Side Quest: Week 2

Name: Min Htet Naing, dmnaing (21008098)

Project/Assignment Decisions

Description:

For Side Quest 2, I built a small p5.js scene that communicates the emotion of **sadness** through motion and atmosphere. The blob moves slower with heavier downward weight, and the environment uses muted colours and rain to make the mood readable without needing extra explanation.

Key Decision / Change

I decided sadness should be shown through **both**:

1. **movement feel** (drag, low speed, droopy motion), and
2. **environmental cues** (rain + low-contrast background).

For the bonus, I added a simple “mischief” interaction where the blob can steal notes or bump them away (Shift). I kept the mechanic small, so it adds contrast without breaking the sad tone.

GenAI Documentation (Used)

Date Used: January 26, 2026
Tool Disclosure: ChatGPT (GPT-5.2 Thinking)

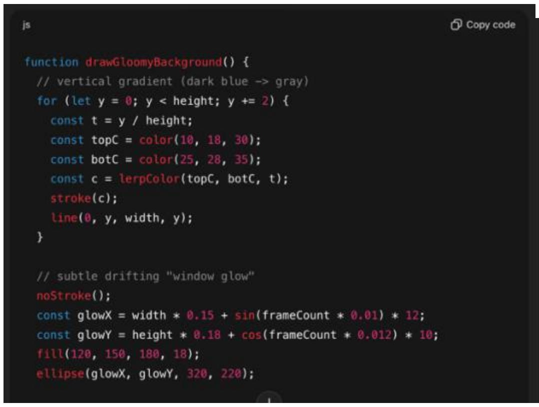
ChatGPT was used to confirm the Week 2 requirements and to help structure the initial sketch idea (sadness cues + a small bonus mischief mechanic). It also confirmed whether any setup changes were needed for this side quest.

Appendix

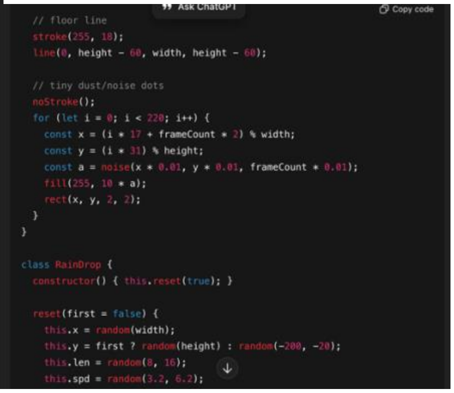
Prompt 1

Prompt: “Can you generate p5.js code for a gloomy SAD environment: a dark gradient background with subtle drifting glow, rain particles, shelf-like rectangle obstacles, and a resolveCircleRect() helper so a circular blob can collide with shelves?”

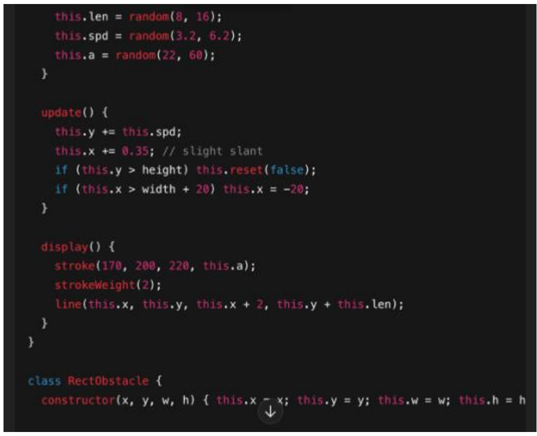
Answer:



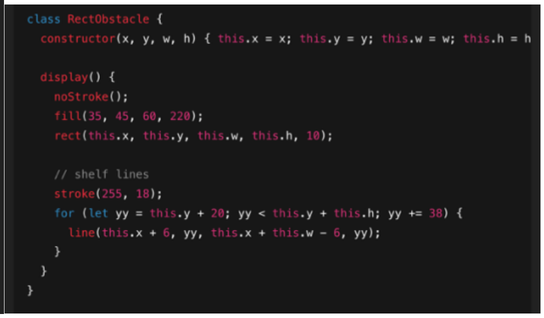
```js
function drawGloomyBackground() {
  // vertical gradient (dark blue -> gray)
  for (let y = 0; y < height; y += 2) {
    const t = y / height;
    const topC = color(10, 18, 30);
    const botC = color(25, 28, 35);
    const c = lerpColor(topC, botC, t);
    stroke(c);
    line(0, y, width, y);
  }

  // subtle drifting "window glow"
  noStroke();
  const glowX = width * 0.15 + sin(frameCount * 0.01) * 12;
  const glowY = height * 0.18 + cos(frameCount * 0.012) * 10;
  fill(120, 150, 180, 18);
  ellipse(glowX, glowY, 320, 220);
```



