## CRITERIA A: Planning

**Problem:**

Our client, Ms. Richardson asked us to design a program that can identify the names of the teachers that rewarded an excess or a lack of House points for students. She asked us to design a program that can identify the names of the teachers that rewarded an excess or a lack of House points for students.

As for the context, in SSIS, students are assigned to 4 Houses: Shenlong, Naga, Wyvern, and Hydra. Throughout the school year, each house can earn House Points, and the team with the most House Points will win the award for the Best House of the Year. Students can earn points from teachers who give them out for exemplary actions that meet our core values, such as academic excellence, respect for all, etc.

However, because the points are awarded by teachers who also belong to certain houses, Ms. Richardson is concerned that the points assigned could be biased. As teachers give an inadequate amount of House Points away to the students and as a result, fail to recognize the students' effort, especially those who deserved the rewards.

We volunteered to solve Ms. Richardson's problem by designing a GUI based program for storing all of the House Point transactions done by each teacher, and for informing the client when there has been an outlier done by a teacher.

Word count: 223

**Success Criteria:**

- Creates a database that will store all the user inputs, including House League points assigned, name of the teacher who assigned the points, name of the student who received the points.
- Accepts the user input for the amount of House League points given out, who assigned it, and who received it.
- Accept only valid user entries into the database.
- Decline every other user entry that isn't valid.
- Displays a menu for teachers that want to assign house points.
- Displays the top 10 highest points given transactions in a table.

**A rationale for the proposed solution:**

The program will allow the teacher to assign points given to the student in order to award them appropriately for what they have done well. If there are any outliers that do not match the majority of other inputted points, they will be visible to Ms. Richardson for review. The amount of points, name of the assigner, and the name of the receiver will be available for Ms. Richardson to see.

We chose to use Python for our program because Python has TkInter and TkInter has a great library of GUI functions. Having a user interface for the program will make it easier for the user to navigate the different functions that the program offers. We also chose to use Python because we need a place to store all the data with the amount of House League points assigned, the assigner, and the receiver. We were going to need something like a database. SQL is a programming language that manages data by storing data in databases, and it works seamlessly with Python. SQL allows us to use a database that can store the different amounts of House League points data that will accumulate with use over time.

Word count: 197