Criterion A : Planning

**Defining the problem**

The Client, **Liesta**, is one of the DP assistant Coordinator in the school Tunas Muda. During her time working, one of her major problem in the school is that the students are coming late and/or skipping school and/or violating the rules. She mention that the school does not have a reliable way of recording / tracking the violations that the students made. ( see Appendix A ) This is due to the lack of people who is responsible on working. During this time, she decided to make a system that would allow the teacher to track the students’ mishap / violation. This system would allow the student to have a point system that when it reaches a certain point would make them receive their consequence, e.g. when the student has a point of 85 out of 100, they would receive a detention. Further reduction in points would make them receive more severe consequences. Security of the program would be needed in order for the student to not hack the system and change their points to avoid consequence. She also mentioned that she would like the parents to be able to see the students points and to know whether his / her daughter / son is behaving in school or not.

After meeting with the client, I was able to formulate a program that would allow the system to work. With this, I also added a way to edit, add, reduce the point and the student. The program would also be able to store some of the students data.

Word count : 258.

**Rationale for solution**

There are multiple ways in order to complete solve this problem. One of the solutions is to make a web-based program. This would be better as if the client wishes to share the program, it would be easily accessible through the internet and the given URL. During the meeting with the client, I noticed that she used 2-in-1 tablet laptop, instead of a full-size laptop. This was due to her job / position, which involves her to move rooms a lot and wants something light, allowing her to not get tired quickly. By making a web-based, she would not have to download the program to her tablet that would consume memory and time. For security of the program, to access the program a Login data is needed. This would provide a great deal of security as a password and email address is needed.

In order to make this web-based program, I would like to use HTML as the UI and the main program, however to integrate a way to store the students, teacher and the parents data / login data, a database is needed. HTML is one of the more common computing language and due to this, it would be easier for me to link the program to another type of language / program. For the database and the website, it would need MySQL and PHP. HTML, PHP and MySQL would work together in order for the website to work. HTML would carry the task for the UI / User Interface, whilst PHP would make up for the web pages and the database is done by MySQL.

The other app that would be used is MySQL, this will be the database which will store all of the student’s data including the disciplinary points. This will be edited using phpMyAdmin and that would monitor the contents of the database. All of this would be done using the software called Atom and XAMPP. XAMPP is, in short terms, a control panel for HTML/UI, PHP, and MySQL. Atom is the editor for PHP and the HTML code, as well as the css file for styling of the website / program.

Word count: 357

**Criteria for success**

1. The students and teachers are able to access the website with their own login data.
2. The user is able to register new students, parents and teachers.
3. The teacher is able to edit the points of the chosen student.
4. The student’s data is shown clearly by the class the student is in.
5. The program should recognize the user ( student or teacher ) and direct to the correct page
6. Error handling should be present throughout the program. For example, login error, wrong inputs, or unable to find.