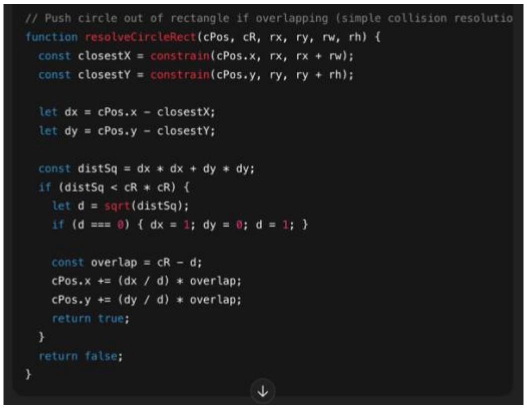
```js
  // floor line
  stroke(255, 18);
  line(0, height - 60, width, height - 60);

  // tiny dust/noise dots
  noStroke();
  for (let i = 0; i < 220; i++) {
    const x = (i * 17 + frameCount * 2) % width;
    const y = (i * 31) % height;
    const a = noise(x * 0.01, y * 0.01, frameCount * 0.01);
    fill(255, 10 * a);
    rect(x, y, 2, 2);
  }
}

class RainDrop {
  constructor() { this.reset(true); }

  reset(first = false) {
    this.x = random(width);
    this.y = first ? random(height) : random(-200, -20);
    this.len = random(8, 16);
    this.spd = random(3.2, 6.2);
```



```js
    this.len = random(8, 16);
    this.spd = random(3.2, 6.2);
    this.a = random(22, 60);
  }

  update() {
    this.y += this.spd;
    this.x += 0.35; // slight slant
    if (this.y > height) this.reset(false);
    if (this.x > width + 20) this.x = -20;
  }

  display() {
    stroke(170, 200, 220, this.a);
    strokeWeight(2);
    line(this.x, this.y, this.x + 2, this.y + this.len);
  }
}

class RectObstacle {
  constructor(x, y, w, h) { this.x = x; this.y = y; this.w = w; this.h = h
```



```js
class RectObstacle {
  constructor(x, y, w, h) { this.x = x; this.y = y; this.w = w; this.h = h

  display() {
    noStroke();
    fill(35, 45, 60, 220);
    rect(this.x, this.y, this.w, this.h, 10);

    // shelf lines
    stroke(255, 18);
    for (let yy = this.y + 20; yy < this.y + this.h; yy += 38) {
      line(this.x + 6, yy, this.x + this.w - 6, yy);
    }
  }
}
```



```js
// Push circle out of rectangle if overlapping (simple collision resolutio
function resolveCircleRect(cPos, cR, rx, ry, rw, rh) {
  const closestX = constrain(cPos.x, rx, rx + rw);
  const closestY = constrain(cPos.y, ry, ry + rh);

  let dx = cPos.x - closestX;
  let dy = cPos.y - closestY;

  const distSq = dx * dx + dy * dy;
  if (distSq < cR * cR) {
    let d = sqrt(distSq);
    if (d === 0) { dx = 1; dy = 0; d = 1; }

    const overlap = cR - d;
    cPos.x += (dx / d) * overlap;
    cPos.y += (dy / d) * overlap;
    return true;
  }
  return false;
}
```

Prompt 2

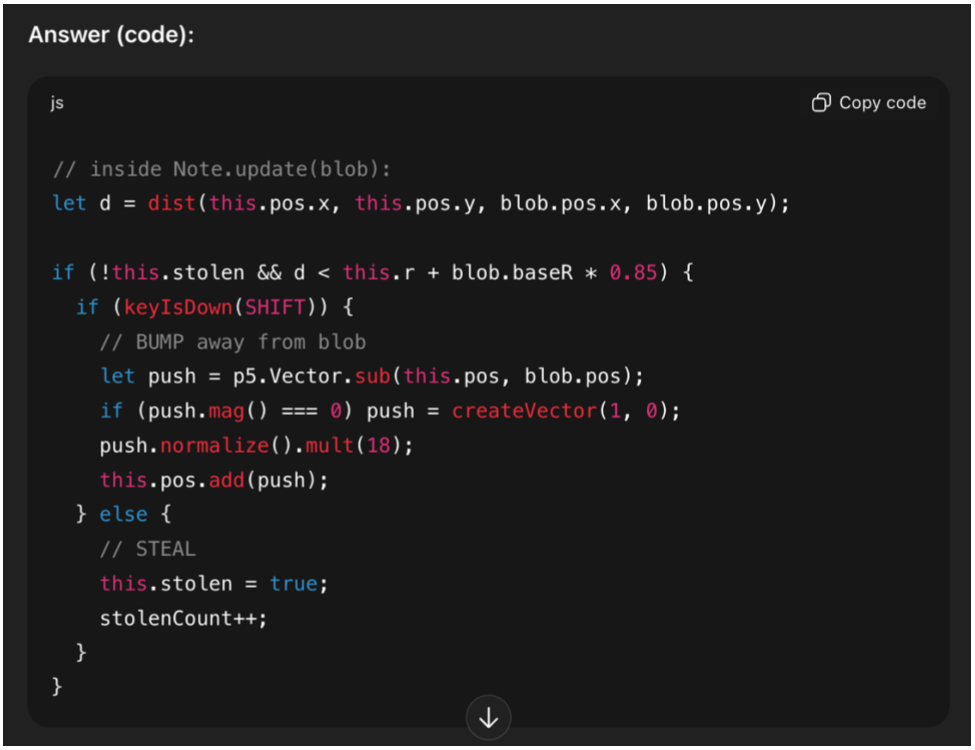
Prompt: “Do I need to change anything in jsconfig.json for this p5.js side quest 2, or can I keep the default?”

Answer:

No changes are needed for jsconfig.json for a normal p5.js sketch. You can keep the default file as-is unless VS Code shows path/IntelliSense errors. If your sketch runs fine in Live Server and on GitHub Pages, the default setup is correct.

Prompt 3

Prompt: “How can I implement the note interaction so the blob STEALS a note on contact, but if SHIFT is held, it BUMPS the note away instead?”



Answer (code):

```js
// inside Note.update(blob):
let d = dist(this.pos.x, this.pos.y, blob.pos.x, blob.pos.y);

if (!this.stolen && d < this.r + blob.baseR * 0.85) {
  if (keyIsDown(SHIFT)) {
    // BUMP away from blob
    let push = p5.Vector.sub(this.pos, blob.pos);
    if (push.mag() === 0) push = createVector(1, 0);
    push.normalize().mult(18);
    this.pos.add(push);
  } else {
    // STEAL
    this.stolen = true;
    stolenCount++;
  }
}
```