

# Project Notes

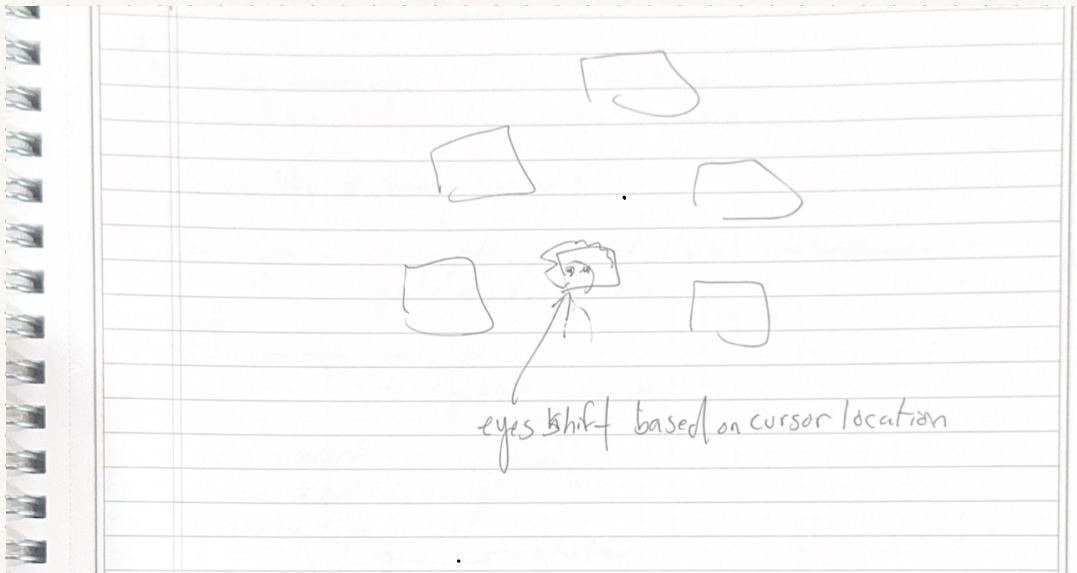
## Concepts + General Ideas

I was in need of a new landing page and wanted something that I would be excited to keep coming back to and scale over time. I was inspired by random personal pages and blogs I found online that used tools like js.p5 and playhtml. The creative potential of these libraries and elements made web development feel playful again for the first time in years for me. At this point, I knew I had to make something interactive.

### 1st Idea

Floating elements site: character's eyes shift with mouse movement to peek at the site components, like my resume, projects, etc.

