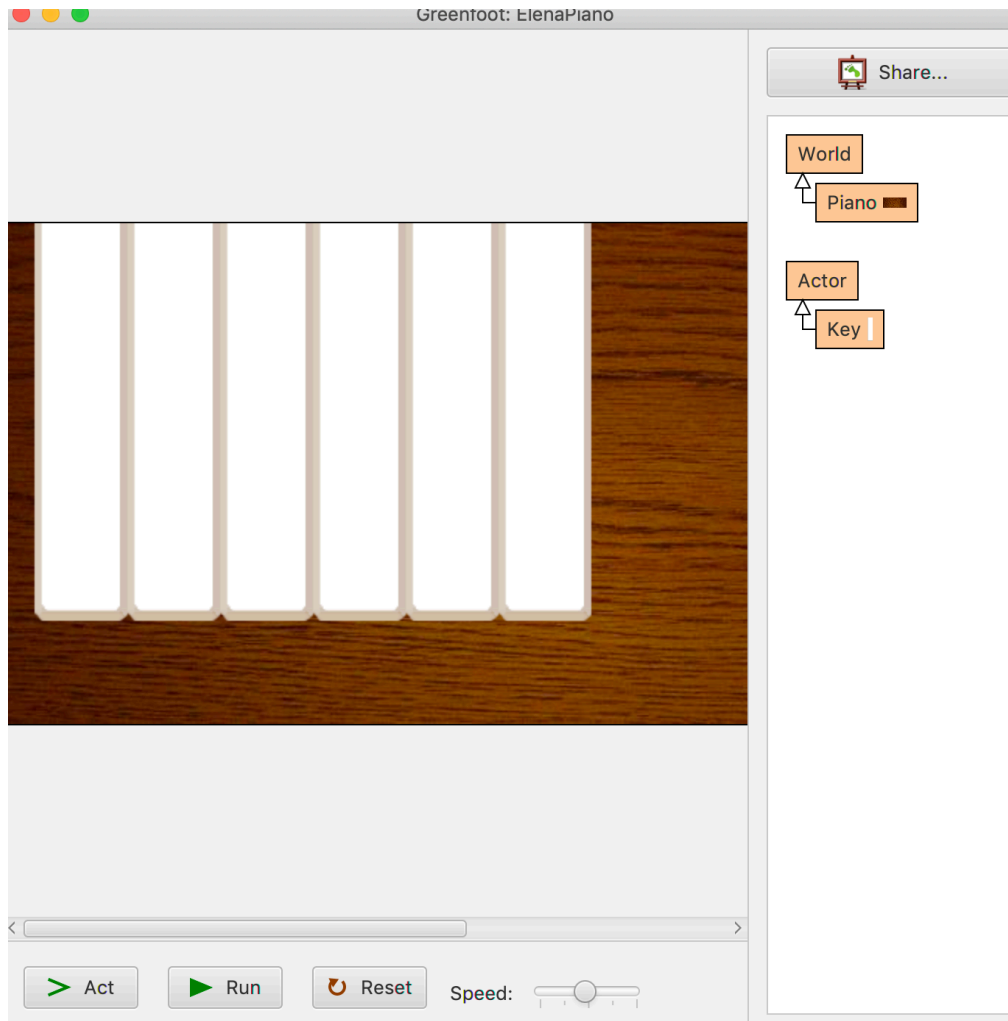


In this document you can find some information about my project so far. I have also attached a video of the piece for reference. Following your advice, after our talk I did more thinking and research and started putting all the pieces and ideas I had together. I have been working in Greenfoot where I coded a simple version of a piano using java.



```
Piano [Piano] X
Compile Undo Cut Copy Paste Find... Close Source Code
import greenfoot.*; // (World, Actor, GreenfootImage, and Greenfoot)

/**
 * A piano that can be played with the computer keyboard.
 *
 * @author: M. Kolling
 * @version: 0.1
 */
public class Piano extends World
{
    public String[] keyNames = {"w", "a", "s", "d", "f", "g"};
    public String[] soundFiles = { "2a", "2b", "2c", "2d", "2e", "2f"};
    /**
     * Make the piano.
     */
    public Piano()
    {
        // Create a new world with 600x400 cells with a cell size of 1x1 pixels.
        super(800, 340, 1);
        prepare();
    }
    private void prepare()
    {
        for(int i = 0; i < 6; i++)
        {
            Key key = new Key(keyNames[i], soundFiles[i] + ".wav", "white-key.png", "white-key-down.png");
            addObject(key, 54 + i * 63, 130);
        }
    }
}
```

The sound that piano keys make so far are just notes. My next step is to start working on the actual sounds that I will produce using GarageBand and following some online tutorials. I will also be producing the melody that will be playing at all times (even when objects are not touched) to set the atmosphere and make it easier to “feel the beat”

After I did the code for the piano, I plugged Make Makey into my computer and attached the wires on the board in correspondence to each letter of the key in my code. I have only tested it with 3 wires so far (as can be seen in the video) just to show the idea of it. I also made myself a tinfoil bracelet in order to be able to play with both hands.

```
import greenfoot.*; // (World, Actor, GreenfootImage, and Greenfoot)

public class Key extends Actor
{
    String key;
    String sound;
    String upImage;
    String downImage;
    boolean isPressed;

    public Key(String keyName, String soundFile, String upImage, String downImage)
    {
        key = keyName; //g
        sound = soundFile; //3a.wav
        this.upImage = upImage;
        this.downImage = downImage;
    }

    public void act()
    {
        keyPressed();
    }

    public void keyPressed()
    {
        if(Greenfoot.isKeyDown(key) && !isPressed)
        {
            setImage(downImage);
            playSound();
            isPressed = true;
        }
        isPressed = true;
    }

    if(!Greenfoot.isKeyDown(key) && isPressed)
    {
        setImage(upImage);
        isPressed = false;
    }
}

public void playSound()
{
    Greenfoot.playSound(sound);
}
```