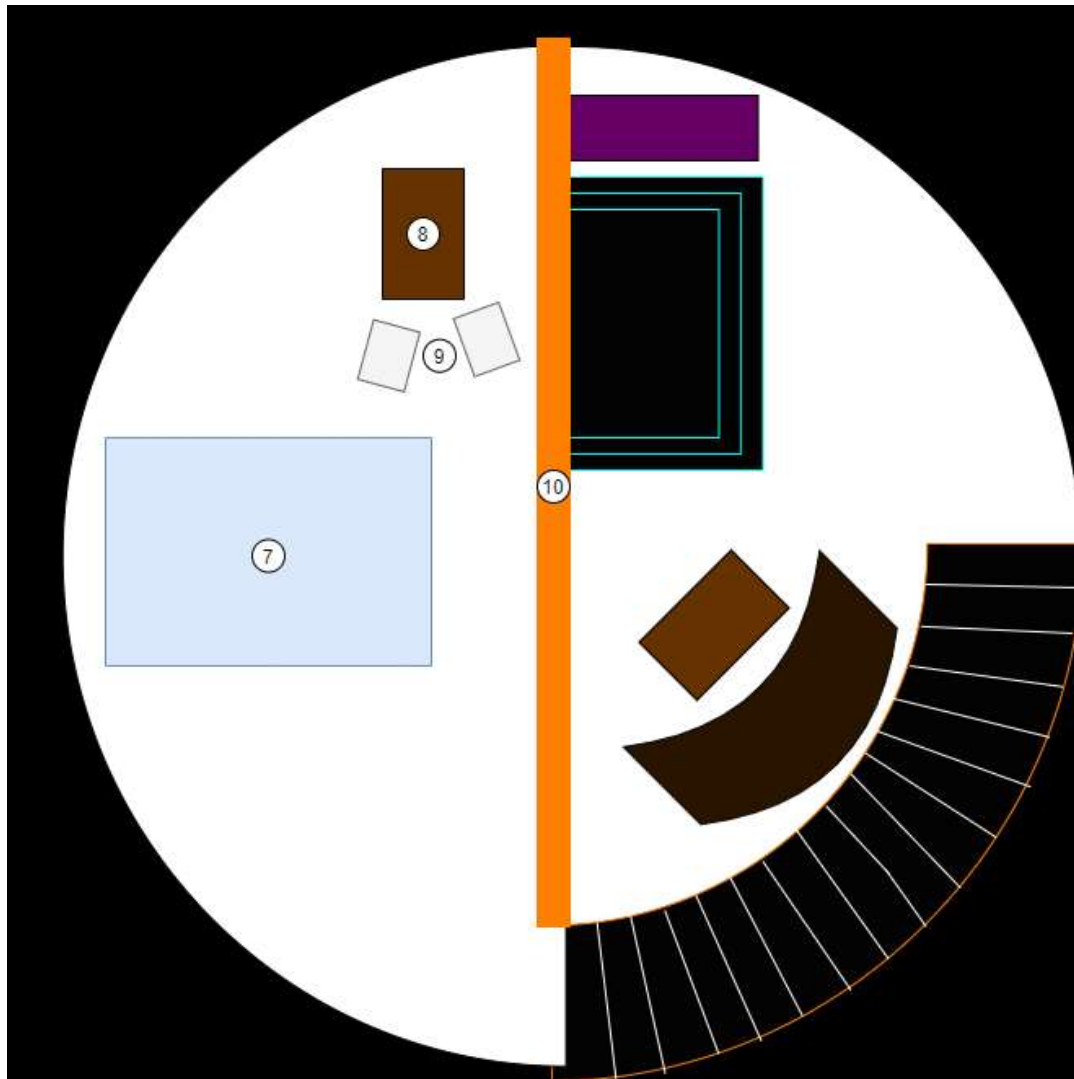
In the Upper level of the home, after you enter from the stairs**(6)** there is a bed(7) in the middle of the upper level that adds a more comfortable feeling to the level and gives the level some life, to the right of the bed**(7)** there is a table**(8)** and chair**(9)** set that is also for looks. Separating the upper floor and lower floor there is a neon orange railing**(10)** that stops the player from falling from the upper level in the lower and causing any discomfort from falling that high in VR.

Lobby

The lobby is an area in which you can interact with other players in a VR environment, while waiting to play a game, in the lobby there is seating areas for socializing while waiting as well as there is multiple portals to the various experiences within the game, each portal will have its unique colouring respective to their own game.

