## Criterion A: Planning

**Running the Program:** The program can be run from the browser, by copying the file path of the Login.html as it is on your device – when implemented with Mathnasium, a domain will be purchased.

**Defining the Problem:**
Client and Advisor: My client is **Mathnasium**, where I am employed, and the representative of the client that I am going to communicate with for my IA is **Brooks Franklin**, who leads online operations for the six branches under Angie Yuan in Mathnasium. The company itself is a mass-tutoring mathematics service, which offers in-person and online services with multiple instructors available to teach the Mathnasium curriculum to customers. My advisor will be my mother, Thamaraiselvi Durairajan, a computer programmer with 20+ years of experience in the field.

Problem: Brooks has noticed that on several occasions, parents of Mathnasium children have reached out to instructors to ask for the amount of LiveSchool points their child has (assigned everytime a child comes in based on performance), decreasing time spent on math material and portraying Mathnasium in a negative light due to the lack of ease of accessibility of this information to their consumers. Also, he stated that communication between the company and its consumers has been damaged through the pandemic, evidenced by cancellations by customers due to inconveniences that were never ably communicated (i.e. "one parent cancelled as assessments took too long and took up too many sessions, something they never told us"). By communicating to parents daily instructor feedback, this communication could improve.

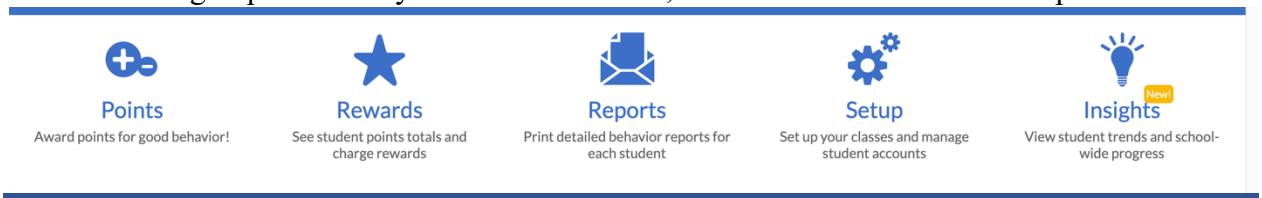


*Figure 1: Liveschool*

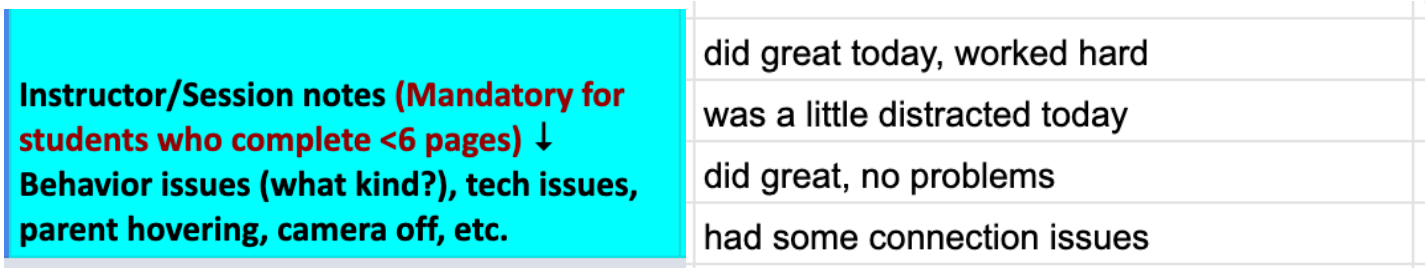


*Figure 2: Sample of Google Sheets Data*

I am creating a website, called Mathnasium, that will give parents, the customers, easy access to statistics and notes on their children's behavior.

**Rationale for the Solution:**

I am using JavaScript, HTML, CSS, Fetch API, and Google Sheets API to create a website which parents can bookmark for convenience. I will need to learn how to update data on a google spreadsheet using just code and be able to read data from a google spreadsheet to display on a HTML page in an organized and readable manner. For me, this is a great challenge and learning opportunity due to my inexperience with all of the languages but JavaScript (I know basic JavaScript). This will aid Mathnasium greatly, as it helps increase customer satisfaction (in turn retention, and in turn, revenue), and reduces employee time spent on consumer problems, hence increasing worker productivity.

**Success Criteria:**

| # | Main | Subsections |
|---|---|---|
| **1** | Update the day's data in Google Sheets | a. Use Google Sheets functions to create numbers from numerical and alphabetical data and import necessary data |
| **2** | Update student's total Liveschool points | a. Update on the Google Sheet by adding the points of those who came to Mathnasium on the day of the program running using JavaScript and Google Sheets API |
| **3** | Enable log-in and logout | a. Display error message if user's input is not seven digits long<br>b. Display error message if student name and ID do not match<br>c. Display error message if none found in database<br>d. Change UI based on authentication status of admin or customer<br>e. Logout button on customer and admin pages should redirect to log-in page |
| **4** | Read spreadsheet and retrieve data for ID entered | a. Utilize Google Sheets API and Fetch API in conjunction with JavaScript to read data from Google Sheets<br>b. Store locally for use in other HTML pages or immediate use |
| **5** | Display data to customers | a. Display total liveschool points of student<br>b. Display the five most recent comments for customer, with scroll bar if too long<br>c. Display name of customer |
| **6** | Admin should be given ability to search, using ID, for any given student | a. Display error message if ID input not seven digits long<br>b. Display error message if valid ID not found in database<br>c. if ID found, display name, Liveschool points, and last five comments associated with ID<br>d. Only change displayed data if another successful ID is entered |
| **7** | Organized UI | a. Ease of use and clean interface for a good customer experience |

Word Count: 406