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Final Project

1. .
2. Design: There are 16 cards lying face down in the center of the screen. When a card is chosen, the image of either a fruit or vegetable will be displayed. Once the second card is chosen, they will both continue to display for 2 seconds before either disappearing or flipping back over. If the user has a match or did not have a match, a message telling them of this will display in top left corner of the screen inside of the pink border. Once the game is complete, the restart button will refresh the page, allowing the user to try again. Variables referencing the divs and button from the HTML document to the js file, empty arrays to hold the images of the chosen cards and the names of the chosen cards, the array to hold each card name and image (doubled), function to display the cards to the screen, function to allow only two cards to be flipped at a time, function to decide if there was a match, functions to display to innerHTML the message of either, eventlistener for the button, and a function to refresh the screen are all the main components required for the javascript. Styling within the HTML style element for the card display div, the message div, button margin, and the button are used. Complete algorithm is written amidst the code.
3. My most helpful resource was from <https://www.youtube.com/watch?v=tjyDOHzKN0w>, which helped me create the two main functions I was really struggling with—chooseCard() and match(), which are the main portions of the code itself. I was able to make my own adjustments but getting started felt overwhelming and I needed some support that the recorded lectures were not able to provide with the more complex tasks. This resource helped me set up empty arrays to use inside of these functions, pushing data into them—I don’t believe I would have been able to figure this out on my own, unfortunately. This was also the only tutorial that was the closest to what we have learned in class, the other online tutorials were more complex with functions and used things I have never heard before, so I didn’t feel comfortable referencing them. Ultimately, it forced me to look into the recorded lectures multiple times and take better notes in order to understand what I was struggling with (breaking down algorithm, empty arrays to push data into, how to choose two cards before moving onto the next function, how to flip the card to the other image). The recorded lectures were a huge resource for me, particularly both of the events videos and the array video, where I was able to review and piece together some of my missing information and to better understand what I was seeing on the internet. The events video helped with query selector, class names, datasets, adding event listeners, setting attributes and setting timeouts. The arrays video helped me begin with creating my array to hold each of my card’s info (name and image), styling divs, how to get my cards to display to the screen with a for loop, creating elements, and setting attributes—this helped me get a good start before looking for other resources. The textbook, <https://eloquentjavascript.net/15_event.html>, chapter 15 was a helpful resource, where I referenced how to use .querySelectorAll for my image elements in my match function. This source, <https://www.youtube.com/watch?v=zYS4J9m3SsU&list=PLLX1I3KXZ-YH-woTgiCfONMya39-Ty8qw&index=4>, helped me figure out how to wrap my cards down so they weren’t all in one row, for the css styling. My final resource was <https://www.codegrepper.com/tpc/reload+page+on+button+click>, where it taught me how to refresh a page via javascript.
4. My first problem that I came across when starting the project, which honestly took way longer than I want to admit, was getting my cards to display to the screen in a way that I could create a function to flip them. I first began with creating 16 separate divs with class names and datasets to hold the image path and styled it to look like it currently does. However, when I went to create a function to display the other side when clicked, I couldn’t figure out how to set the attribute to the clicked card to a source and then use the dataset image path. I decided maybe I should create image elements for each div and move the information there, then eventually removed the divs completely. I put the divs back and then tried to loop through them so I could add the images that way and tried to throw an if statement to make the cards flip, but this made all the cards change to the card image I chose. I got this idea from the events video, specifically around the 7 minute mark, where there was a container div with other divs in it that could be selected and display the dataset value in the innerHTML. This proved too confusing for me to understand what I was supposed to do, so I moved onto the arrays lecture video to see if maybe an array would be the better choice to hold my information, which it totally did because it showed me how to display my cards via creating elements, setting attributes, and appending them to the document. Once I figured it out, I felt very relieved. This language does not come easily to me at all and I don’t feel confident or comfortable with it the majority of the time, so this was huge for me—seeing the tutorial video after doing this was a huge confidence boost too, since she did it the same way. It took her a minute to show me how to do something that took me an entire evening to figure out on my own. Each session was broken up based on how much time I spent struggling or how frustrated something made me. So, my first day I collected all of my images and resized them and set up my html document with divs and the basic of styling. I began a loose algorithm, trying to figure out what all I would need to do in order to complete this. My second session, I set out on figuring out the rest of the styling (resource that finally helped with an issue above) and moving onto my biggest problem previously mentioned. Across the next two sessions, I moved onto reviewing lecture videos and taking better notes and reviewing some of the textbook to make sure I understood functions, arrays, and everything that comes with events. During those two sessions, I worked towards creating functions to utilize event.targets, setting/getting attributes, adding event listeners, and if statements—I eventually had to find a tutorial online to help when I finally became too frustrated to figure this out on my own, and stopped after watching. Session four, I began to cross reference the tutorial, lectures, and book to see how I could make my own adjustments and understand what they were telling me to do for those two functions. Session five, wrapping that up and working on displaying my message via functions and setTimeouts. Session six was dedicated to figuring out the restart button, which was going down quite a few rabbit holes on how to reshuffle an array and reset the board, but ultimately landing on refreshing the page because I either didn’t understand what I was being told to write or I couldn’t get it to work and eventually got frustrated and quit. Session seven was my final session, where I tidied up my code, touched up my algorithm, and asked for feedback from a friend. This class has been an extreme challenge and has shown me that I am probably not cut out for programming and that I really require a more dumbed down version of class—I wish things were broken down further, lectures/labs didn’t feel so rushed, and we were taught how to do our research online because this is very daunting and much easier said that done. Ultimately, I’m happy to be done with this project.