

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title> Monster Match </title>
5
6   <style>
7     body {
8       text-align: center;
9       background: linear-gradient(90deg, rgb(255, 255, 255) -30%, rgb(255, 115, 0)
10 50%, rgb(255, 255, 255) 130%);
11   }
12 </style>
13 <script>
14
15   // initialize global variables here
16   var gameState = "game over";
17
18   var cardsPerdeck = 8;
19
20   var player1DeckArray;
21
22   var player2DeckArray;
23
24   var currentIndex1;
25
26   var currentIndex2;
27
28   var player1Card;
29
30   var player2Card;
31
32   var imageArray = ["monster1.svg", "monster2.svg", "monster3.svg",
33 "monster4.svg"];
34
35   //image file for the currentindex (player1DeckArray[currentIndex])
36
37   //Description: Return a random interger, n, such that min <= n <= max
38   //Citation: Mozilla Foundation, https://developer.mozilla.org/en-
39 US/docs/Web/JavaScript/Reference/Global_Objects/Math/random
40
41   //Input/Parameters: Two floating point numbers, min and max
42   //Output Return: Returns a random interger between mix and max
43   function randomInt(min, max){
44     min = Math.ceil(min);
45     max = Math.floor(max);
46
47     return Math.floor(Math.random() * (max - min + 1)) + min; //inclusive on
48 min and max
49   }
50
51   function displayRandomCard(){
52
53   }
54   // write a formatImage function based on your Marvel project
55   function formatImage(inputArray, index){
56     var fileName = inputArray[index];
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56         var output = "<img src='monsters/' + fileName + '' width=200  
height=300>";  
57         return output;  
58     }  
59     // this function starts a new game of Monster Match  
60     function startNewGame(){  
61         document.getElementById('gameMessageId').innerHTML = "";  
62         gameState = "play";  
63         player1DeckArray = [];  
64         player2DeckArray = [];  
65         for (var i = 0; i < cardsPerdeck; i++){  
66             var index = i % 4;  
67             player1DeckArray.push(imageArray[index]);  
68             player2DeckArray.push(imageArray[index]);  
69         }  
70         console.log(player1DeckArray);  
71         var curCard1 = formatImage(player1DeckArray, 3);  
72  
73         var curCard2 = formatImage(player2DeckArray, 3);  
74  
75         dealNewCards();  
76     }  
77  
78     function updateCounters(){  
79         document.getElementById("p1CountId").innerHTML = "Cards Left: " +  
player1DeckArray.length;  
80  
81         document.getElementById("p2CountId").innerHTML = "Cards Left: " +  
player2DeckArray.length;  
82     }  
83  
84     function dealNewCards(){  
85         // update the currently-selected index for each deck of cards to an  
(appropriate) random value  
86         currentIndex1 = randomInt(0, player1DeckArray.length - 1);  
87         currentIndex2 = randomInt(0, player2DeckArray.length - 1);  
88         // update the currently-selected card for each player  
89         player1Card = player1DeckArray[currentIndex1];  
90         player2Card = player2DeckArray[currentIndex2];  
91         // update the displayed images  
92         var player1PicCode = formatImage(player1DeckArray, currentIndex1);  
93         var player2PicCode = formatImage(player2DeckArray, currentIndex2);  
94  
95         document.getElementById("image1Id").innerHTML = player1PicCode;  
96         document.getElementById("image2Id").innerHTML = player2PicCode;  
97         // call the function that updates the card count  
98         updateCounters();  
99     }  
100  
101     function checkForWins(){  
102         // if Player 2's deck has no cards in it:  
103         if (player1DeckArray.length == 0){  
104             document.getElementById("gameMessageId").innerHTML = "Player 1 has won this  
game! Player 2 has no more cards!"  
105             gameState = "gameOver";  
106         }  
107         // 1) tell the user that Player 1 has won  
108         // 2) set the game state to "game over"  
109         if (player2DeckArray.length == 0){
```