- Could add additional projects in the space around the character

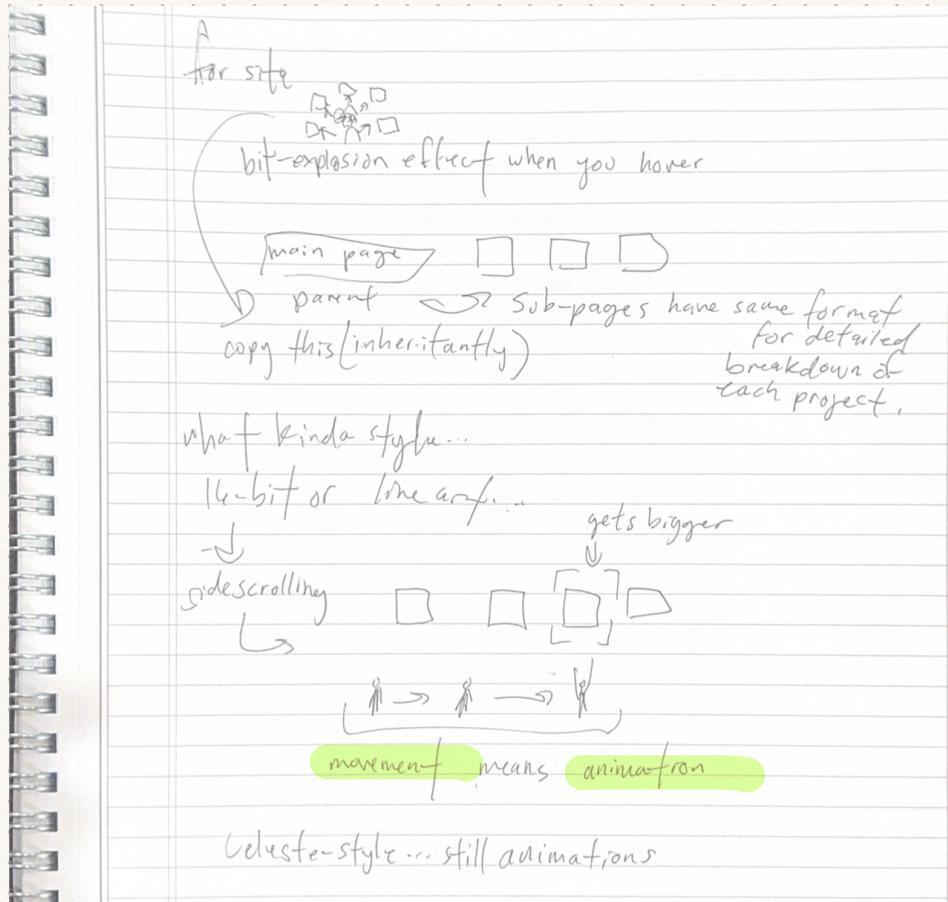


This seemed sort of empty. I realized I wanted to make something more immersive. This idea did establish a "character" on my site though, which followed into the 2nd idea.

## 2nd idea

Video game site: a tiny me walks around and interacts with the room to display portfolio components.

- Could scale by updating the scene to include more projects



At this point, I was still holding onto the floating portfolio elements idea, this time with a moving character on screen.

This still didn't seem quite immersive enough in the way I wanted it to be, so I decided to go all in with the video-game style and build a background for my character to interact with.

I went with a pixel-art style for the site because I love the look and feel of it. It's timeless and avoids the dated look all 3d graphics eventually develop when new tools are developed.

Phaser seems like good software. → 2D game framework

Some kind of interactive game sight / journal  
to talk about my life.

for site: Core concepts.

- render background
- render sprite
- render interactive items + set up click handlers
- on click, move sprite to location and/or open popups

I eventually found Phaser: a Javascript library that allows for game rendering and playing in the browser. It includes plenty of documentation and streamlines the building process compared to simply building the game in pure Javascript.

Now I could start fleshing out the general steps required to build this:

Create a sprite

Animate the sprite

Create a scene

Add interactive components

## Create a sprite

I used an application called Piskel to develop my sprite.

It underwent a few revisions before I ended up with something I liked!

This part was fun and built momentum for the rest of the project!

### 1st version:

- very general outline
- getting a feel for outfit, shape, dimensions



### 2nd version:

- adding details to clothes and face
- trying to determine how sprite should stand
- the body faced forward while the head was turned (not good)



### 3rd version:

- started over, focusing on the face instead
- doubled sprite size ( $32 \times 32 \rightarrow 64 \times 64$ ) (more pixels for details/shading)



### 4th version:

- final idle model!
- rebuilt outfit, added details/shading
- fixed hair, since I knew I wanted to animate it

