





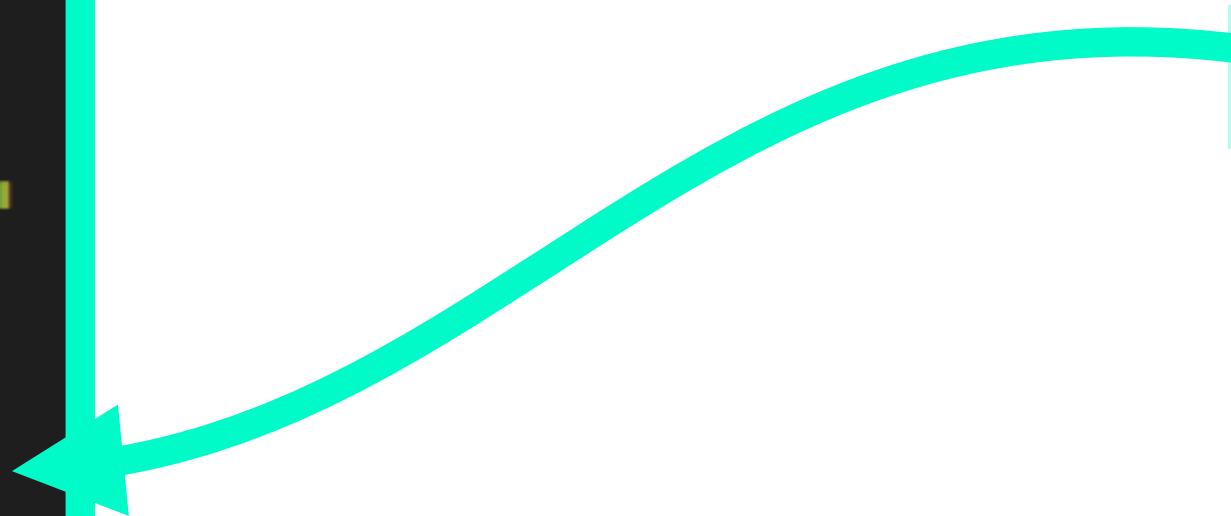


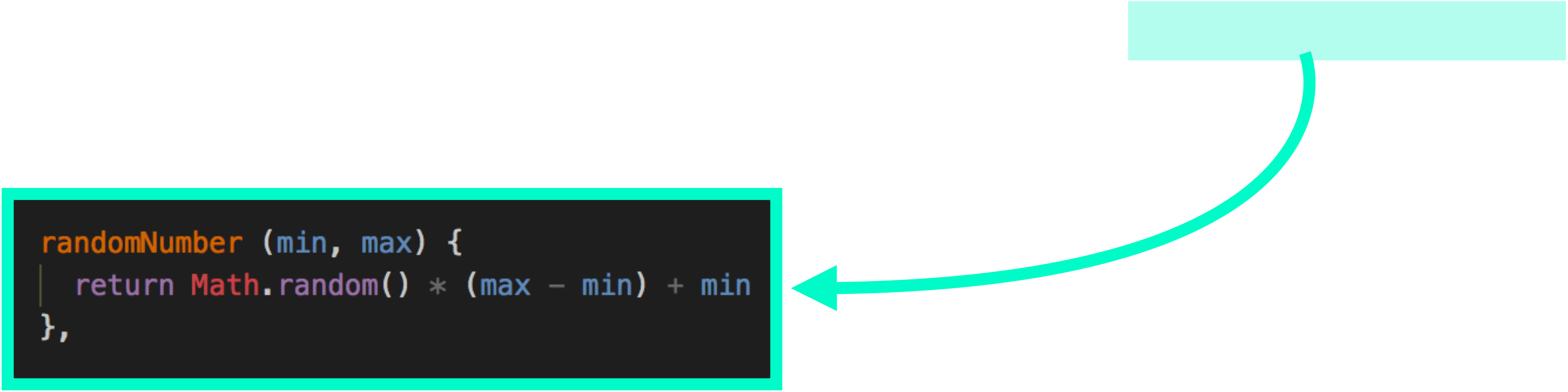




```
mounted () {  
  this.$refs.canvas.width = window.innerWidth  
  this.$refs.canvas.height = window.innerHeight  
  
  for (let i = 0; i < this.numberOfCircles; i++) {  
    let radius = this.randomNumber(5, 20)  
    let diameter = radius * 2;  
  
    let circleObj = {  
      radius: radius,  
      x: this.randomNumber(diameter, window.innerWidth - diameter),  
      y: this.randomNumber(diameter, window.innerHeight - diameter),  
      dx: this.randomNumber(-1, 1),  
      dy: this.randomNumber(-1, 1),  
      color: this.mainColor  
    }  
  
    this.circles.push(  
      new CreateCircle(circleObj, this.canvasContext, this.mouse)  
    )  
  }  
  
  this.animate()  
}
```

```
props: {  
  mainColor: {  
    type: String,  
    default: '#00ff5a'  
  },  
  numberOfCircles: {  
    type: Number,  
    default: 50  
  }  
},
```



