```html
<html>
    <head>
        <title>Canvas</title>

        <script language="javascript">
            //global variables
            var moveXOne = 10*1;
            var moveYOne = 10*1;

            var moveXTwo = -10*1;
            var moveYTwo = -10*1;

            var colorOne = "#0000FF";
            var colorTwo = "#FF0000";

            var canvasBoundX = 500;
            var canvasBoundY = 200;

            var xCoordOne = Math.floor(Math.random() * (canvasBoundX - 100)) + 50;
            var yCoordOne = Math.floor(Math.random() * (canvasBoundY - 100)) + 50;

            var xCoordTwo = Math.floor(Math.random() * (canvasBoundX - 100)) + 50;
            var yCoordTwo = Math.floor(Math.random() * (canvasBoundY - 100)) + 50;

            var isOn = false;


            //paints a circle on the canvas
            function drawCircle(){
                var canvas = document.getElementById("myCanvas");
                var context = canvas.getContext("2d");
                //paint the background of the canvas
                context.fillStyle="#ADD8E6";
                context.fillRect(0, 0, canvasBoundX, canvasBoundY);

                //draw the circle
                context.fillStyle = colorOne;
                context.beginPath();
                context.arc(xCoordOne, yCoordOne, 15, 0, 2 * Math.PI, true);
                context.closePath();
                context.fill();

                context.fillStyle = colorTwo;
                context.beginPath();
                context.arc(xCoordTwo, yCoordTwo, 15, 0, 2 * Math.PI, true);
                context.closePath();
                context.fill();
            }


            function move(){
                //momves circle ~10px

                if(xCoordOne > (canvasBoundX - 15) || xCoordOne < 15){
                    //moveXOne = -Math.sign(moveXOne) * Math.floor(Math.random() * 10);
                    moveXOne *= -1;
                }

                if(yCoordOne > (canvasBoundY - 15) || yCoordOne < 15){
                    //moveYOne = -Math.sign(moveYOne) * Math.floor(Math.random() * 10);
                    moveYOne *= -1;
                }

                if(xCoordTwo > (canvasBoundX - 15) || xCoordTwo < 15){
                    //moveXOne = -Math.sign(moveXOne) * Math.floor(Math.random() * 10);
                    moveXTwo *= -1;
                }
```

```
68
69                  if(yCoordTwo > (canvasBoundY - 15) || yCoordTwo < 15){
70                      //moveYOne = -Math.sign(moveYOne) * Math.floor(Math.random() * 10);
71                      moveYTwo *= -1;
72                  }
73
74                  if(contact()){
75                      moveXOne *= -1;
76                      moveYOne *= -1;
77                      moveXTwo *= -1;
78                      moveYTwo *= -1;
79
80                      toggleColor();
81                  }
82
83
84                  xCoordOne += moveXOne;
85                  yCoordOne += moveYOne;
86
87                  xCoordTwo += moveXTwo;
88                  yCoordTwo += moveYTwo;
89
90                  drawCircle();
91              }
92
93              function contact(){
94                  return Math.abs(xCoordOne - xCoordTwo) <= 20 && Math.abs(yCoordOne -
                     yCoordTwo) <= 20;
95              }
96
97              function toggleColor(){
98                  (colorOne == "#0000FF") ? colorOne = "#008000" : colorOne = "#0000FF";
99
100                     (colorTwo == "#FF0000") ? colorTwo = "#800080" : colorTwo = "#FF0000"
                        ;
101             }
102
103             function toggleTimer(){
104
105
106                 isOn ? turnOff() : turnOn();
107             }
108
109             function turnOn(){
110                 timer = setInterval("move()", 50);
111                 isOn = true;
112             }
113
114             function turnOff(){
115                 clearInterval(timer);
116                 isOn = false;
117             }
118         </script>
119     </head>
120
121     <body onload="drawCircle()">
122         <center>
123             <h1>Basic Animations</h1>
124
125     </br>
126     </br>
127
128         <canvas id="myCanvas" width="500" height="200"
129             style="border:2px solid rgb(195, 195, 195);">
130             Your browser does not suppport the canvas element
131         </canvas>
132
```

```html
        </br>
        </br>
            <input type="button" name="Play" value="MOVE"
                onclick="move()"/>

            <input type="button" name="Auto" value="AUTO"
                onclick="toggleTimer()"/>
        </center>
    </body>
</html>
```