# Criterion E:

When interviewing my client, he expressed his satisfaction in using the system by saying that “it was very well thought out” (Baker) and that it “meets [his] needs perfectly” (Baker). He appreciated the feature packed build of the system and the tabbed pane to navigate between sections of a class easily. He mentioned that he particularly appreciated being able to view the statistics presented on the generate effort grade screen, and that “it’s very nice for me, as a maths teacher, to be able to see all these statistics” (Baker).

## Evaluation of system against success criteria:

Methods of data collection to be utilised:

* Observation – [-]
* Interview – [+]

The following table summarizes evaluation of the system against success criterion established in criterion A.

|  |  |
| --- | --- |
| **Success Criteria:** | **Evaluation:** |
| 1. The client must be able to enter the homeworks, quarter tests and semester exams given to students and mark whether or not they have been completed/the score the student has received on them on a per student basis | [-] The client was able to add, remove and mark the homeworks, quarter tests and semester exams associated to his class. |
| 2. The system should be able to generate the effort grade for a student based on composite test weighting, homework completion rate and the client’s perceived effort grade, with a 50%, 25% and 25% weighting to each respective factor | [-] The client was able to generate an effort grade that utilised the homework completion rate and EMA of a sample student’s test scores. He particularly liked being able to see the statistics be openly displayed to him to understand why the system generated the grade it did. The grade was generated using the weightings provided by my client. |
| 3. The system should weight recent test scores more than previous test scores for a student | [-] The system generated and displayed an exponential moving average of the quarter tests and semester exams prior to generating the effort grade. |
| 4. The system should weight semester exam scores as 70% and average quarter test scores as 30% to generate the composite test score weighting | [-] The system generated and displayed an exponential moving average of the quarter tests and semester exams prior to generating the effort grade. |
| 5. The client should be able to override the generated effort grade and replace the score with the effort grade the client intends to award the student, and to be able to record why the client performed this action | [-] The client was able to override the generated effort grade and store an effort grade he believed suited the student. He was also able to view the overridden grade as being stored under the student’s effort grade history |
| 6. The system should not allow for incorrect data types, incorrect data format or duplicate data to be entered, i.e. there should be error management in case invalid input is entered | [-] The system did not crash. All errors were validated. Validation followed the checks presented in Criterion B as part of the test plan. My client liked the clean pop ups indicating an error and the cause of it. |
| 7. The client should be able to view and enter the classes they teach and assign students to each class, with the data for each student being separate from other students, as no student can be in 2 classes for the same subject for the same teacher | [-] The client was able to view all the classes they teach, add a new class, assign students to a class. However, a student could be in 2 classes under the same subject for a teacher. The reasoning for this was outlined in Criterion D. |
| 8. The system should be able to save entered data to secondary storage whenever the application is closed and should load said data when it is opened, provided the directory of stored data is not changed | [-] The system implements serializable, hence the information was saved to secondary storage and loaded when the program was opened. All information was retained. |
| 9. The client should be able to view the history of effort grade data corresponding to a student | [-] The client was able to easily view all the effort grades pertaining to a student. He mentioned that although it was clean, he would have liked more contextual information on the effort grades, such as the statistics behind each effort grade, after having saved them. |
| 10.  The application should be less than 10 MB in total | [-] My system is less than 10 MB. |

## Recommendations for future improvements:

### Client recommendations:

#### Add an FAQ/help page

My client recommended that a help page or FAQ page be added so that the user could understand the order of steps to go through when they start using the system, as he found the number of pages rather daunting at first.

#### Make the system auto refresh:

My client recommended that the system automatically refresh after certain actions have been performed so that he would not have to refresh every time he made a change to the system. The auto refreshing of my system would allow for my client to not have to worry about possibly double entrying information into the system, only to receive an error message that such data exists

#### Option to contact student:

My client suggested to add the option to contact the student with the reasoning behind the awarding of an effort grade directly when reports need to be produced and to share the statistics calculated by the system. This would allow for automatic and accurate feedback to be produced for a student to identify their exact areas of weakness.

### Self recommendations:

#### Train a linear regression algorithm

By training a Machine Learning algorithm with a softmax output as the program runs, a model can be made ready to understand how student assessment and homework completion rates change through quarters. The algorithm could also be trained on the teacher’s preference scores, gradually no longer needing the teacher to input a preference grade anymore, allowing for scores to be generated at merely the click of a button.

#### Automatically produce reports of the effort grades achieved by a student

This option would allow for the process of generating reports to be integrated with the effort grade generator, easing the workload on my client while also increasing the functionality of my system. The reports could then be automatically sent to the student for whom the effort grade was produced, further easing the workload on my client.

[Word Count: 410]