



# JavaScript (Part 3)

## Fetch, Canvas

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# Using 3rd part APIs

**JS Libraries**

**HTTP Request**

# Using JS Libraries

```
<script src="xyz.js"></script>
```

# Using HTTP Request

fetch()

# Using HTTP Request

```
fetch('https://cat-fact.herokuapp.com/facts', {..})
```

Resource

Options

# Resource URL structure

`https://cat-fact.herokuapp.com/facts`

# Resource URL structure

`https://cat-fact.herokuapp.com/facts`

Base URL

Endpoint

# Resolving a promise

fetch() -> Promise

# Resolving a promise

```
fetch(..).then()
```

# Resolving a promise

```
fetch(...).then((res) => {...})
```

# Using `async/await`

```
res = await fetch(..)
```

# Using `async/await`

```
async function(){  
    res = await fetch(..)  
}
```

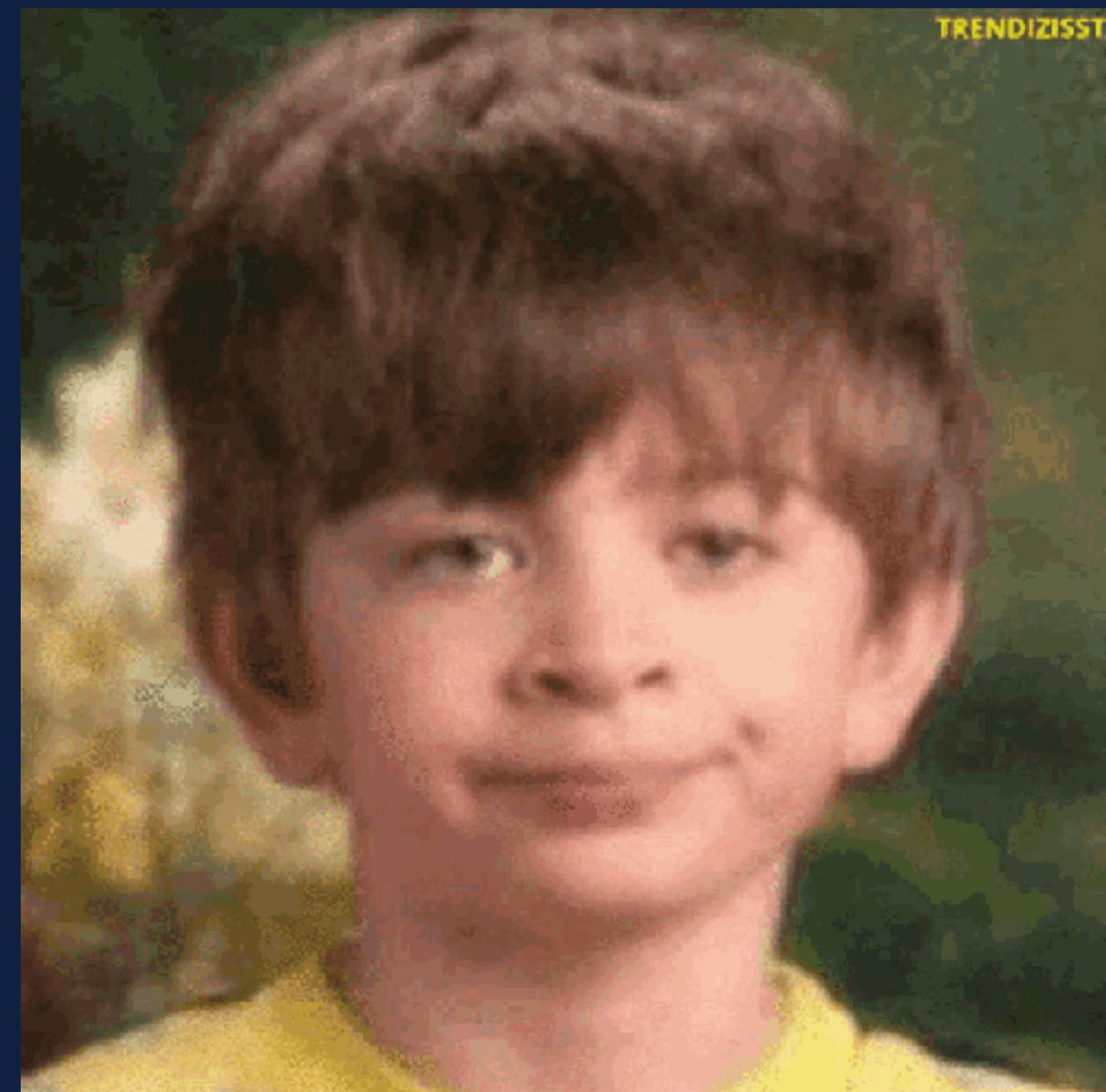


# Let's Fetch some data

**Color Pallette Helper**

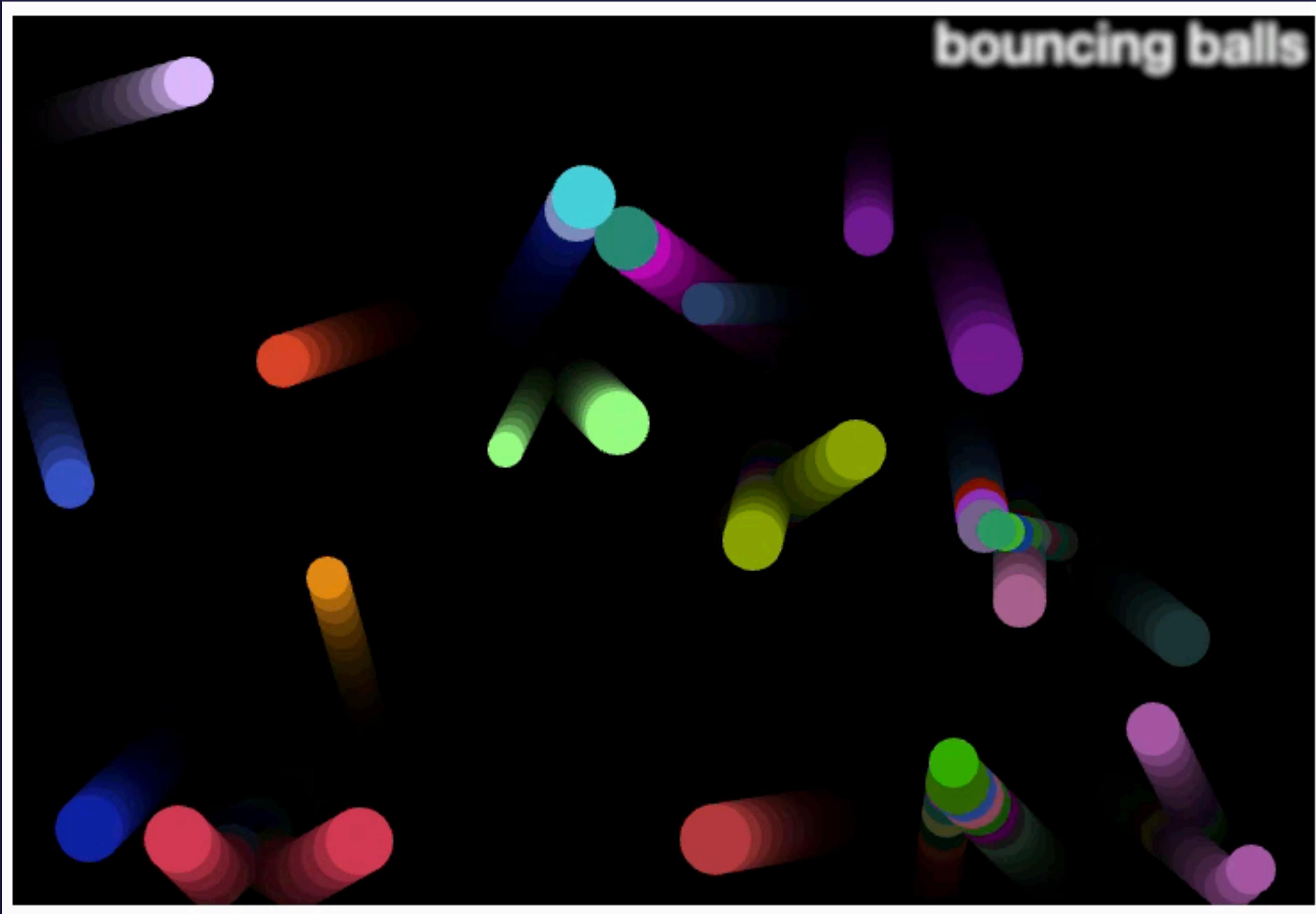
