Criteria A: Planning

Scenario

Ms. Richardson is a teacher in a school with a point system called "House Leagues" in highschool. Currently, there are 4 houses, and each student and teacher is assigned to a house based on their advisories. Houses can earn points by winning event activities or when a teacher gives a house points based on a student's commendable actions.

During the meeting with the client, she said she was worried that some teachers might be assigning too many points, so she wants to monitor which teachers add points (Appendix 1). She thinks if one teacher is assigning all the points, it's unfair. After consulting with her, I suggested that I make a program that accesses data from a database and is able to give reports of how many points teachers assign. The program will be shown through a graphical user interface to make using the program easier and more straightforward for the client.

Rationale

In order to solve her problem, I decided to use a database for storing information and a graphical user interface. Using a database can update or modify information and organize the data in different tables neatly and clearly, so it is easy to only show the information about house points through SQL statements within my code. Using a database will be suitable than using files because databases are more structured than files. In addition, since there will be a relationship between houses and teachers, using a database to relate the two would be much easier.

Also, I will be making a graphical user interface instead of a console-based program because although a console-based program would be easier to code, a graphical user interface would be much easier for my client to use. I will use Python because it contains third-party modules that can be implemented in the code such as having the graphical user interface using Tkinter.

Benefits of using database and python:

    Database
    - Data integrity
    - Can perform query statements
    - Reduces data redundancy
    - Independent from the applications programs
    Python
    - High-level language
    - Can access and interact with a database
    - Can create a graphical user interface using tkinter
    - Can construct the graphical interface and the structure of the program in one file

Success Criteria

1. The client gets a report of top 10 teachers assigning the most points by clicking a button
2. The client gets a report of the total house points for each house by clicking a button
3. The program presents the reports in a table format
4. The client can add a new house and set its house color
5. The client can click a button to reset house points each year
6. The program shows a message to check if the client really wants to reset points
7. The program shows a message when there are data entry errors
8. The client can exit/cancel the program when the client clicks an exit button

Word Count: 362