```
110     document.getElementById("gameMessageId").innerHTML = "Player 2 has won this  
game! Player 1 has no more cards!"  
111     gameState = "gameOver";  
112 }  
113 }  
114  
115 function checkMatch(event){  
116     var curKey = event.key;  
117     if(gameState == "play"){  
118         if (curKey == "a"){  
119             if (player1Card == player2Card){  
120                 document.getElementById("gameMessageId").innerHTML = "Player 1 has  
claimed the match<br>Press \"\n\" to deal the next card!";  
121                 player1DeckArray.push(player2DeckArray[currentIndex2]);  
122                 player2DeckArray.splice(player2Index, 1);  
123             }  
124  
125             else{  
126                 document.getElementById("gameMessageId").innerHTML = "Player 1 misfires,  
and gives up their card!";  
127                 player2DeckArray.push(player1DeckArray[currentIndex1]);  
128                 player1DeckArray.splice(currentIndex1, 1);  
129             }  
130             gameState = "pause";  
131             updateCounters();  
132             checkForWins();  
133         }  
134         else if (curKey == "l"){  
135             if (player2Card == player1Card){  
136                 document.getElementById("gameMessageId").innerHTML = "Player 2 has  
claimed the match<br>Press \"\n\" to deal the next card!";  
137                 player2DeckArray.push(player1DeckArray[currentIndex1]);  
138                 player1DeckArray.splice(currentIndex1, 1);  
139             }  
140  
141             else{  
142                 document.getElementById("gameMessageId").innerHTML = "Player 2 misfires,  
and gives up their card!";  
143                 player1DeckArray.push(player2DeckArray[currentIndex2]);  
144                 player2DeckArray.splice(currentIndex2, 1);  
145             }  
146             gameState = "pause";  
147             updateCounters();  
148             checkForWins();  
149         }  
150         else if (curKey == "n"){  
151             if (player1Card == player2Card){  
152                 document.getElementById("gameMessageId").innerHTML = "Is there an  
unclaimed match on the board still.....?";  
153                 gameState = "play";  
154             }  
155             else{  
156                 dealNewCards();  
157                 document.getElementById("gameMessageId").innerHTML = "";  
158                 gameState = "play"  
159             }  
160         }  
161     }  
162  
163     else if (gameState == "pause"){
```

```

164         if (curKey == "n"){
165             dealNewCards();
166             document.getElementById("gameMessageId").innerHTML = "";
167             gameState = "play";
168         }
169     }
170 }
171 function showInstructions(){
172     var instructions;
173     instructions = "<br> <br> Each player has a deck of monster cards. Each round,
a <br>";
174     instructions += "player will reveal a random card from their deck. If the
<br>";
175     instructions += "cards match, it is a \"monster match.\" The fastest player
<br>";
176     instructions += "can claim the other player's card (it is removed from the
<br>";
177     instructions += "deck of the slower player's deck and added to the faster
<br>";
178     instructions += "player's deck). Player 1 can claim a match by pressing \"a\"
<br>";
179     instructions += "before player 2 can claim the match by pressing \"I.\" If a
<br>";
180     instructions += "player presses \"a\" or \"I\" when there is not a match, they
<br>";
181     instructions += "will give up their card. If the cards don't match, press \"N\"
<br>";
182     instructions += "to start the next round. When a player has claimed all the
<br>";
183     instructions += "other player's cards, that player wins the game.";
184
185     document.getElementById("displayInstructions").innerHTML = instructions;
186 }
187 </script>
188 </head>
189 <body onKeyUp="checkMatch(event)">
190     <h1>Monster Match</h1>
191
192     <input type = "button" value="Start New Game:" onclick= "startNewGame()">
193     <input type = "button" value="Show Instructions" onclick= "showInstructions()">
194
195     <div id="displayInstructions"></div>
196
197     <table style = "margin-left:auto;margin-right:auto;">
198         <tr>
199             <th><span id="player1Id"></span></th>
200             <br>
201             <th><span id="player2Id"></span></th>
202         </tr>
203         <tr>
204             <th><span id="image1Id"></span></th>
205             <th><span id="image2Id"></span></th>
206         </tr>
207         <tr>
208             <th><span id="p1CountId"></span></th>
209             <th><span id="p2CountId"></span></th>
210         </tr>
211     </table>
212
213

```

```
214     <div id="gameMessageId"></div>
215     </body>
216 </html>
```