4HC3 - Assignment 2

Sida Wang

400072157

Divergent thinking Ideas:

- Shows images in a row and show relations cards in a row below it. Put those rows in a division. Display an info-box on the top of the division to tell the user what to do. In this case, the user will need to click on an image and then click on a relation. The images and relation cards will disappear if they are matched. The UI will display a congratulation effect(such as a firework) and show the paired relation and picture in a pop-up window once each pair is matched.

- Display an info-box on the top of the UI to tell the user what to do. Put all images as a stack of virtual flashcards in random order. The name and relationship are labeled on the flashcards as well. The user will be able to observe and memorize the relationships immediately when he/she looks at a flashcard. The user will need to drag the card on the top of the card stack to remove it and move to the next one.

- Display an info-box on the top of the UI to tell the user what to do. Put all images in a stack. Show one image at a time and display four flip cards with it. Each card has a relation and a name on it but only one card of four is the correct one. The user could click on the card to flip it and to see if it is the correct one. The user can also go back and forth between different images to practice their memorization of family members faces, names and relationships. After the practice of all images, there will be a congratulation sign for the completion.

Design Rationale:

◆ **To design the GUI for the target user:**
- Since the target user is an elderly person, I intentionally used larger sizes for fonts, images, cards and buttons so that the user can easily see and click on it.
- I tried to minimize/reduce the complexity(fewer buttons, different colors for buttons, info-box and flip cards) of the GUI to make it more user-friendly for elderly people.
- Unlike younger generations, elderly people may have difficulty using web GUIs. Therefore, I put an info-box on each iteration of the window to tell them what to do for a specific step.
- I believe that some of the keys to help mild cognitive impairment to early stage dementia patients is to communicate with them with patience and encouragement. Therefore, I put some encouraging sentences/words in the info-box to warm his/her heart and encourage him/her.
   - e.g.   "Don't worry if it's wrong, go try again!"

     "You're doing great. All of them are done perfectly."

◆ **To make the GUI responsible for both desktop/tablet and smartphone screen sizes:**
- I used Boostrap grid layout for the design. Also, most of the components I used are from Boostrap and they adjust responsively based on screen size.

◆ **There are some interactivity in my design, listed below and ordered by priority:**
- Click and hold on a flip card to flip it and show correct/incorrect.
- Click on back/next buttons to move between different images back and forth.
- When finished, click on the button on the congratulation window to restart the practice.

◆ **The GUI events with JS are listed below:**
- The start button on the first window acts as a trigger to the event that the start window disappears and the image window appears. The DOM manipulation is accomplished by using JS to change HTML/CSS styling and JQuery fade-in/fade-out.
- The next/back buttons on the image window enable the image change event. JS was used to detect which image is on the image window and disable buttons when the first/last image is displayed. The DOM manipulation is accomplished by using JS to change HTML className.
- The go button on the congratulation window enable the restart practice event. The DOM manipulation is accomplished by using JS to change HTML/CSS styling and JQuery fade-in/fade-out.