Select a Mode  Select a color

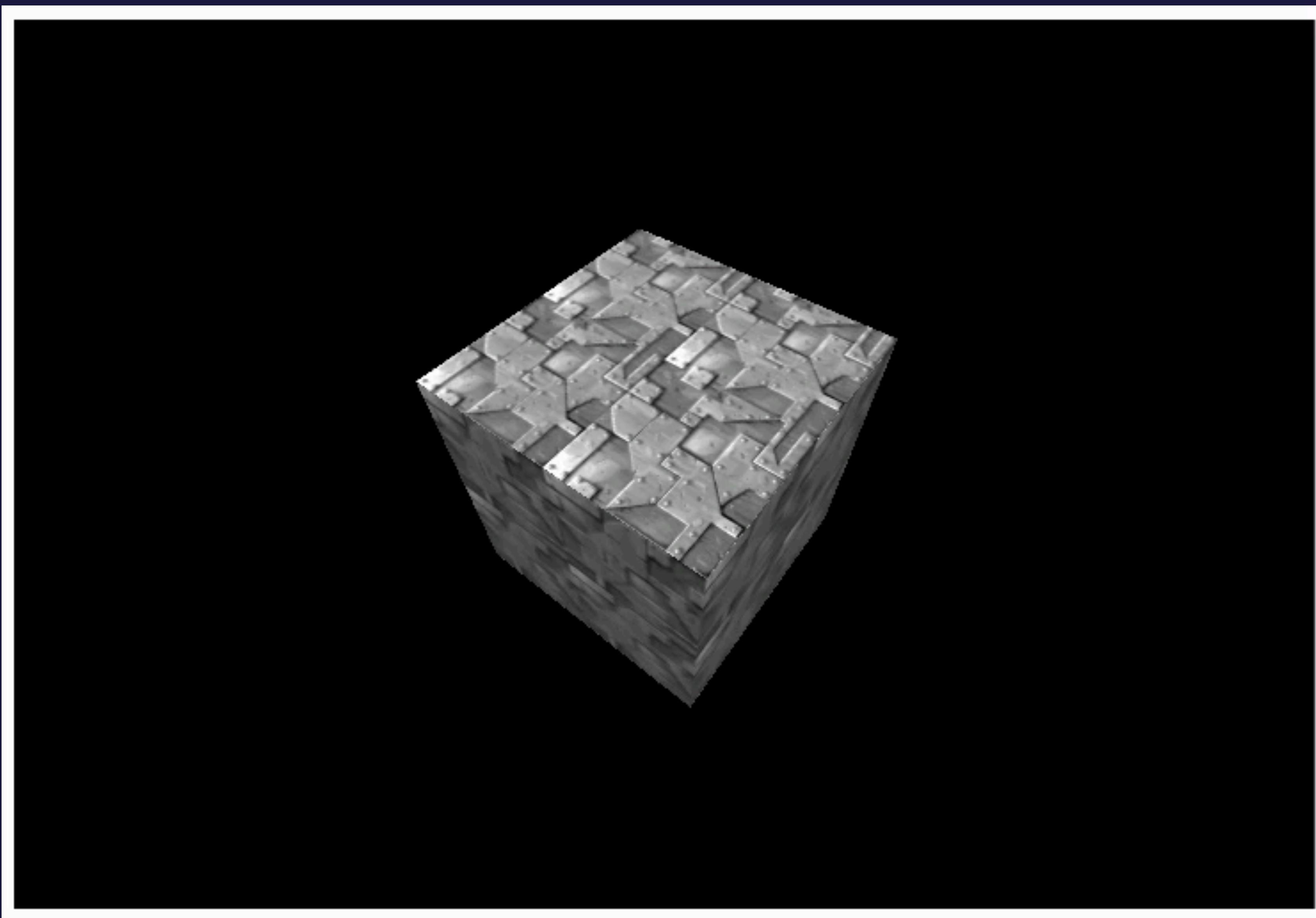
We suggest you use these colors



<canvas>

bouncing balls





<canvas></canvas>

## index.html

```
<canvas></canvas>
```

## index.js

```
canvas = document.querySelector("canvas");
context = canvas.getContext("2d");
```

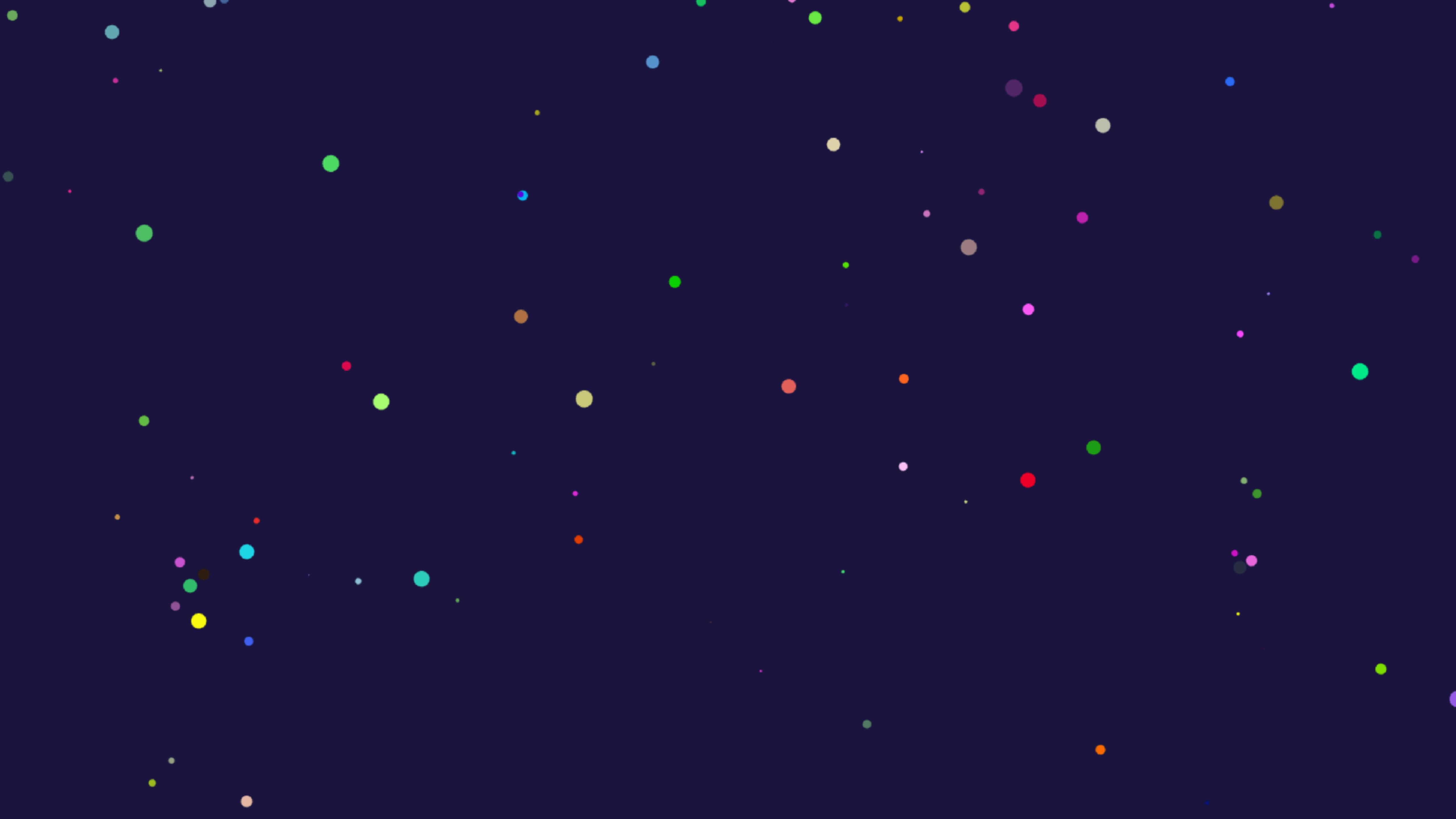
 Demo

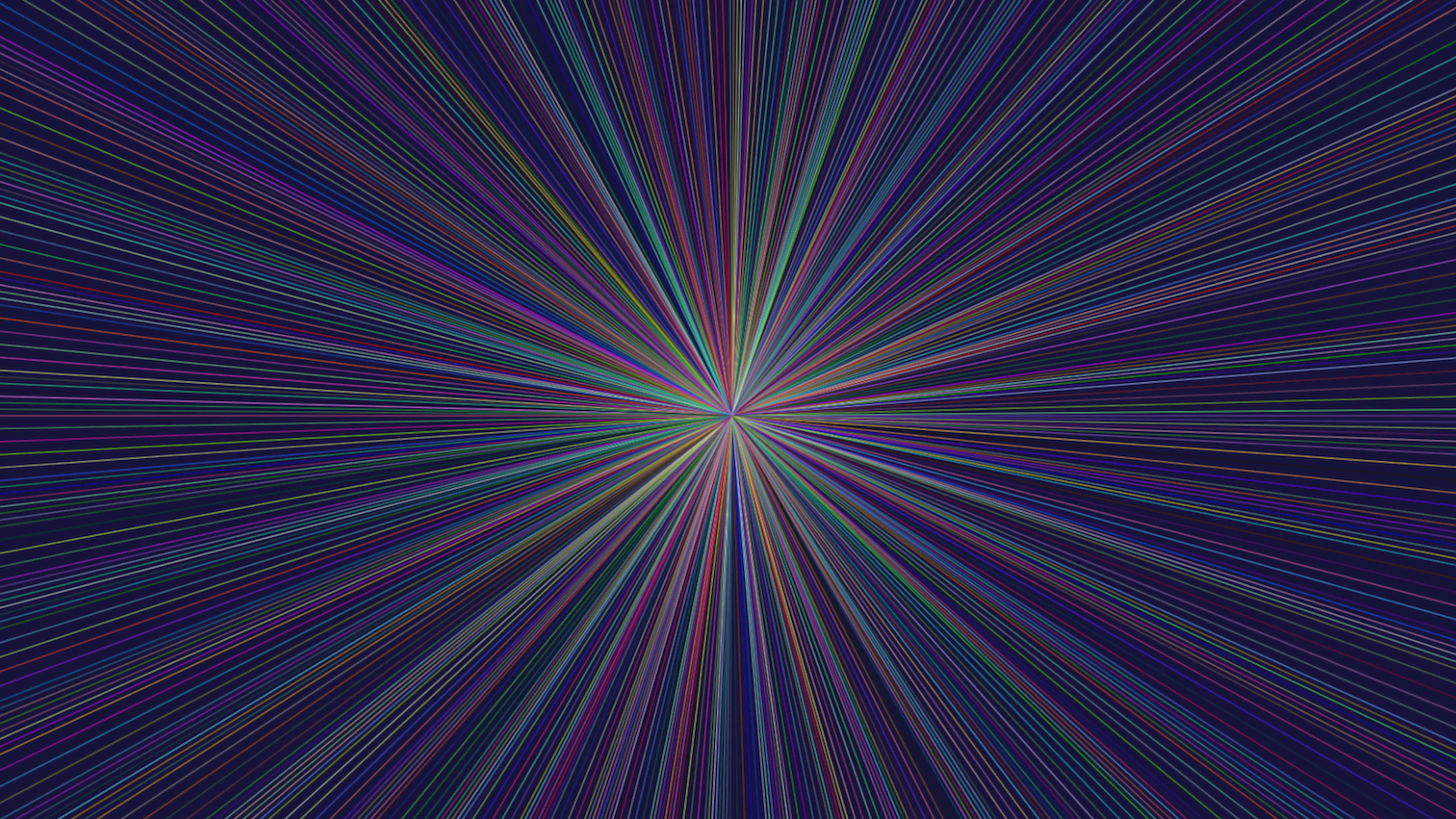
**Let's Draw  
a house**