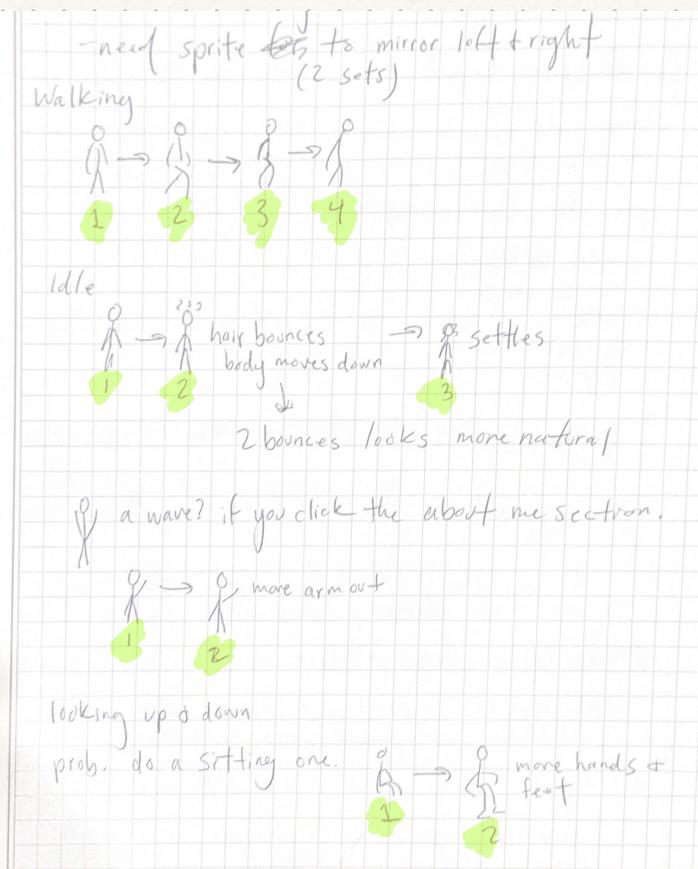


Sprite created, now it's time to make spritesheets!

## Animate the Sprite

In order to animate a sprite, you need to make a frame for every bit of movement in each "action" (the better you are at visualizing movement in your head, the faster you'll be at making spritesheets)

Since I wanted the sprite to be able to move in a couple of different ways, I developed spritesheets for each of these variations.



I ended up with spritesheets for walking left and right, swaying, sitting, and waving.

