

## **main.js**

```
var canvas;
var ctx;
var balls=new Array();
// initialize the Canvas and context
window.onload = init;

function init(){
    //get the canvas
    canvas = document.getElementById('cnv');
    // Set the dimensions of the canvas
    canvas.width = window.innerWidth;
    canvas.height = window.innerHeight;
    canvas.style.border = 'solid black 2px';
    canvas.style.backgroundColor = 'rgba(0,24,35)';
    // get the context
    ctx = canvas.getContext('2d'); // This is the context
    loadBalls(100);
    animate();
}

function animate(){
    ctx.clearRect(0,0,canvas.width, canvas.height);
    for(var i=0; i<balls.length;i++){
        balls[i].update();
        balls[i].render();
    }
    requestAnimationFrame(animate);
}

function Ball(x, y){
    this.x = x;
    this.y = y;
    this.dx = Math.random()*10 - 5;
    this.dy = Math.random()*10 - 5;
    this.radius = 10;
}

Ball.prototype.update=function(){
    this.x += this.dx;
    this.y += this.dy;
    if(this.x > canvas.width || this.x < 0) this.dx = -this.dx;
```

```

        if(this.y > canvas.height || this.y < 0) this.dy = -this.dy;
    }

    Ball.prototype.render=function(){
        ctx.strokeStyle = 'rgba(155,180,50)';
        ctx.fillStyle = 'rgba(155,180, 50)';
        ctx.beginPath();
        ctx.arc(this.x,this.y,this.radius,Math.PI*2, 0, false);
        ctx.fill();
        ctx.stroke();
    }

function loadBalls(num){
    for(var i=0; i<num; i++){
        balls[i]=new Ball(Math.random()*window.innerWidth,
Math.random()*window.innerHeight);
    }
}

```

---

## **index.html**

```

<!DOCTYPE html>
<html>
  <head>
    <title>JS Patterns</title>
    <script src="main.js"></script>
  </head>

  <body>
    <canvas id = "cnv"></canvas>
  </body>

</html>

```