# Criterion A: Analysis

## A1. Definition of the problem

**The client – Mr. Wright** is a teacher at an IB school who holds the position of the CAS in-charge as well. Thus other than teaching, his responsibility is also to keep a record CAS activities that each student does. At the end of the month he has to then generate reports based on activities completed by each student. **Until now**, he has been using a manual pen and paper based method to do this. However one of his common complaints is that the manual system requires him to take large amounts of time from his busy schedule in order to maintain. This causes him to often neglect his other responsible which is a cause of great concern for him. Thus not only does he find the system difficult to maintain but he also finds it unnecessarily time consuming and inefficient.

**He has thus approached me** – to help him develop an automated computer based program that will replace the existing manual system. He has asked for a program that will allow teachers to effectively keep a log of all their CAS activities and hours completed by each student, perform calculations based on the data stored and display appropriate reports accordingly.

## A2. Justification for product

I feel that a simple console based (menu driven) computer program that aids in the generation of these reports is the best solution. There are several reasons for this. Firstly everything will be automated. Since the main concern for the client is the fact that the existing manual system is too time consuming, the use of computer program will automatically solve this problem as the client will simply need to input the data and all the calculations and reports will be generated automatically.

Besides the fact that everything will be automated, the client will also have the flexibility to generate reports based on the criteria he wants by simply selecting or deselecting the appropriate filters. This will save him time as the reports will automatically be generated without the user having to redo the calculations many times.

Furthermore, since the client is not very expert in using computers, a simple menu driven console application will be appropriate because the learning curve for such a program will not be very steep and thus the client will be able to get familiar with the program quicker than a complex graphical program that has complex windows.

## A3. Criteria for Success

Keeping the requirements of the client in mind, the program generally must be able to:

* Receive input data from the user – e.g. Names, CAS hours.
* Write the input data to hard disk for storage.
* Read the data from hard disk after data has been written
* Display the stored/processed data in an appropriately organized manner for the user.
* Provide a method of authentication for the user to prevent unauthorized access.
* Successfully perform calculations based on the data that has been entered by the user/read from the hard disk.
* Generate reports based on the calculation and display them appropriately for the user – e.g. total CAS hours complete by each student.
* Have some form of data validation and validation to make sure data entered makes sense and is free of error.
* Run efficiently with minimal errors.

[Total Word Count: 538 Words]