## Walking sheet



## Waving sheet

- moving hand and highlight shifts



## Sitting sheet

- moving hands and feet



## Swaying/idle Sheet

- hair bouncing and shirt flowing

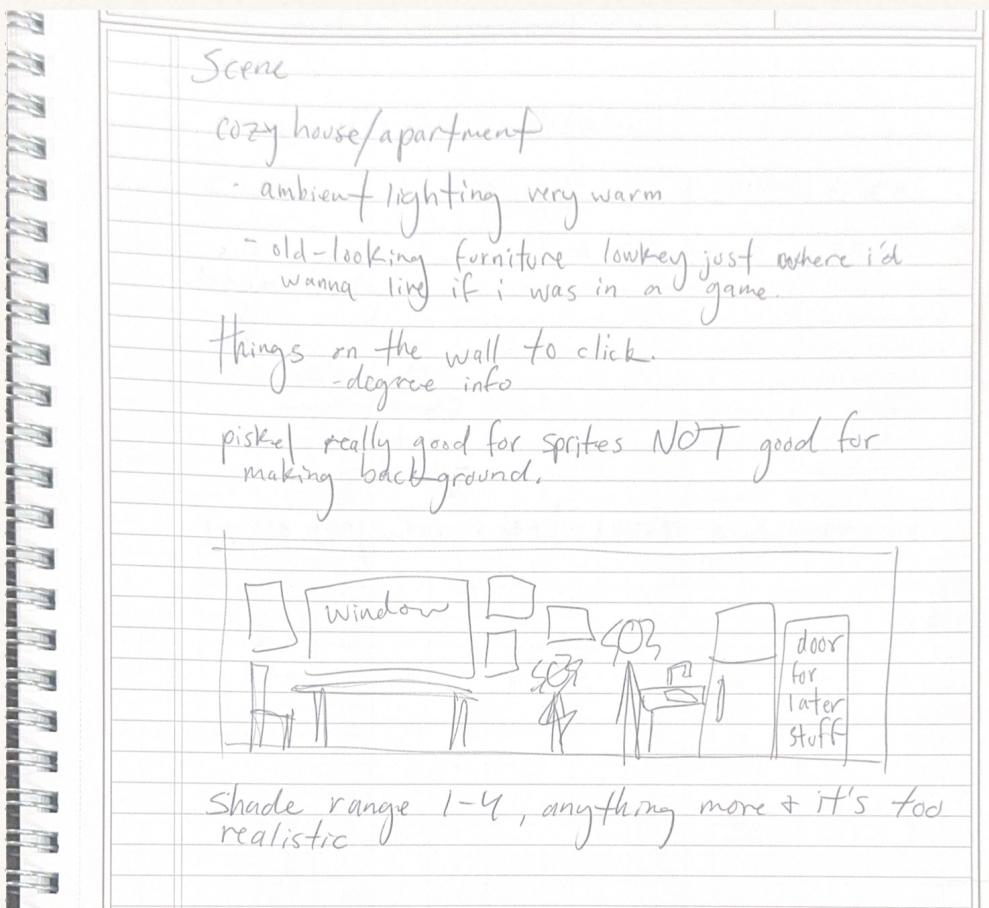


To determine how many frames I needed for each spritesheet, I used Piskel's built in FPS tool to build something that looked natural.

- More frames will look smoother, but by balancing the number of frames with FPS you can get away with making less and still looking good!

## Create a Scene

When building the scene, I had to keep in mind scalability so I wouldn't need to remake the whole thing eventually. (I'm glad I did this, because it took forever to make this in Piskel) (I highly recommend Aseprite for scene building instead)

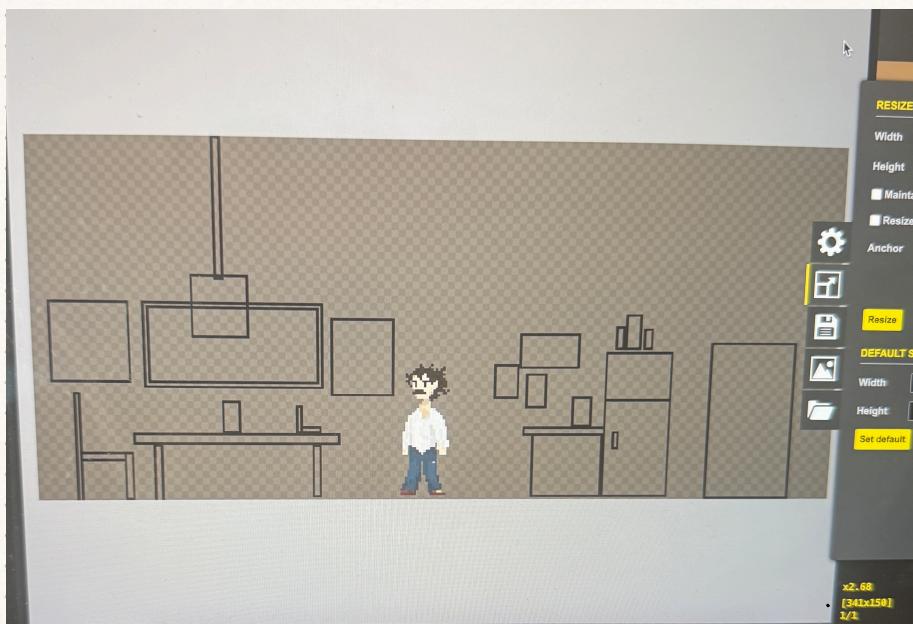


To make it scalable, I thought about ways to naturally fill up space in a room.

I think someone's room can say a lot about them and reveal aspects of their character. I decided to recreate my apartment to make this super immersive for myself.

I thought this would be a great way to show off portfolio elements and other things about myself on my site while allowing for future updates that don't require a rework of the whole scene.

