

main.js

```
var canvas;
var ctx;
var ball;
//var balls[];
// 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
    ball=new Ball(400,300);
    animate();
}

function animate(){
    ball.update();
    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 = 30;

    this.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;
        this.render();
    }
}
```

```
this.render=function(){
  ctx.clearRect(0,0,canvas.width, canvas.height);
  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>
```