Criterion A: Planning

Defining the Problem:

Client and Advisor: My client is Gurukul Deep se Deep Jale (DSDJ) and I will be communicating with program leader Monika Kannadaguli. The program serves to educate youth (mostly kindergarteners) on Hindi and Indian culture through high-school teacher-interns who had previously learnt Hindi in Gurukul for six years. The class structure consists of Hindi and culture sessions led by the two lead teachers. There are also breakout room sessions, in which the culture teacher, Hindi teacher, and the two DSDJ interns commandeer one of three rooms in which the students are split into thirds, offering a more personalized experience as they handle less kids. I help oversee and evaluate teacher-interns, giving comments to improve performance and grades. My advisor will be my mother, Thamaraiselvi Durairajan, who has lengthy object-oriented programming experience as a decades-long software engineer and has worked with Java extensively.

Problem: Interns rarely check the Google spreadsheet in which they are being graded on, and hence do not act on their feedback in a timely manner between classes to teach better. Also, the large nature of the classrooms and the short nature of the time spent with each kid in an individual manner can lead to struggles for interns to connect with children. In my experience as a teacher-intern in the previous year, I tended to gravitate towards and spend more times with certain students. Mrs. Kannadaguli also complains of the lack of personalization from interns towards the students as they do not know the students' personalities through and through. I also personally struggle with comments to give as an overseer.

> I am creating an android app which will allow interns to comment on students and view comments on their own performance from overseers, who are aided by comment suggestions.

Rationale for the Solution:

My app will improve intern interactivity with students and the general experience for students and interns in the kindergartener classrooms. By increasing the wealth of information available to interns, they will be able to connect better with students and they can also act on feedback rapidly. The convenience element of an app increases the crucial nature of the app to improving DSDJ. I will utilize Dart, Flutter, and Android Studios to create this app in conjunction with Firebase. This serves as a challenge for me as I have never used these languages or linked data with Firebase: I have prior experience with Google Sheets which is vastly different. I will have to figure out how to make a visually appealing and extremely functional app while also working with Firebase and editing, deleting, adding, and storing data.

Success Criteria:

1. Allow overseer users to manipulate intern data
    a. Overseer can search for intern
    b. Overseer can edit comments, years of experience, classroom, and name of intern
2. Allow interns to manipulate student data

      a. Intern can search for student
      b. Intern can edit comments, classroom, and name of student
      c. Interns can add a new student with specified fields
      d. Interns can delete a student
3. Enable users to view comments from overseers in their own account
4. Create suggestion tree to help overseers comment on intern performance
      a. Small suggestion tree if intern has 1 year of experience
      b. Large suggestion tree if intern has more than 1 year of experience
5. Enable account creation for intern
6. Enable log-in and log-out for all users with proper error handling
7. Clean user interface for optimal intern and overseer experience

Word Count: 438