

```

1  <html>
2      <head>
3          <title>Canvas</title>
4
5          <script language="javascript">
6              //makes variables for each circle
7
8              var colorMain = "#0000FF";
9              var colorShade = "808080";
10
11             //defines the boundaries of the canvas as varaibles to make it easier to hot
12             swap
13             var canvasBoundX = 500;
14             var canvasBoundY = 500;
15
16             var currentAngle = 0;
17
18             var angleCap = 2 * Math.PI;
19
20             var isOn = false;
21
22             var circlesAppear = new Array(8);
23
24             var index = 0;
25
26             for(var i = 0; i < circlesAppear.length; i++){
27                 circlesAppear[i] = false;
28             }
29
30             //paints a circle on the canvas
31             function drawCircle(){
32                 var canvas = document.getElementById("myCanvas");
33                 var context = canvas.getContext("2d");
34
35                 currentAngle = 0;
36
37                 angleCap = inputForm.circles.value * (Math.PI / 3);
38                 //paint the background of the canvas
39                 context.fillStyle="#ADD8E6";
40                 context.fillRect(0, 0, canvasBoundX, canvasBoundY);
41
42                 //draw the main circle;
43
44                 if(circlesAppear[0]){
45                     context.strokeStyle = colorMain;
46                     context.beginPath();
47                     context.arc(canvasBoundX / 2, canvasBoundY / 2, 200, 0, 2 * Math.PI,
48                                 true);
49                     context.closePath();
50                     context.stroke();
51                 }
52
53                 if(circlesAppear[1]){
54                     context.strokeStyle = colorMain;
55                     context.beginPath();
56                     context.arc(canvasBoundX / 2, canvasBoundY / 2, 75, 0, 2 * Math.PI,
57                                 true);
58                     context.closePath();
59                     context.stroke();
60                 }
61
62                 for(var i = 0; i < 2 * Math.PI; i += Math.PI / 3){
63                     if(circlesAppear[(i / (Math.PI / 3)) + 2]){
64                         context.strokeStyle = colorMain;
65                         context.beginPath();
66                         context.arc((canvasBoundX / 2) + (100 * Math.cos(currentAngle)),
67                                     (canvasBoundY / 2) - (100 * Math.sin(currentAngle)), 100, 0, 2 *

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64         Math.PI, true);
65         context.closePath();
66         context.stroke();
67         currentAngle += Math.PI / 3;
68     }
69 }
70
71 }
72
73 function changeAppear(){
74     if(!circlesAppear[index])
75         circlesAppear[index] = true;
76
77     index++;
78
79     drawCircle();
80
81     if(index == circlesAppear.length){
82         toggleTimer();
83
84         for(var i = 0; i < circlesAppear.length; i++){
85             circlesAppear[i] = false;
86         }
87
88         index = 0;
89     }
90 }
91
92 function toggleTimer(){
93     //if the timer is on the turn it off, if its not then turn it on
94     isOn ? turnOff() : turnOn();
95 }
96
97 function turnOn(){
98     //turns the timer on
99     timer = setInterval("changeAppear()", 500);
100     isOn = true;
101 }
102
103 function turnOff(){
104     //turns the timer off
105     clearInterval(timer);
106     isOn = false;
107 }
108
109 </script>
110 </head>
111
112 <body onload="drawCircle()">
113     <center>
114         <h1>Basic Animations</h1>
115
116     </br>
117     </br>
118
119     <canvas id="myCanvas" width="500" height="500"
120         style="border:2px solid rgb(195, 195, 195);">
121         Your browser does not support the canvas element
122     </canvas>
123
124 </br>
125 </br>
126 <form name="inputForm">
127     <input type="button" name="Play" value="Play"
128         onclick="toggleTimer()" />
129

```

```
130         <input type="text" name="circles">
131     </form>
132 </center>
133 </body>
134 </html>
```