Basketball

Original Design
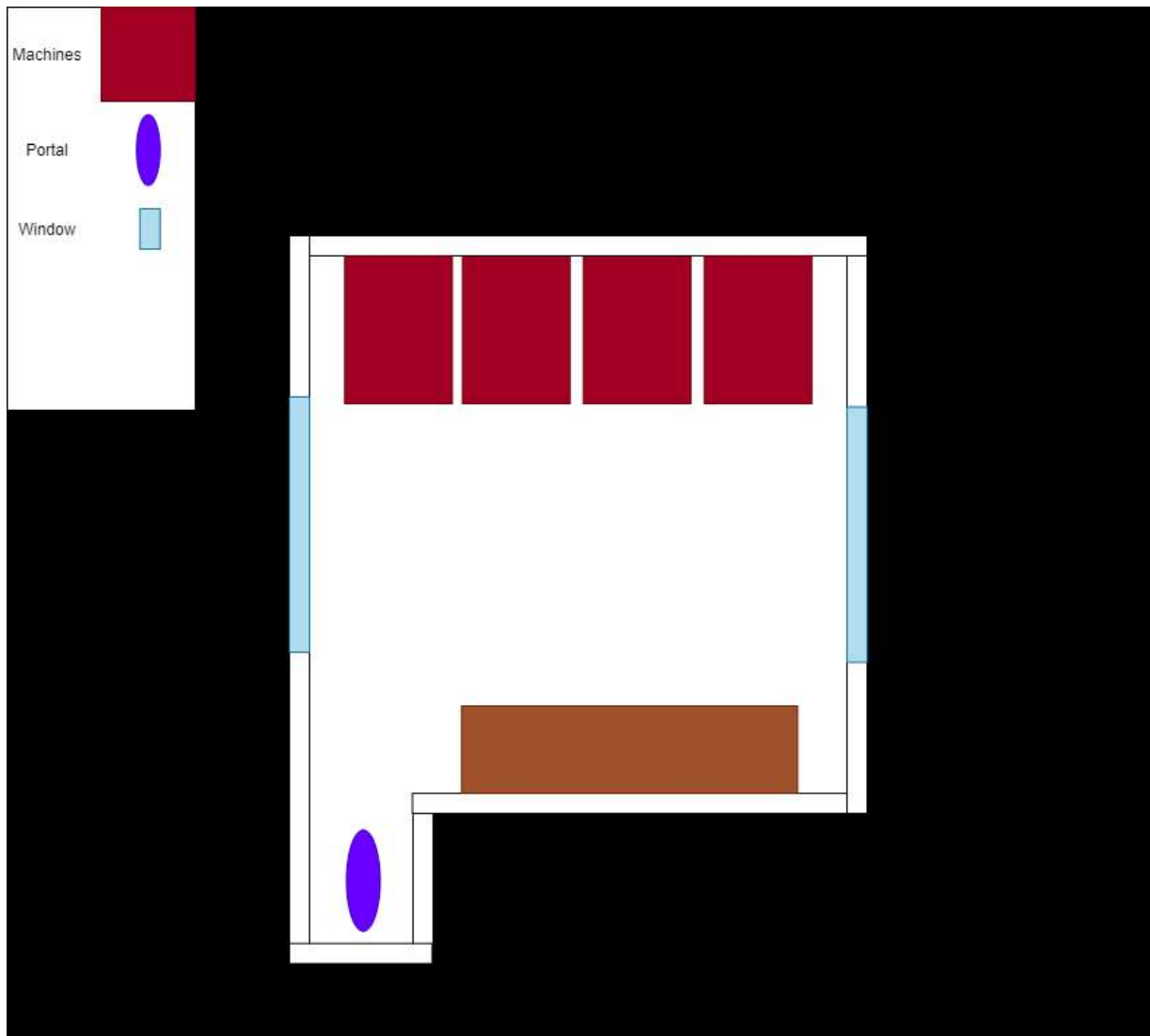
The Basketball experience is a room with 4 arcade basketball machines that allow the 4 different players to face off against each other head to head, as well as allows them to play by themselves. The machine will be modelled after an arcade basketball machine with added neon colouring. The neon colouring will be mostly