

Basic Version - <https://editor.p5js.org/Brody-Bergerhofer/sketches/rPMQEkrlU>

Final Version - <https://editor.p5js.org/Brody-Bergerhofer/sketches/fgq2rGCTv>

Proposal

Concept: Create a 3d Character controller in p5.js

Objectives:

1. Use p5.js to create a 3d character controller
 - a. Be able to walk around
 - b. Jump
 - c. Crouch
2. Create an environment
 - a. Be able to interact with the environment (i.e. don't walk through walls)

Technical Documentation

W pressed = move forward (move camera & camera looking)

D pressed = move background (move camera & camera looking)

A pressed = turn left (move camera looking)

D pressed = turn right (move camera looking)

Control = crouch (camera move down)

Space = jump (camera movement)

Create a function that takes the amount of points able to look at and calculates the turn distance between them.

Create a player class.

Add a camera to the player class.

Create a move function. W and S move forward/backward.

Create a rotate function. A and D move the 4, 5, and 6 values in the camera for what the camera looks at. It also goes to the array created by the earlier function for move distance.

Create a crouch function. If hold shift, the camera will lower.

Create a ground check for the following jump function.

Create a jump function. If you click space and on the ground, jump until you hit the ground again and stop.

Create an environment. Make the player interact with the environment.

Mood Board



Movement: Doom

Crouch, jump, rotate, move

Concept Art

Mostly use p5.js built-in WebGL graphics.

For testing use Debug mode.

The final version intends to create a basic environment.

Box - <https://p5js.org/reference/#/p5/box>

Sphere - <https://p5js.org/reference/#/p5/sphere>

Ellipsoid - <https://p5js.org/reference/#/p5/ellipsoid>

Intend to make a box for the player to be inside of. There will be walls, a roof, and a floor that the player will not be able to go through. Players will be able to leave temporary marks on walls.

Timeline

April 16: Pre-production Documents due and start production

April 23: Have player movement done

April 30: Have an environment that the player can interact with

May 3: Have all features/ movement done.

May 8: Have all graphics/ features/ movement done. Be able to turn in the final project.