let snowflakes = [];

let currentBack = 0;

let snowmanX, snowmanY;

let backgroundColor = 255;

function setup() {

  createCanvas(1800, 1600);

  snowmanX = width / 2;

  snowmanY = height - 100;

  background(backgroundColor);

  // Create snowflakes

  for (let i = 0; i < 300; i++) {

    snowflakes.push(new Snowflake());

  }

  // Describe sketch

  describe('Snowmen move with the mouse and snowflakes fall.');

}

function draw() {

  if (mouseIsPressed) {

    for (let flake of snowflakes) {

      flake.update(frameCount / 60);

      flake.display();

    }

  }

  drawSnowman(snowmanX, snowmanY);

  if (mouseIsPressed) {

    snowmanX = mouseX;

    snowmanY = mouseY;

  }

  displayName();

  if (keyIsPressed && key === 'r') {

    resetSnowman();

  }

}

function setBackground() {

  if (currentBack == 0) {

    background(200, 230, 255);

  } else if (currentBack == 1) {

    background(135, 206, 235);

  } else if (currentBack == 2) {

    background(0);

  } else if (currentBack == 3) {

    background(255, 255, 255);

  }

}

function drawSnowman(x, y) {

  fill(255);

  stroke(0);

  ellipse(x, y, 60, 60);

  ellipse(x, y - 40, 40, 40);

  ellipse(x, y - 70, 30, 30);

  fill(0);

  ellipse(x - 10, y - 75, 5, 5);

  ellipse(x + 10, y - 75, 5, 5);

  fill(255, 140, 0);

  triangle(x, y - 70, x, y - 60, x + 10, y - 65);

}

function resetSnowman() {

  snowmanX = width / 2;

  snowmanY = height - 100;

}

function displayName() {

  fill(0);

  text("Your Name", 10, height - 10);

}

function mousePressed() {

  if (mouseButton === CENTER) {

    currentBack = (currentBack + 1) % 4;

  }

}

class Snowflake {

  constructor() {

    this.posX = random(width);

    this.posY = random(-50, 0);

    this.size = random(2, 5);

    this.speed = random(1, 3);

  }

  update() {

    this.posY += this.speed;

    if (this.posY > height) {

      this.posY = 0;

      this.posX = random(width);

    }

  }

  display() {

    noStroke();

    fill(255);

    ellipse(this.posX, this.posY, this.size);

  }

}