### **Challenge #5: JavaScript - Memory Card Matching Game (Part 2) (30 minutes)**

You will create a memory card matching game where users flip cards to find matching pairs. The game should keep track of flipped cards and notify the player when they find a match or fail to do so. The game ends when all pairs are matched. This challenge will test your logical reasoning and ability to manage complex game states using DOM manipulation and event handling.

In this exercise, we will complete the game where:

* The users will flip cards to find matching pairs.
* The game should **keep track of flipped cards** and **notify the user** when they find a match or fail to do so.
* The game ends when **all pairs are matched**.

#### **Instructions**

1. **Skeleton Files**:
   * Copy all solution files from **Challenge4** into (a new folder you have to create) **Challenge5**.
   * You cannot continue without completing **Challenge 4**.
2. Don’t forget to use **Chrome Browser’s InCognito mode**.
3. Please remember to **hard-reload/refresh** (the main HTML page in the web browser upon making changes to the HTML file (if any), the CSS file (if any), and the JavaScript file (you will make changes here for sure).
   * **Windows**: CTRL + SHIFT + R
   * **Mac**: command + SHIFT +R
4. Add more code or modify existing code in the HTML, CSS, and/or JavaScript files as follows:
   * **Task 1**
     + Add an **<h1>** in HTML such that it shows the **Total Score** accrued by the user in a game session.
   * **Task 2**
     + In the Part 1 solution, all cards are shown (face up) at the point of new game board generation. Fix this such that all cards are ‘hidden’ (face down).
     + Please refer to cards/hidden.png as this can be used as the “hidden” card.
   * **Task 3**
     + When a card is clicked on by the user, it must be *flipped* and its **face shown**.
   * **Task 4**
     + According to the game rules, only **2 cards at a time** can be shown **face up** simultaneously. Add more code to ensure this.
     + When the **2nd card** is *flipped* and its **face shown**, your code must compare it to the **1st card** (that is already *flipped* with its **face shown**).
       1. If both cards match, then **add 1 point to the total score**. Both cards can **remain facing up**. Make each card (image) **opacity** to **0.5**.
       2. If both cards do NOT match, after 2 seconds, flip both cards again such that they are **hidden**.
     + When all cards are **matched**, the **Total Score** <h1> heading should display **“All Matched, Congratulations!”**

*See below for example output screens*

| home.html (upon loading this page for the first time - the user hasn’t clicked on any buttons) |
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|  |

*See more examples in the next pages*

| home.html (user selects **Brandon** and **Darryl** - and then clicks on the button) |
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|  |

*See more examples in the next pages*

| home.html (subsequently, user clicks on **1st card**) |
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|  |

*See more examples in the next pages*

| home.html (subsequently, user clicks on **2nd card**) |
| --- |
|  |

*See more examples in the next pages*

| home.html (since the two cards **DO NOT MATCH**, **after 2 seconds**, both cards will be **hidden**) |
| --- |
|  |

*See more examples in the next pages*

| home.html (subsequently, user clicks on **2 cards** and **it is a match**) |
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|  |

*See more examples in the next pages*

| home.html (since the two cards **MATCH**, **after 2 seconds**, both cards will have **opacity of 0.5** and the **total score** has increased from 0 to 1) |
| --- |
|  |

*See more examples in the next pages*

| home.html (subsequently, user clicks on **2 more cards** and it is a **MATCH** - **after 2 seconds**, both cards will have **opacity of 0.5** and the **total score** has increased from 1 to 2) |
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|  |

*See more examples in the next page*

| home.html (When **all cards are matched**) |
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