For those continuing our work

As the summer semester nears the end, use this document to keep track of what is important for us to keep our focus on. Below is a list of tasks that are important for us to complete:

- Complete classroom 5 (heat maps)
    - Teach the player what a heat map is and how to read it
        - ie: what does warm colors and cold colors tell us?
    - Have the player place colored blocks over each of the tiles to check their understanding of correlations
    - Have an end of class survey that checks their understanding of why certain tiles will be strongly correlated, ask questions about why some may have no correlation
        - Columns will have a strong correlation with themself
        - What could a lack of correlation tell us about the data?

Important Note:

In this classroom we were only able to create an empty grid of tiles. These tiles are buckets that will contain a number that corresponds to the value in the heatmap but not have any color. The player will then take a colored ball and place them in each corresponding bucket depending on the correlation. We planned on having four different colored balls, a red for values greater than 0.75, orange for values between 0.5-0.74, light blue for values 0.25-0.49, and a dark blue for values less than 0.24. We had a small bug with the lighting in this classroom, as we took out some objects from the classroom but it left a shade where the objects used to be.

Our vision for this classroom was to have the player read a small canvas explaining what a heap map is and understand what correlations between variables can tell you about the dataset. Once the player completed the activity (with a 5x5 or 6x6 grid instead of doing all 100 squares) they can check it with an image of the actual heat map. Then before they leave the classroom they will take a survey that checks their understanding of heatmaps with hints if they get the question wrong.

- Implement UI changes to classrooms 1-4
    - Make it look nicer

- Add more layers of interactivity to keep engagement
    - What are features that can be added to make it feel more like a game, not a museum?
- Add animations for end of class surveys
    - Add features to allow the player to get more hints/help when they get it wrong
        - How can we make sure they leave with the takeaway from the lesson plan?
    - [Check with this link about the questions we want to change the surveys to](#)
- Complete a potential classroom 6
    - Teach the player how to read scatter plots
    - Create a lesson plan that will be interactive for the player but teach them what a scatter plot is, how to read it, and how this can tell you more about the dataset
    - Create an end of class survey to reflect the lesson plan
- Fix lighting bug in the hallway
    - From the player spawn, if they go right there is a hole in the wall and lighting issues

Explanation of Golden Path:

- Ensure that each classroom follows the golden path:
    - First classroom will teach the player how to import a data set
        - Ask the player different ways we can import a dataset into an environment such as Jupyter notebooks
    - Second classroom will teach the player how to handle missing values
        - Very important classroom
        - How do you handle NaaNs? Knn, mean/median/mode
    - Third classroom is making univariate models
        - What can these models tell us?
    - Fourth classroom is looking at bivariate models
        - Now that we have color coded histograms by diagnosis can we learn more about the data?
    - Fifth classroom is focused on heat maps
    - Sixth classroom is teaching the player scatter plots
        - Besides adding the models, what are features we can implement to make it more interactive
        - How to read scatter plots, what does this mean for our data?
            - Is there any story with this data?
    - Potential seventh classroom
        - Looking at columns with and without outliers
        - How does this affect the data?