orange to match with basketball colouring. The room itself will be a medium to large sized room, with windows to allow viewing to the outside which will be a black expanse with some flecks of light. In this room there is a hallway which has a portal at the end of it, this will be where you spawn and exit the experience.
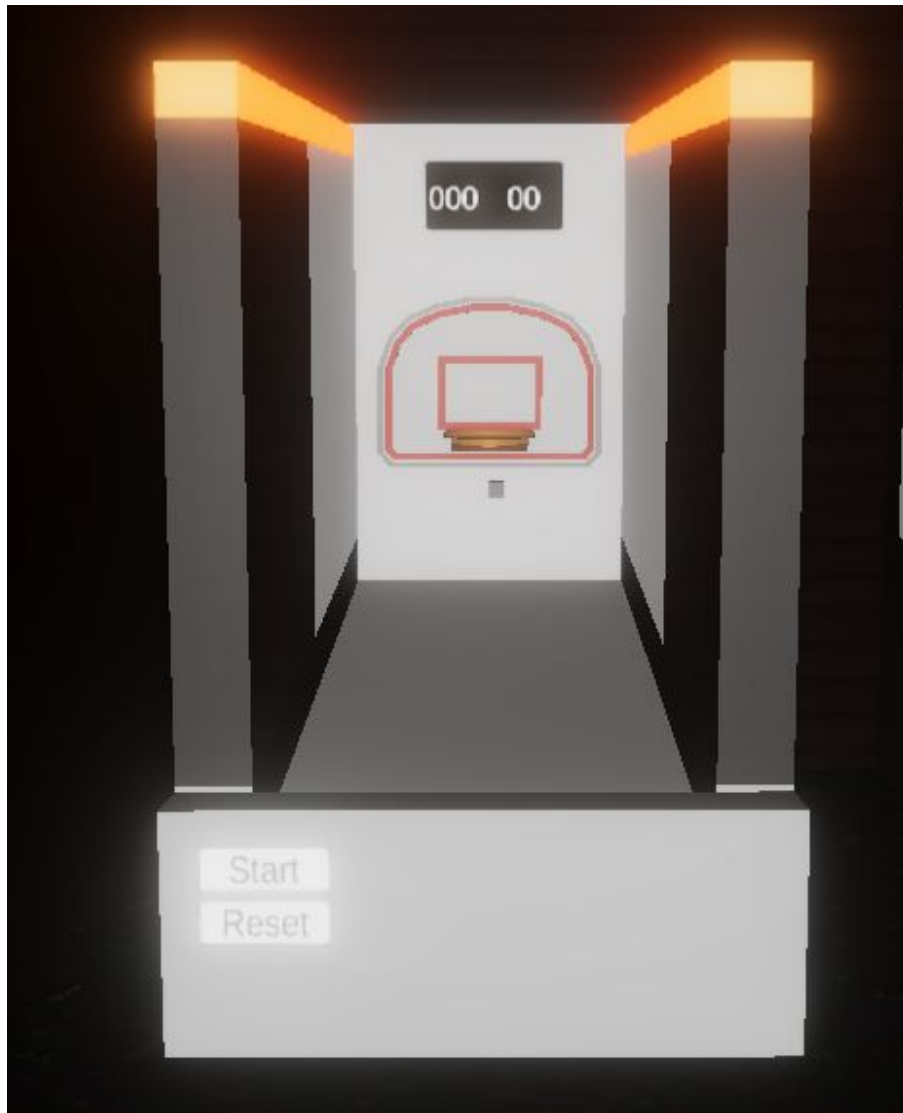
Finished Prototype Level

