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HTML5 Canvas e Javascript

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Sumário

HTML5 Canvas e Javascript

```html
<!DOCTYPE HTML>
<html>
  <head>
    <style>
      body {
        margin: 0px;
        padding: 0px;
      }
    </style>
  </head>
  <body>
    <canvas id="myCanvas" width="578" height="200"></canvas>
    <script>
      window.requestAnimFrame = (function(callback) {
        return window.requestAnimationFrame || window.
webkitRequestAnimationFrame || window.mozRequestAnimationFrame
|| window.oRequestAnimationFrame || window.
msRequestAnimationFrame ||
        function(callback) {
          window.setTimeout(callback, 1000 / 60);
        };
      })();

      function drawRectangle(myRectangle, context) {
        context.beginPath();
        context.rect(myRectangle.x, myRectangle.y, myRectangle.
width, myRectangle.height);
        context.fillStyle = '#8ED6FF';
        context.fill();
        context.lineWidth = myRectangle.borderWidth;
        context.strokeStyle = 'black';
        context.stroke();
      }
      function animate(myRectangle, canvas, context, startTime) {
        // update
        var time = (new Date()).getTime() - startTime;

        var linearSpeed = 100;
        // pixels / second
        var newX = linearSpeed * time / 1000;

        if(newX < canvas.width - myRectangle.width - myRectangle.
borderWidth / 2) {
          myRectangle.x = newX;
        }

        // clear
        context.clearRect(0, 0, canvas.width, canvas.height);

        drawRectangle(myRectangle, context);

        // request new frame
        requestAnimFrame(function() {
          animate(myRectangle, canvas, context, startTime);
        });
      }
      var canvas = document.getElementById('myCanvas');
```

```
53        var context = canvas.getContext('2d');
54
55        var myRectangle = {
56          x: 0,
57          y: 75,
58          width: 100,
59          height: 50,
60          borderWidth: 5
61        };
62
63        drawRectangle(myRectangle, context);
64
65        // wait one second before starting animation
66        setTimeout(function() {
67          var startTime = (new Date()).getTime();
68          animate(myRectangle, canvas, context, startTime);
69        }, 1000);
70      </script>
71    </body>
72  </html>
```

recursos/codigos/move_retangulo.html

Para criar uma animacao usando HTML5 Canvas, nós usamos o *requestAnim-Frame* que habilita o navegador determinar o FPS adequado para cada animacao. Para cada frame de animação, nos atualizamos os elementos do canvas, limpando e redesenhando solicitando nova animação para dar aspecto de movimento.