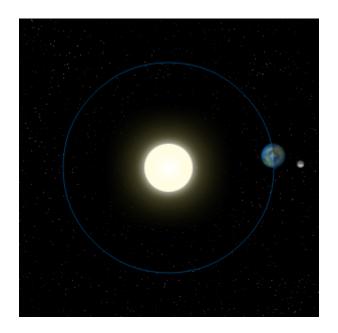
:: **Animação** :: Terra Lua



Objetivo:

Usar o elemento <Canvas> com animação

Conceitos:

- Canvas
- Contexto canvas
- Animação

```
1 <! DOCTYPE html>
 2 <html>
 4 <head>
 5 <meta content="text/html; charset=utf-8" http-equiv="Content-Type">
       <title>Sistema Terra Lua</title>
 6
 7
 8
       <script>
 9
10
            var sun = new Image();
11
            var moon = new Image();
12
            var earth = new Image();
13
            function init(){
14
                   sun.src = 'img/Canvas_sun.png';
15
                   moon.src = 'img/Canvas_moon.png';
16
                   earth.src = 'img/Canvas_earth.png';
17
18
                   setInterval(draw, 100);
            }
19
20
            function draw() {
21
              var ctx = document.getElementById('canvasTerraLua').getContext('2d');
22
23
              ctx.globalCompositeOperation = 'destination-over';
24
              ctx.clearRect(0,0,300,300); // limpa canvas
25
26
              ctx.fillStyle = 'rgba(0,0,0,0.4)';
27
        ctx.strokeStyle = 'rgba(0,153,255,0.4)';
28
29
        ctx.save();
30
       ctx.translate(150,150);
31
32
        // Terra
33
        var time = new Date();
        ctx.rotate( ((2*Math.PI)/60)*time.getSeconds() + ((2*Math.PI)/60000)*time.getMilliseconds() );
34
35
        ctx.translate(105,0);
36
        ctx.fillRect(0,-12,50,24); // sombra
37
        ctx.drawImage(earth,-12,-12);
38
39
        // Lua
40
        ctx.save();
41
        ctx.rotate( ((2*Math.PI)/6)*time.getSeconds() + ((2*Math.PI)/6000)*time.getMilliseconds() );
42
        ctx.translate(0,28.5);
43
        ctx.drawImage(moon,-3.5,-3.5);
44
        ctx.restore();
45
        ctx.restore();
46
47
             ctx.beginPath();
             ctx.arc(150,150,105,0,Math.PI*2,false); // orbita da terra
48
49
             ctx.stroke();
50
51
             ctx.drawImage(sun,0,0,300,300);
          }
52
53
54
       </script>
55 </head>
56
57
58 <body onload="init()">
59
60
       <canvas id="canvasTerraLua" width="300" height="300"></canvas>
61
62 </body>
63
64 </html>
```