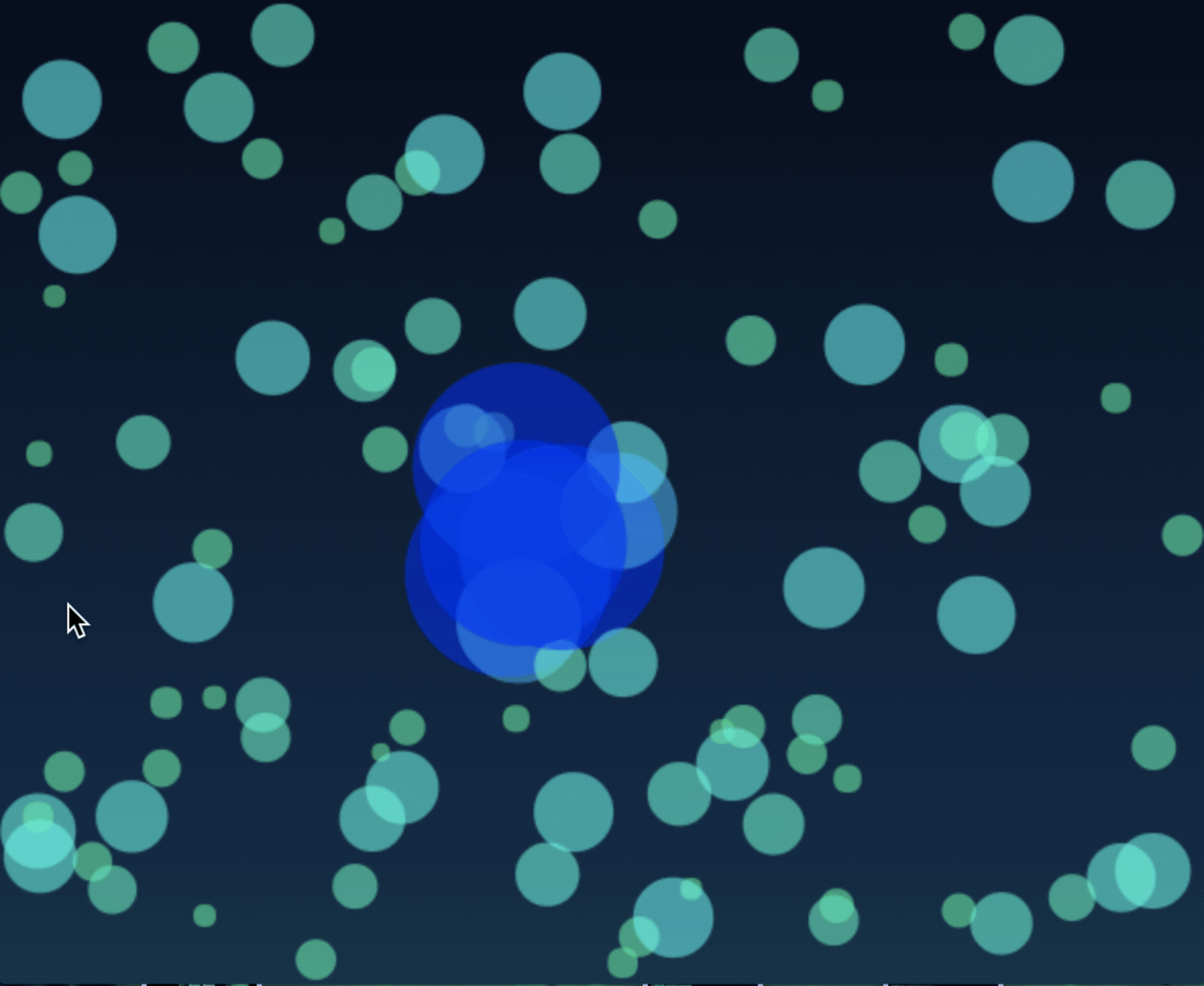


The diagram illustrates a function call and its definition. A light blue rectangular box at the top right represents a function call. A thick, curved blue arrow originates from this box and points to the left, terminating at a dark blue rectangular box. This dark blue box contains the function definition for `randomNumber`, which takes `min` and `max` as arguments and returns a value calculated using `Math.random()`.

```
randomNumber (min, max) {  
  return Math.random() * (max - min) + min  
},
```









```
const CreateCircle = (circleObj, canvasContext, mouse) => {
  return {
    x: circleObj.x,
    y: circleObj.y,
    dx: circleObj.dx,
    dy: circleObj.dy,
    radius: circleObj.radius,
    minRadius: circleObj.radius,
    maxRadius: circleObj.radius * 2,
    draw () {
      canvasContext.beginPath()
      canvasContext.arc(this.x, this.y, this.radius, 0, Math.PI * 2, false)
      canvasContext.fillStyle = Color(circleObj.color).rotate(this.radius * 2).alpha(0.5)
      canvasContext.fill()
    },
    update () {
      if (this.x + this.radius > innerWidth || this.x - this.radius < 0) {
        this.dx = -this.dx
      }

      if (this.y + this.radius > innerHeight || this.y - this.radius < 0) {
        this.dy = -this.dy
      }

      this.x += this.dx
      this.y += this.dy

      this.interactWithMouse()
      this.draw()
    },
    interactWithMouse () {
      if (mouse.x - this.x < 50 && mouse.x - this.x > -50 &&
        mouse.y - this.y < 50 && mouse.y - this.y > -50) {
        if (this.radius < this.maxRadius) {
          this.radius += 1
        }
      } else if (this.radius > this.minRadius) {
        this.radius -= 1
      }
    }
  }
}
```