The final design for the level has some differences from the original, there is now a scoreboard added on the window, as well as skylight to show the outside skybox to give the player the feeling that they are in a different space other than their own.

Gameplay

Iteration 1

This is the first design of the arcade basketball machine, it has a cube like design with an open hallway that leads towards a basketball hoop in which the players score points through. Beneath the hoop there is a ramp that allows players to collect the balls to throw again. Above the hoop there is a display that shows the timer on the left and the score on the right. On the front of the machine there is a Start button, that will spawn 3 balls and start the timer, the spawn area for these balls is under the hoops. After 60 seconds the timer will stop and the balls will disappear. The reset allows the player to end the game after the 60 second or reset the game early, this in turn will reset the timer and the score for the next person to play a fresh game.

Iteration 2

This is the second design of the arcade basketball machine, it has a couple of changes of the design of the machine. There are now orange neon strips on the front sides of the machine and the glass is now showing the connection to the glass rather than a void. The text on the buttons and score have now been updated to the correct text to match with the rest of the project's style.
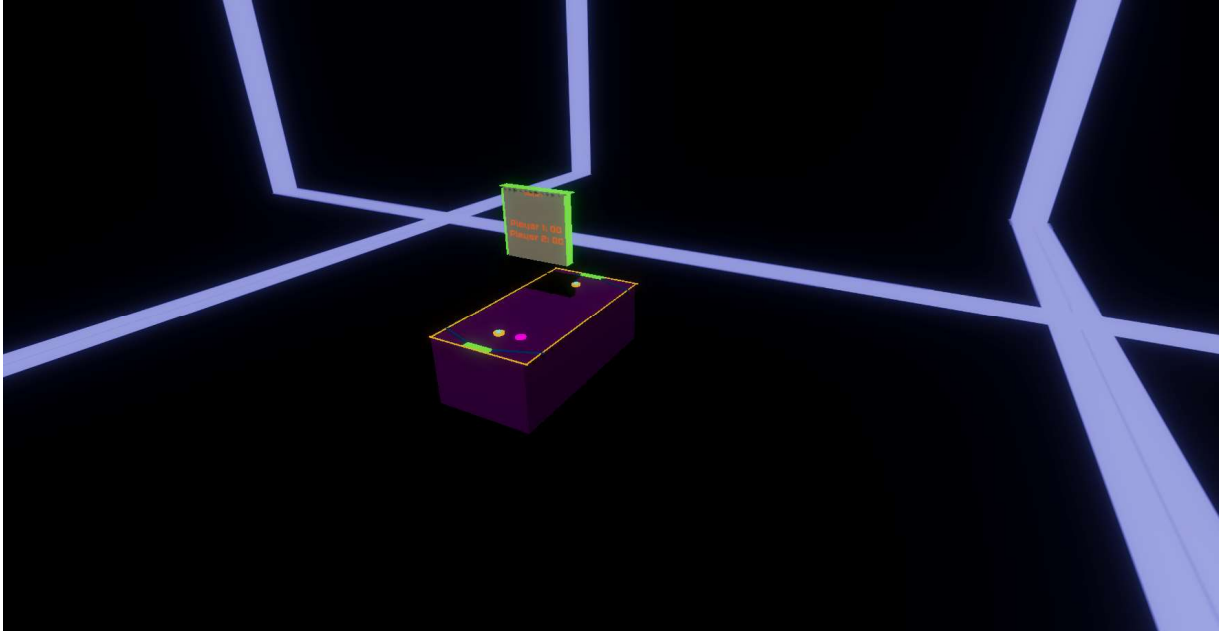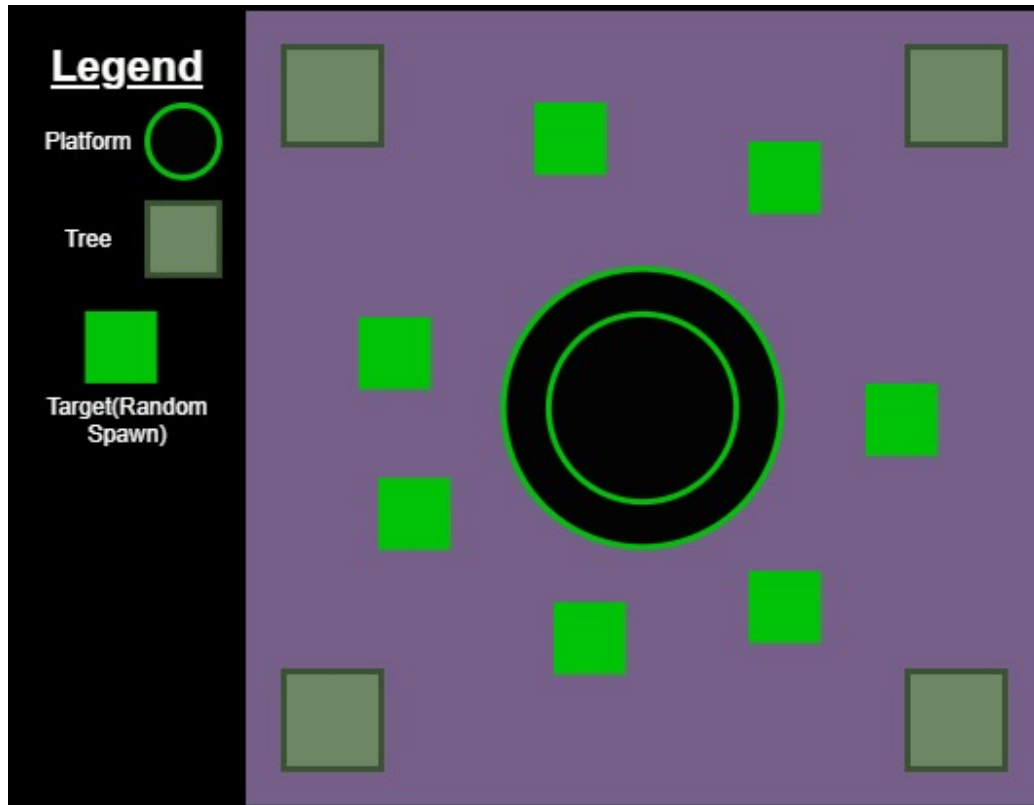
Air Hockey

