# Criterion E: Evaluation

## E1. Evaluation of the product

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| **Success criteria from Criterion A** | **Fulfilled?** | **Comments** |
| Receive input data from the user. | Met | The program is able to efficiently read the data that has been entered. |
| Write the input data to HDD for storage. | Met | The program is successfully able to write the data to disk each time. |
| Read the data from hard disk after data has been written. | Met | The program is successfully able to read data after it has been written. |
| Display the stored/processed data in an appropriate reports. | Met | The program successfully displays the stores/processed data but the layout and presentation could be improved. |
| Provide a method of authentication for the user. | Met; Limited | The program does provides a form of authentication using a password - however the program does not include the ability to change the password or reset the password if forgotten. |
| Successfully perform calculations based on the stored data and generate suitable reports. | Met; Limited | The program is successfully able to use the saved data that to perform calculations but the number of reports it can generate as on now is still limited. |
| Has some form of data validation and validation to make sure data entered makes sense and is free of error. | Met; Limited | The program offers some validation and verification checks however there is still scope for including more. |
| Run efficiently with minimal errors. | Met; Limited | The program is able to run error free most of the time. However there are still some potential runtime errors that could cause the program to crash. They could be removed by further debugging. |

## E2. Recommendations for further improvement

The product works well for the most part and is able to carry out the desired task successfully. However there is still scope for improvement and some improvements could be:

* Including the ability to change the login credentials as currently the program only allows the client to assign desired login credentials when the program is executed for the first time.
* Including the ability to reset the credentials if forgotten which will also increase its versatility. Without this the client would be locked out of the application if he forgets the password.
* In its current form, the number of calculations and reports the program can generate are small. Thus an improvement could be to include a greater number of calculations and reports it can generate thus making it more useful for the client.
* Due to various limitations it was not possible to test the program in every possible runtime environment or using every possible data input. Therefore an improvement to the program could be to make it undergo through further debugging sessions in a variety of different runtime environments with a larger variety of data inputs.
* The program provides basic forms of validity and verification checks such as length checks, presence checks but it could greatly benefit if has validity and verification checks at every point where it receives an input from the user. This will not only prevent data entry errors, but can also potentially prevent many runtime errors from occurring due to unexpected data entries.
* Lastly an improvement to the program would be to include the ability for the user to edit and/or delete saved students from file. Currently once entered, there is no way in which the user can edit or remove a student making it very restricting for the user.

[Total Word Count: 562 Words]