**MDN > CanvasRenderingContext2D**





```
for(){ CANVAS_CODE }
```

```
// Loop 100 times to draw random filled circles
for (let i = 0; i < 100; i++) {
    // Begin a new path for each circle
    ctx.beginPath();

    // Generate random coordinates within the canvas
    const x = Math.random() * canvas.width;
    const y = Math.random() * canvas.height;

    // Generate a random radius between 0 and 10
    const radius = Math.random() * 10;

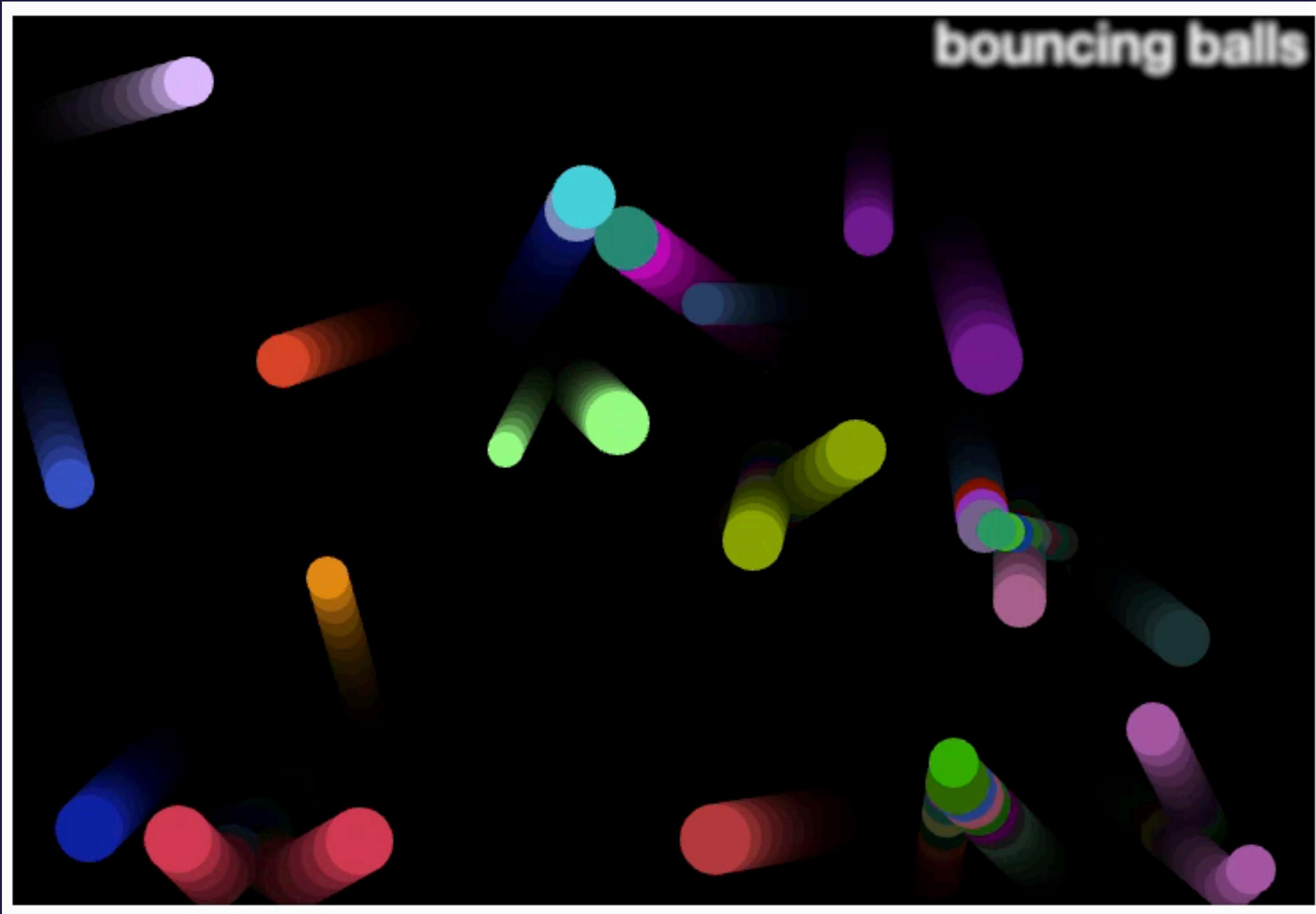
    // Create a filled circle
    ctx.arc(x, y, radius, 0, Math.PI * 2, false);

    // Generate a random RGB color
    const red = Math.random() * 255;
    const green = Math.random() * 255;
    const blue = Math.random() * 255;

    // Set the fill style to a random color
    ctx.fillStyle = `rgb(${red}, ${green}, ${blue})`;

    // Fill the circle with the random color
    ctx.fill();
}
```

