NOTES FOR FUTURE PEOPLE WORKING ON THIS PROJECT

- Assumed audience: people who have a good understanding of knowledge tracing and probably BKT => looking to possibly change to DKT but don't understand/trust it enough to do so

- Very little written stuff => the stars are the visual representations

- THE FLOW
  - Introduction to the whole thing
  - Explanation of deep learning first
    - Show difference between human thinking vs computer thinking with the constellation example
  - Link it back to DKT and show with bubble page what features a neural network might take into account when focusing on DKT
  - Introduce skill mapping bc an in-depth full out DKT is way too complicated
  - Training neural network using skill mapping
  - Play ball game using that trained network
  - Pan out to the big picture and show that skill mapping is just one section of DKT

- Test subject responded very well to the visuals
  - Obviously there's very little written stuff in this explainable => the stars are the visuals and drawings
    - People seemed to like the quaintness of the visuals looking hand drawn, but change it up if you think people would respond better to crisper images
  - Please feel free to redraw stuff since these visuals were just me in Illustrator using a trackpad…but keep in mind that these visuals got very good responses because of their simplicity and straightforwardness. So if you redraw stuff to make ti look better, I suggest you keep the theme of the visual the same

- The ball game
  - The ball game is the meat of the explainable. It's what all the other explanations are leading up to. It's the final representation of a simulated DKT and is the end product of the user's new understanding of deep learning, training, skill mapping, etc.
    - This is the section of the explainable that also needs the most work
    - More questions needed - maybe write a script to help you out
    - I HEAVILY apologize for the clunkiness of the coding for this section. It's actually so awful with ridiculously long functions. I'm serious. Tear apart this code if you want and remake it (will probably be necessary anyway)
    - Animation to make balls go into jars
    - Better way of displaying balls than a 2D array on a canvas
      - Maybe use a physics engine? I didn't have time to get into this
  - Feel free to absolutely eviscerate this page and redraw/reformat/reprogram whatever you need to in order to make it flow well and look good
  - The hope is that these math questions and such go on basically forever. The user should just keep interacting and trying math questions and seeing how the balls/jars behave until they're satisfied and then they just move on to the final page

- The point of this explainable is to create a general understanding of deep learning and DKT. The user won't suddenly understand what happens inside the nodes of a neural network, but they should be able to see that a neural network isn't a total blackbox. The hope is that this explainable will help people to understand the intuition behind DKT and they'll in turn trust it more

- There's a lot of reformatting needed
  - I stayed mostly in the planning/paper prototype testing phase for my summer and didn't have time to go in depth with Javascript and CSS, so there are a lot of issues with page resizing and reformatting that need to be fixed

- PLEASE reach out to me if you have questions about any parts of the explainable. I had a lot of fun with this project and hope that you do too
  - My unix is klh5 :)