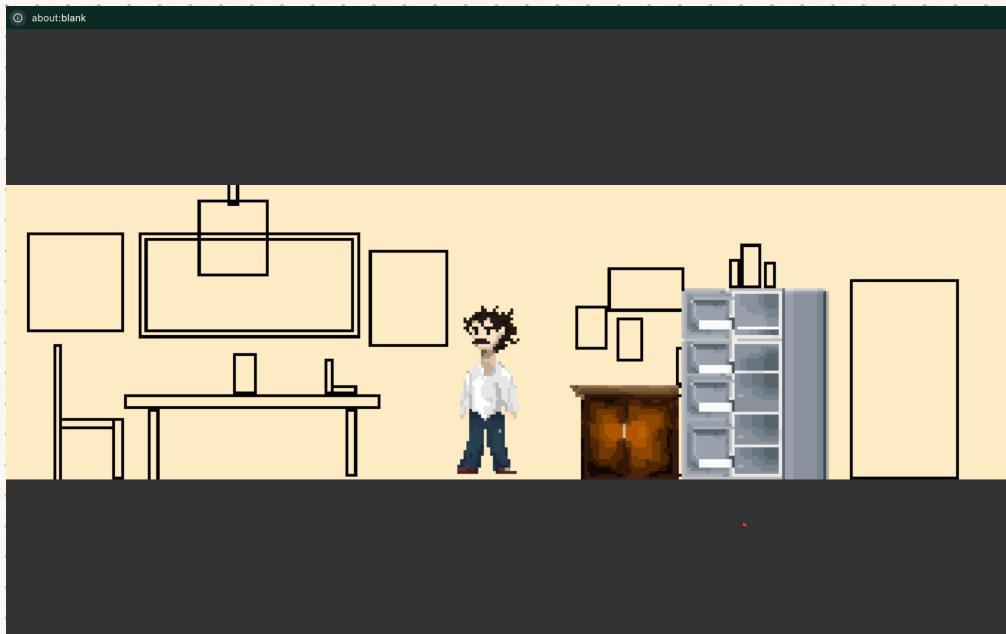
## Mockup:



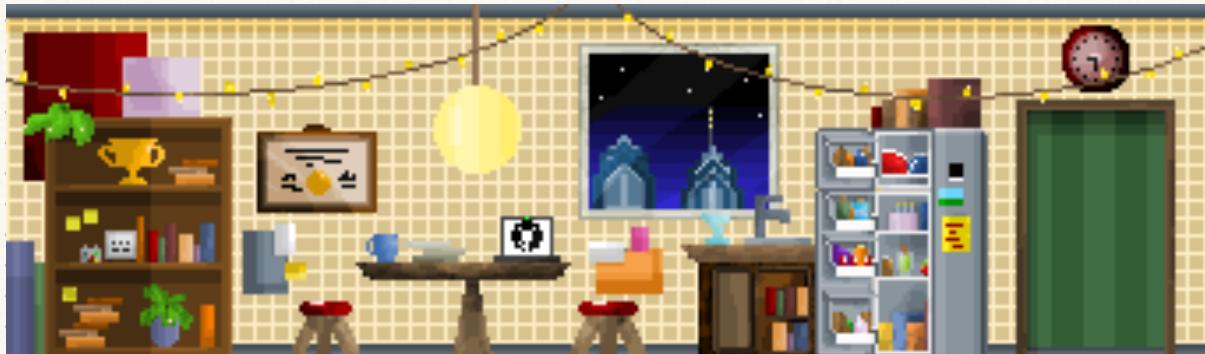
I needed to determine scene size based on 64 x 64 model.

Didn't want it to feel too big or too small.

With this established, I started filling in the details, VERY slowly...



Eventually, I was in my apartment in real life and on my site.



I'm hoping to add multiple scenes for day/night differences visible from the window, and maybe even changes for the seasons!

It will definitely grow alongside me.

With this built, it's now time to add interactivity!

## Add Interactive Components

Again, Phaser is a great Javascript library for jumping into game development. It has a simple formula: preload your models, build them, and update them based on inputs.



For example, I preload the scene, my sprite, and the "poster" image I made. I "create" objects for each of these, and add an update when hovering over the posters (a green highlight, text above the screen, and an "on-press" button that takes you to this page!)

This formula is repeated for sprite movements as well, looping through the spritesheets after clicking specific arrow keys.

The final product is just my life but tiny! It was so fun exploring little pockets of the internet and scrolling through the sites that inspired this. Hopefully this gets someone to start exploring creative coding the same way those sites got me to! If you're curious about any of this, please send me an email! (click the note on the fridge)