Criterion A:

    a. Defining the problem

        Our client's high school has a system called house leagues. Every student and teacher is a part of one house. The number of houses changes every year. Houses compete with each other for a year to earn the most house points. House points can be earned through house league activities, where all the houses gather for a competition once in a few weeks. A teacher can also award house points to a student when the teacher thinks a student did something extraordinary. The house points awarded to a student then adds to the total house points of the student's house.

        Currently, there is not a way to keep track of how many points each teacher has awarded to each house. Our client is suspicious that some teachers are awarding an unusual amount of house points to their own house. She wishes to be able to see reports of house points and points awarded by teachers. (Transcript of the interview with client can be viewed in Appendix A)

        To solve her problem, we proposed to construct an application that provides a report on the top 10 teachers based on the number of points awarded within a specific time frame and another report that presents the total number of points of each house. The reports will be presented when she chooses to enter the application and view the reports. The application will also allow the client to manually insert newly awarded house points.

    b. Rationale for solution

We decided to build an application for these following reasons:
- It can be designed to be aesthetically appealing
- It is easy for the client to interact with
- It can easily be shared to the client

We decided to use Python for these following reasons:
- It is a higher level language; therefore it is easy to understand
- There are lots of extensive support libraries
- It is easy to incorporate relational database and graphical user interface

We decided to use a relational database for these following reasons:
- It is easily accessible by Python
- It is easier to maintain data integrity
- Complex queries are easy to carry out
- Multiple people can access the database

    c. Success Criteria
1. User should be able to choose to view the house points report, view the teacher report, or enter new house points awarded.
2. The teacher report should present a table the names of the top 10 teachers who awarded the most house points within a specific period of time.
3. The house points report should present a table with the name of each house and the total points of each house.

4. User should be able to choose the time frame for the teacher report.
5. When the user enters house points, the user should be able to enter the name of teacher, name of house, number of house points awarded, and the date when the house points were awarded.
6. If the user enters anything invalid, the user should be notified of an error.
7. The user should be able to enter points awarded or view the reports as many times as she wants consecutively before closing the window.
8. When house points are entered, the report should be updated accordingly the next time the user sees it.
9. The user should be able to exit the application gracefully.
10. The user should be able to clear everything (house points, houses, teachers)
11. The user should be able to enter new teachers and houses.