Criteria A- Planning

# Defining the Problem (with reference to Interview #1 in Appendix A):

After conducting an interview with the swimming instructor, and on multiple observations of the swimming sessions, I found that there is a student performance management system; however, it’s are not implemented efficiently. At the very surface, it was clear the system lacked apt organization of data in a sequential and well-organized manner[[1]](#footnote-1). Furthermore, the current system employs a mixture of excel sheets, random notes on note apps, and random data in word documents. The swimming instructor would take a performance test each month and give a performance grade to each student. The one’s below grade 8 do not qualify for state level competitions.[[2]](#footnote-2) A performance management system for the instructor would reduce hassle and organize the existing clutter into useful information which would lead to an efficient, optimized and well-planned system that allows the instructor’s classes to run smoothly.

After the interview, I deuced that a system that could record the performance and generate reports with graphs, and a simplified database that could easily be navigated around to determine students with the least grade and also determine the students at the top of the class who may qualify for competitions.

[word count: 194]

Rationale for the solution

Firstly, the program being able to document and record performance for the student could be expanded and be used by other instructors in the school which would make the school’s sports program easier to manage and serve as the central platform to manage the students under the sports department.

Secondly, the new system will allow the teachers to divide attention between students according to their grades and will be able to provide instruction to the students who need them the most, thus, improving the students’ performance.

Thirdly, the website will be hosted on school servers to maintain privacy and security and provide a faster access to the resources as using a third-party hosting service would be slower as the school is located in a village with minimal connectivity.

I decided to make a website using HTML 5, CSS3, PHP, jQuery, JavaScript, AJAX, and MySQL rather than making a standalone application. Which would be easy to implement allow the user to access it with ease and remotely.

I decided to use HTML 5, CSS3, PHP, jQuery, JavaScript, AJAX, and MySQL because:

* CSS3 provides endless customization to the UI which can easily be integrated with the HTML 5 code and further developed on, making the UI user friendly.
* HTML 5 will allow for a simple structure to be built as the framework of the website.
* HTML 5 code can be further enhanced and modified easily as most style classes, functions and etc can be called easily.
* JQuery, JavaScript, MySQL, and PHP will allow integration of the back end to the front end.

[word count: 260]

Stating the success criteria[[3]](#footnote-3)

1. There should be a well thought out and working login system with email verification. And in case of the user forgetting the password, an easy method for the user to reset the password.
2. Creation of a database with relation to the school’s database to store performance test records, names, contact details of students.
3. All lists of students to be sorted in order.
4. The user should be able to view individual performance reports.
   1. Student reports should have a working graph which depicts student’s progress.
   2. The student report should also mention student grades over the year.
   3. The user should be able to hover over each data point and to aid the user the system should display X and Y values for that data point.
5. The user should be able to view all student’s performance grades over a year on one page.
6. The user should be able to view all relevant medical details for the students.
7. The user should be able to add new students to the system.
8. The user should be able to view his/ her profile.
9. Help and instructions and about and contact admin page to be included.
10. The user interface should be simplified and allow the user to quickly navigate around the system.
    1. The system’s interface should be designed in accordance to the conditions this system will be used under.
    2. Font styles/ families, colour scheme, and a well-organized, aligned, and responsive system should be designed.
    3. Custom theme modifications should be implemented. For example: custom scrollbars, table design, and etc.

1. Appendix A: Interview 1: Q 2 [↑](#footnote-ref-1)
2. Appendix A: Interview 1: Q 3 [↑](#footnote-ref-2)
3. Refer to Appendix A: Interview 1 [↑](#footnote-ref-3)