bouncing balls







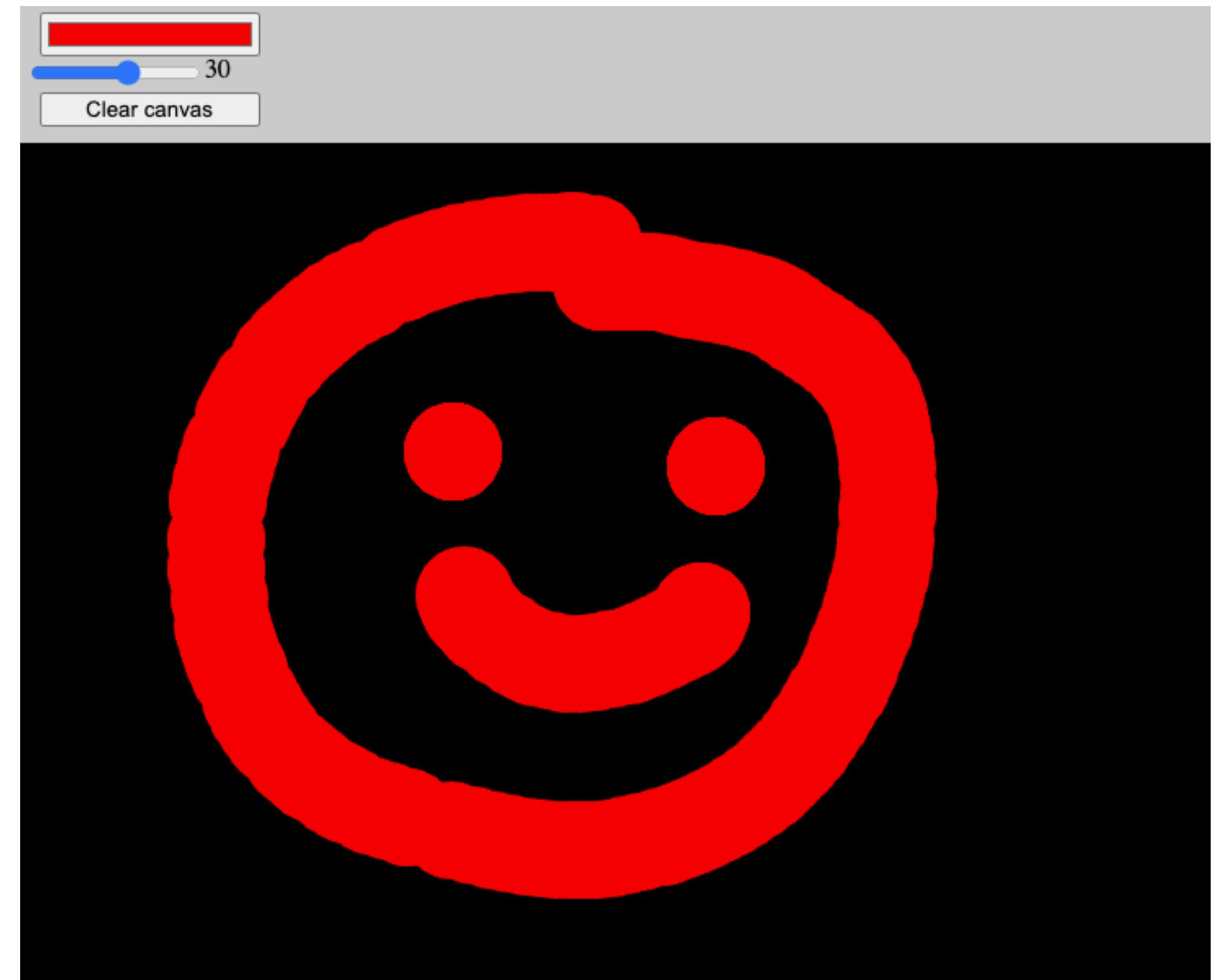
window.requestAnimationFrame()

