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1  console.log("Hello <!DOCTYPE html>
2  <html>
3  <head>
4  <meta charset="UTF-8">
5  <title>Pac-Man Algebra Game</title>
6  <style>
7    body { background: black; color: white; text-align: center; }
8    canvas { background: black; display: block; margin: auto; }
9  </style>
10 </head>
11 <body>
12
13 <h2>Pac-Man Algebra Game 🎮</h2>
14 <canvas id="game" width="450" height="510"></canvas>
15
16 <script>
17 const tile = 30;
18 const rows = 15, cols = 15;
19 const canvas = document.getElementById("game");
20 const ctx = canvas.getContext("2d");
21
22 let maze = [
23   [1,1,1,1,1,1,1,1,1,1,1,1,1,1,1],
24   [1,0,0,0,0,0,1,0,0,0,0,0,0,0,1],
25   [1,0,1,1,1,0,1,0,1,1,1,0,1,0,1],
26   [1,0,1,0,0,0,0,0,0,0,1,0,1,0,1],
27   [1,0,1,0,1,1,1,1,1,0,1,0,1,0,1],
28   [1,0,0,0,0,0,0,0,1,0,0,0,0,0,1],
29   [1,0,1,1,1,1,1,0,1,1,1,1,1,0,1],
30   [1,0,0,0,0,0,0,0,0,0,0,0,0,0,1],
31   [1,0,1,1,1,1,1,0,1,1,1,1,1,0,1],
32   [1,0,0,0,0,0,1,0,0,0,0,0,0,0,1],
33   [1,0,1,1,1,0,1,1,1,1,1,0,1,0,1],
34   [1,0,1,0,0,0,0,0,0,0,1,0,1,0,1],
35   [1,0,1,0,1,1,1,1,1,0,1,0,1,0,1],
36   [1,0,0,0,0,0,0,0,0,0,0,0,0,0,1],
37   [1,1,1,1,1,1,1,1,1,1,1,1,1,1,1]
38 ];
39
40 let pac = {r:1,c:1};
41 let move = {r:0,c:0};
42 let ghosts = [
43   {r:7,c:7},{r:1,c:13},{r:13,c:13},{r:1,c:7},{r:7,c:8}
44 ];
45
46 let lives = 3, score = 0, time = 300;
47 const heart = {r:7,c:7};
48
49 document.addEventListener("keydown",e⇒{
50   if(e.key="ArrowLeft"){move={r:0,c:-1}}
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51     if(e.key="ArrowRight"){move={r:0,c:1}}
52     if(e.key="ArrowUp"){move={r:-1,c:0}}
53     if(e.key="ArrowDown"){move={r:1,c:0}}
54 });
55
56 function draw(){
57     ctx.clearRect(0,0,canvas.width,canvas.height);
58
59     for(let r=0;r<rows;r++){
60         for(let c=0;c<cols;c++){
61             if(maze[r][c]=1){
62                 ctx.fillStyle="blue";
63                 ctx.fillRect(c*tile,r*tile+30,tile,tile);
64             }else if(maze[r][c]=0){
65                 ctx.fillStyle="white";
66                 ctx.beginPath();
67                 ctx.arc(c*tile+15,r*tile+45,3,0,Math.PI*2);
68                 ctx.fill();
69             }
70         }
71     }
72
73     ctx.fillStyle="red";
74     ctx.beginPath();
75     ctx.arc(heart.c*tile+15,heart.r*tile+45,8,0,Math.PI*2);
76     ctx.fill();
77
78     ctx.fillStyle="yellow";
79     ctx.beginPath();
80     ctx.arc(pac.c*tile+15,pac.r*tile+45,14,0,Math.PI*2);
81     ctx.fill();
82
83     ghosts.forEach(g⇒{
84         ctx.fillStyle="pink";
85         ctx.beginPath();
86         ctx.arc(g.c*tile+15,g.r*tile+45,14,0,Math.PI*2);
87         ctx.fill();
88     });
89
90     ctx.fillStyle="white";
91     ctx.fillText("Lives: "+lives,10,20);
92     ctx.fillText("Score: "+score,180,20);
93     ctx.fillText("Time: "+Math.floor(time/60)+":"+("0"+time%60).slice(-2),330,20);
94 }
95
96 function update(){
97     let nr=pac.r+move.r,nc=pac.c+move.c;
98     if(maze[nr]?.[nc]≠1){
99         pac.r=nr; pac.c=nc;
100         if(maze[nr][nc]=0){maze[nr][nc]=2;score+=10;}
101     }

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102
103 ghosts.forEach(g⇒{
104   let d=[[1,0],[-1,0],[0,1],[0,-1]][Math.floor(Math.random()*4)];
105   let nr=g.r+d[0],nc=g.c+d[1];
106   if(maze[nr]?.[nc]≠1){g.r=nr;g.c=nc;}
107   if(g.r=pac.r&&g.c=pac.c){
108     lives--;
109     pac={r:1,c:1};
110     if(lives=0){alert("GAME OVER");location.reload();}
111   }
112 });
113
114 if(pac.r=heart.r&&pac.c=heart.c){
115   let a=prompt("Solve  $x^2-2x-3=0$ \nEnter x:");
116   if(a="3" || a="-1"){alert("YOU WIN 🏆");}
117   else{alert("Wrong answer");}
118   location.reload();
119 }
120
121 draw();
122 }
123
124 setInterval(()⇒{time--; if(time≤0){alert("TIME
UP");location.reload();}},1000);
125 setInterval(update,200);
126 </script>
127
128 </body>
129 </html>

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