Original Design
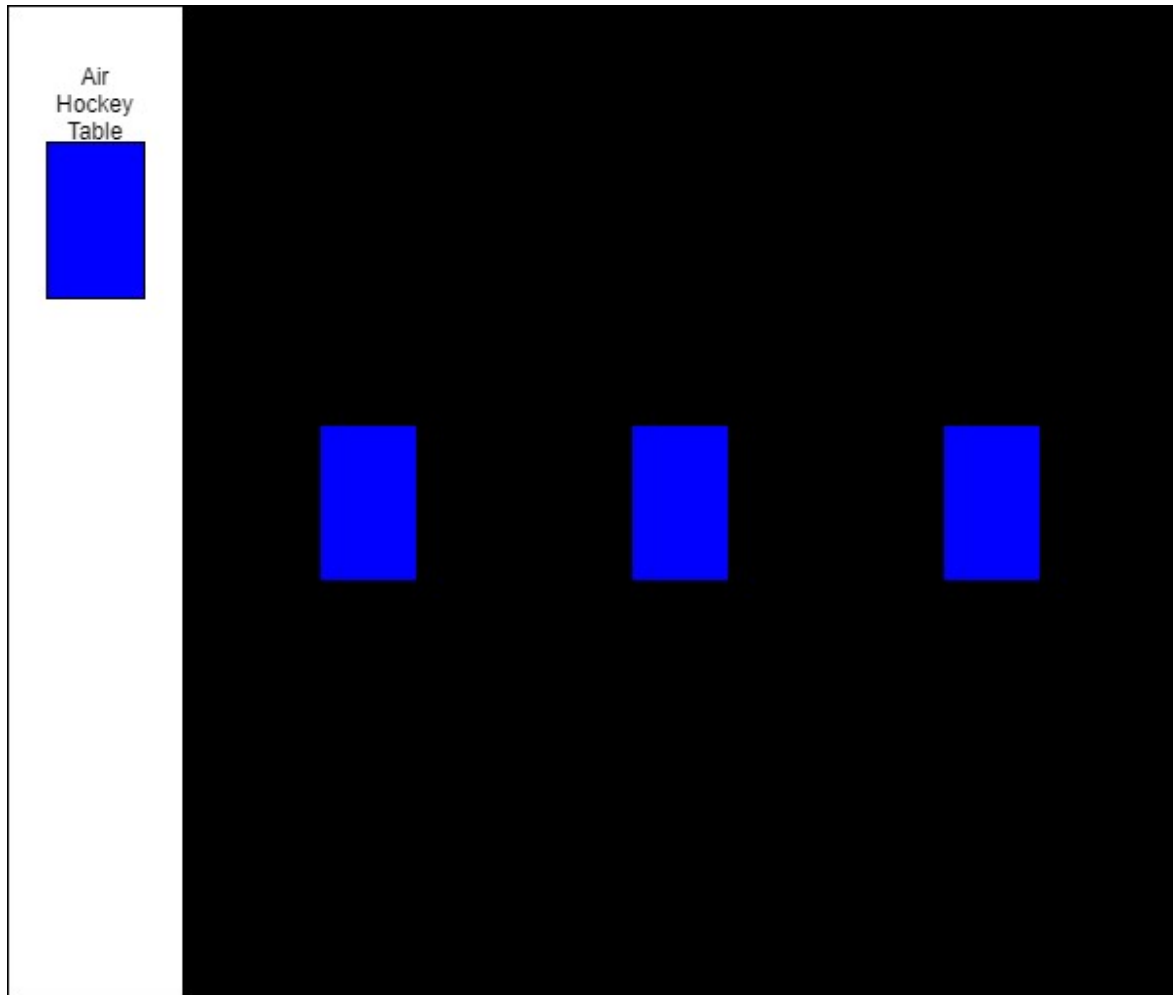
The Air Hockey level is an area in which you are able to compete 1 on 1 with another player in a match of air hockey. In this level there is nothing other than a few Air Hockey tables.

