

# Process & Decision Documentation

## Significant decision or change:

Change the ball color and shape, to make it turn red and in an irregular shape in the air, and green in a regular circle on the ground.

## Why did you make it:

To add more visualized design and changes to add interest to the interaction.

## What effect did it have on the work:

The ball color changes when the user interacts with it

## Screenshots:

In this side quest, I mainly added two changes. One is blobColor to control the color of the blob, and another is blobScale to control the shape.

```
111
112 // --- STEP 2: Move vertically, then resolve Y collisions ---
113 box.y += blob3.vy;
114 blob3.onGround = false;
115 let blobColor = "";
116 let blobScale = 1;
117
118 for (const s of platforms) {
119   if (overlap(box, s)) {
120     if (blob3.vy > 0) {
121       // Falling → land on top of a platform
122       box.y = s.y - box.h;
123       blob3.vy = 0;
124       blob3.onGround = true;
125       //When blob on the ground, change blob color to green
126       blobColor = "green";
127       blobScale = 0;
128     } else if (blob3.vy < 0) {
129       // Rising → hit the underside of a platform
130       box.y = s.y + s.h;
131       blob3.vy = 0;
132       //When blob in the air, change blob color to red
133       blobColor = "red";
134       blobScale = 1;
135     }
136   }
137 }
```

In this screenshot, the code shows my changes to the blob's visual state based on its movement.

If the blob is falling ( $vy > 0$ ) and lands on a platform or on the ground, it turns green, and the scale is set to 0 to turn the blob shape into a regular circle("close" the noise).

If the blob is rising ( $vy < 0$ ) and in the air, it turns red and the scale resets to 1, to keep the blob noise original setting.

```
163 // Draws the blob using Perlin noise for a soft, breathing effect
164 function drawBlobCircle(b, color, scale) {
165     //add blob's color status & noise factor
166     if (color == "green") {
167         fill(0, 255, 0);
168     } else {
169         fill(255, 0, 0);
170     }
```

This function shows my add on the blob's state of color and scale, and outputs my new setting on the blob. If the current state color is "green", the blob is filled with green. Otherwise, it defaults to red. It sets the blob color can only be either red or green.

```
45
46 // --- Draw the animated blob ---
47 blob3.t += blob3.tSpeed;
48 drawBlobCircle(blob3, blobColor, blobScale);
49
```

This part updates my changes to the blob's animation.

## GenAI

No GenAI use in this Side Quest