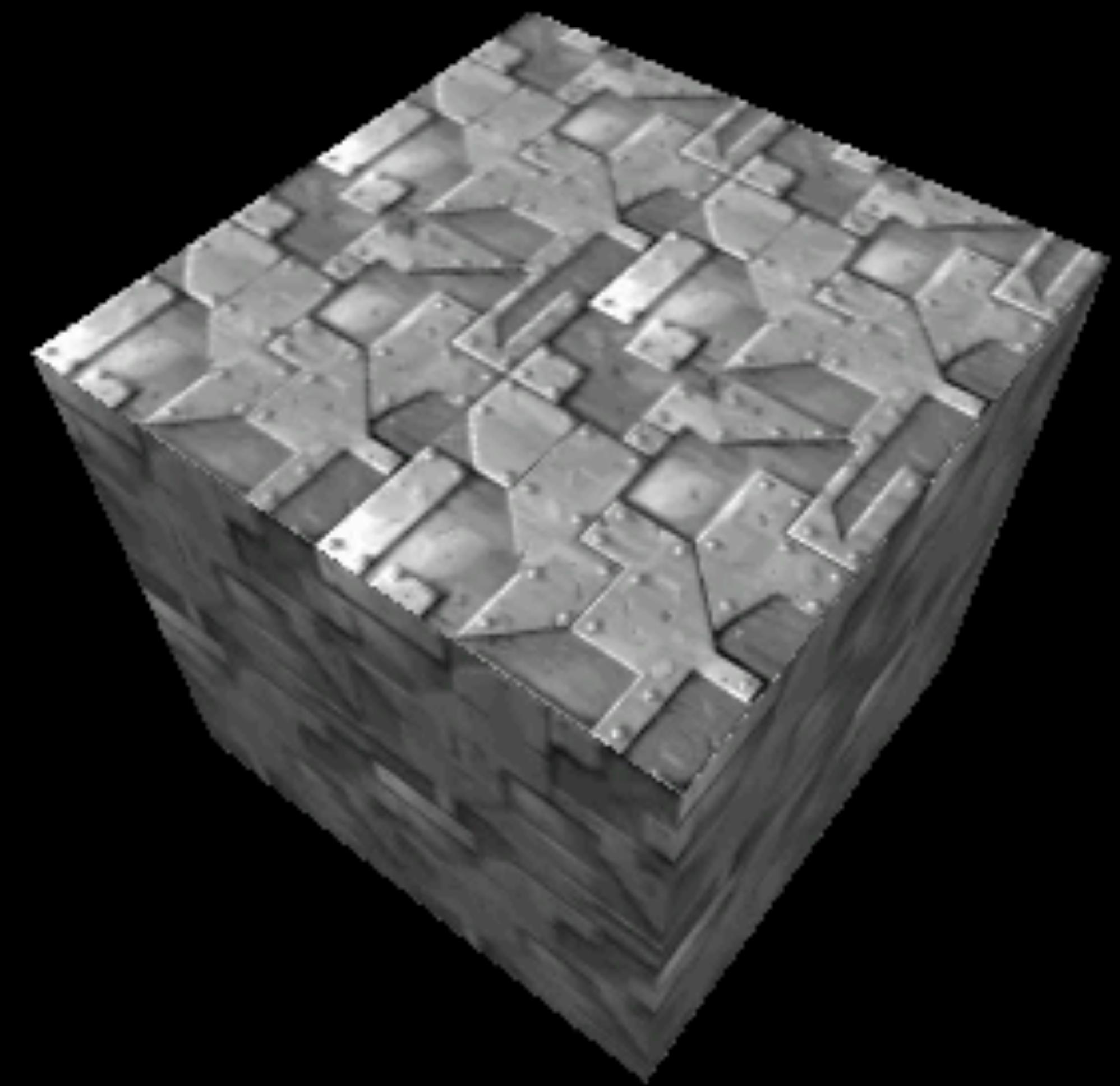
60fps

```
func loop(){  
    CANVAS_CODE  
    window.requestAnimationFrame(loop)  
}
```