Finished Prototype Level

Archery

Original Design

In the Archery seen two players are able to go head in an archery shoot out or practice shooting by themselves. In this scene there is an elevated platform in the middle of the scene that player is shooting from, they are then surrounded by targets and are able to shoot these targets until the timer is done. Surrounding the player in each four corners of the map are trees that add a bit of substance to the level.

Archery Redesign
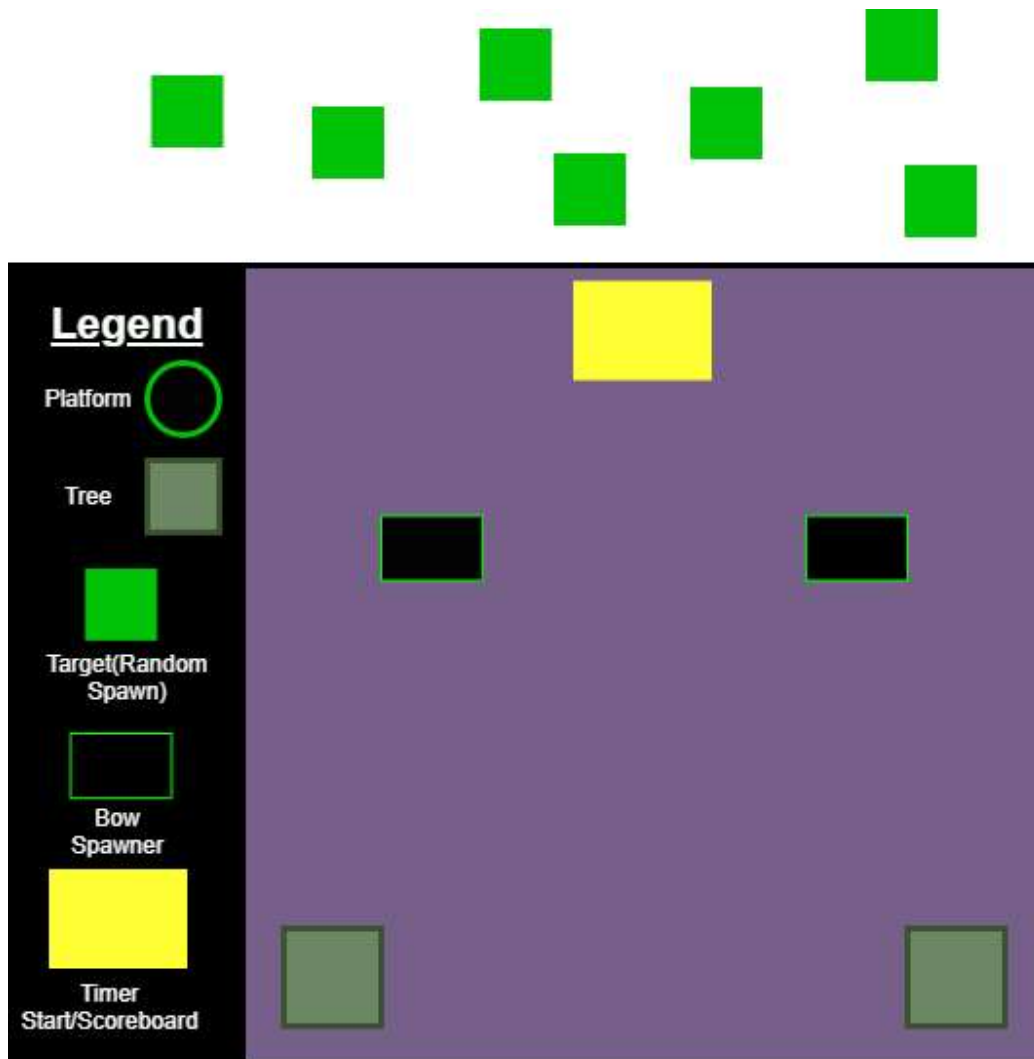
In the Archery redesign there were a few changes to the level. First the two front trees were removed as the arrows kept getting stuck in the leaves and branches and we removed those trees to allow easier shooting for the targets that were obstructed. There are now two tables that have a bow on top of them for the players to use to shoot the targets. There is now a Timer that you can shoot that will start a timer, and this also displays the top scores for this particular experience.

Finished Prototype Level