 Demo

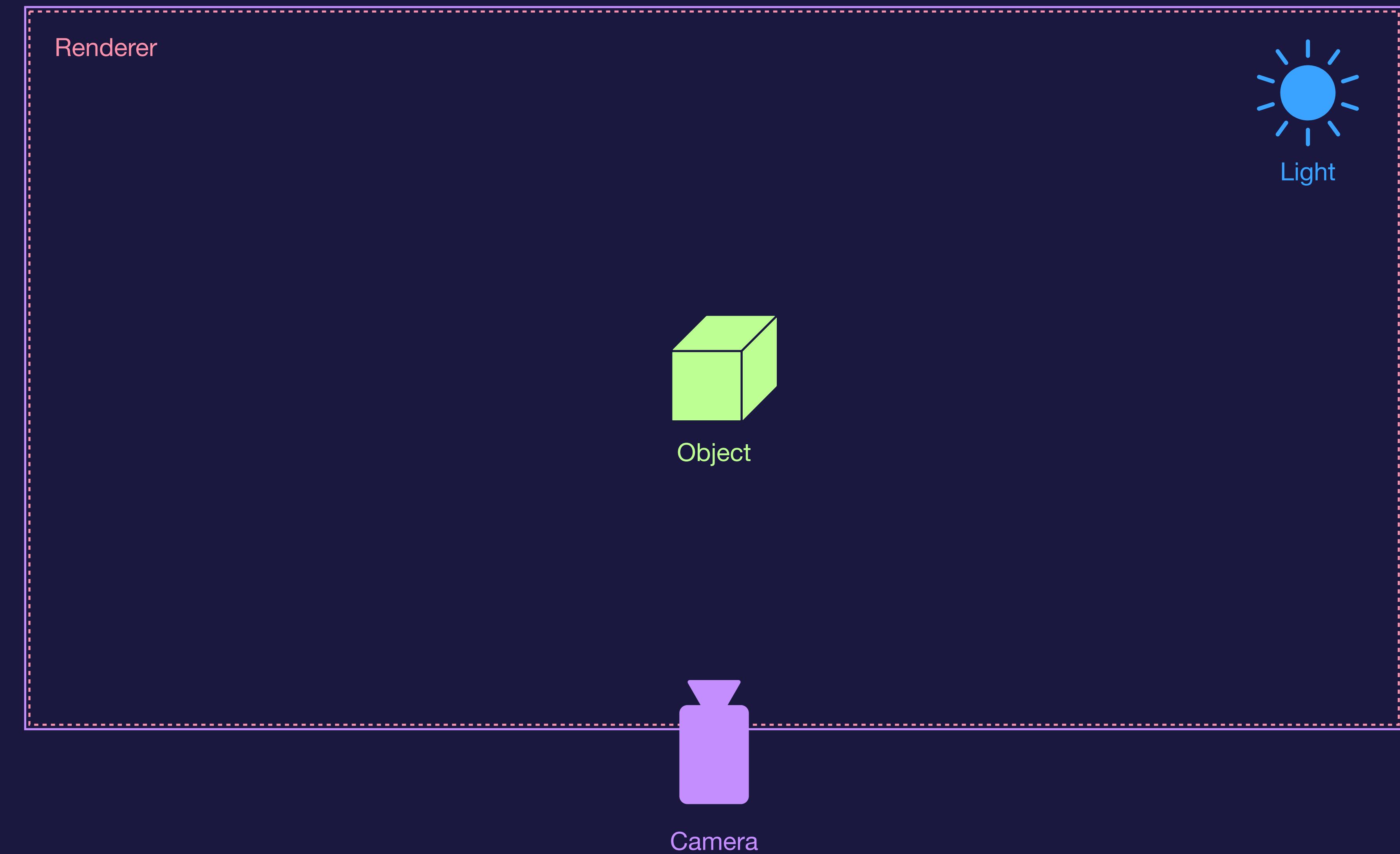
Let's make  
our paint  
app





Three.js

# Scene





# Three.js

 Demo

**Let's  
finally  
build the  
Cube**

