Estimation Accuracy

Credit task 62C

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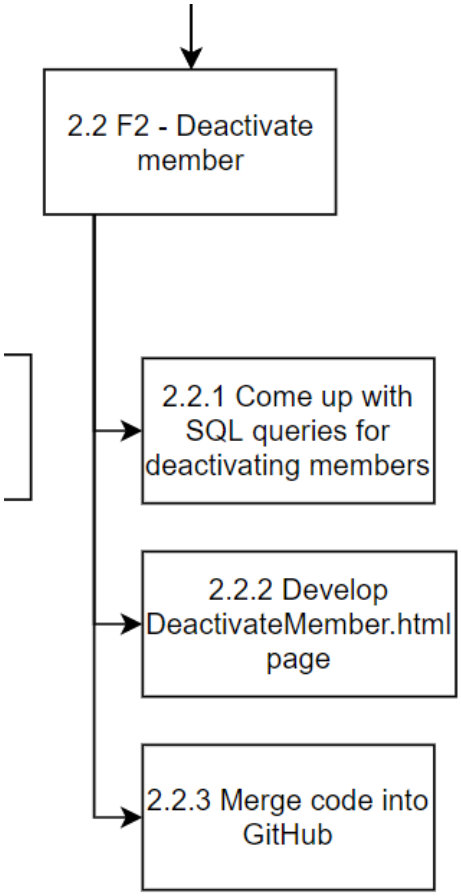
Tutorial: Tuesday 12:30 Hawthorn EN310

Product backlog

The backlog item F2 Deactivated member is the selected product backlog item to perform estimation accuracy of the estimated time completed in 61C. In addition, performing accuracy estimation and backlog item subtasks 2.2.1, 2.2.2 and 2.2.3.

No.	Item	Dependencies	Business Value (1 least – 10 most)	Release Schedule (Sprint 1 | 2)
F2	Deactivate member	F1	8	Sprint 1

Backlog item and subtask



Evidence of task 61C vs Actual time taken

Subtask	Estimation	Actual
Come up with SQL queries for deactivating members	60 minutes 10% + = 66 minutes 10% - = 54 minutes	Day 5 - 30 minutes (Doing) Day 6 - 48 minutes (Testing) Day 7 - 0 minutes (waiting to be confirmed) Day 8 - 0 minutes (waiting to be confirmed) Day 9 - 0 minutes (waiting to be confirmed) Day 10 - 0 minutes (waiting to be confirmed) **Total:** 78 minutes Not in within 10% of original estimation

Explanation:
As demonstrated above the actual measured time does not fall within the original estimation. This is 10% above the estimation or 10% below the estimation. In conclusion, the accuracy of the estimation is low.

Subtask	Estimation	Actual
Develop deactivating members.html page	90 minutes 10% + = 99 minutes 10% - = 81 minutes	Day 5 - 60 minutes (Doing) Day 6 - 27 minutes (Testing) Day 7 - 0 minutes (waiting to be confirmed) Day 8 - 0 minutes (waiting to be confirmed) Day 9 - 0 minutes (waiting to be confirmed) Day 10- 0 minutes (waiting to be confirmed) **Total:** 87 minutes Is Within 10% of original estimation

Explanation:
It is evident that this estimation does have high accuracy. As the estimated time falls into the below 10% range. Therefore, has medium accuracy has it does fall into the 10% range. However, is not exactly the measured actual time of the sub-task.

Subtask	Estimation	Actual
Merge code with	45 minutes	Day 5 - 15 minutes (Doing)

git hub	10% += 49.5 minutes 10% -= 40.5 minutes	Day 6 - 10 minutes (Testing) Day 7- 0 minutes (waiting to be confirmed) Day 8 - 0 minutes (waiting to be confirmed) Day 9 - 0 minutes (waiting to be confirmed) Day 10- 0 minutes (waiting to be confirmed) **Total:** 25 minutes Not in within 10% of original estimation

Explanation:
The actual measured time for the completion of this sub-task as depicted above it does not fall into the 10% above or below of the estimation. The measured time to complete the task took a lot shorter than the expected time of 25 minutes whereas the estimated time was a lot larger 45 minutes, 20 minutes more.

Task	Estimation	Actual
Overall time	60 + 90 + 45 **= 195 minutes estimated**	78 + 87 + 25 **= 190 minutes actually completed**

Completion of Backlog item

Day 02

The design was completed and to be confirmed

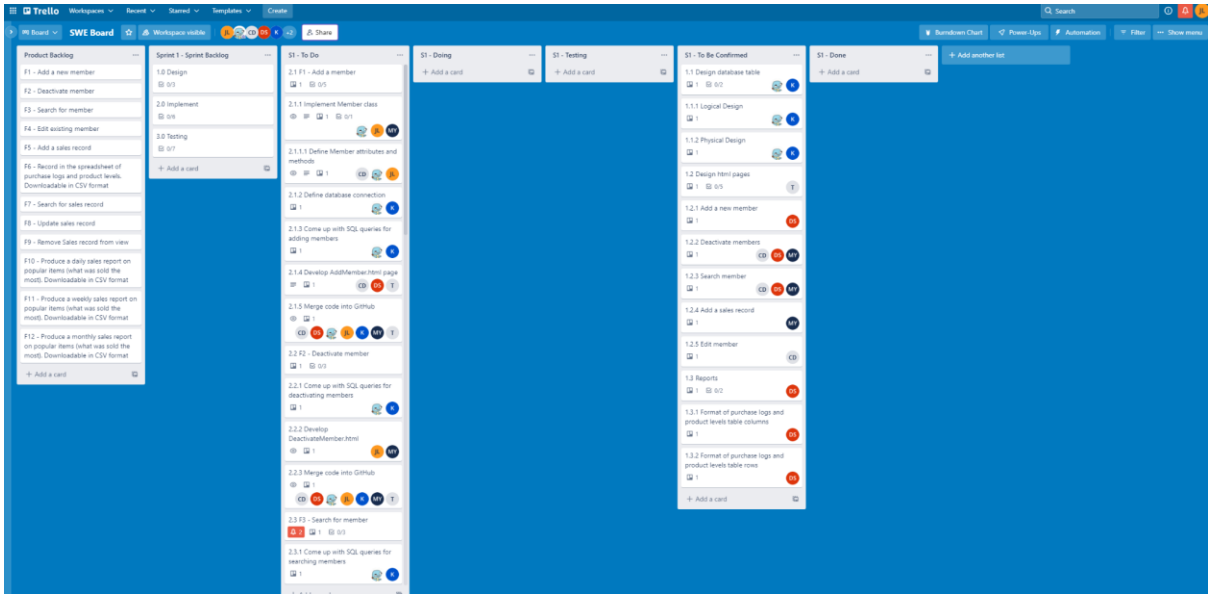


Figure 2

Day 03:

The design Was completed

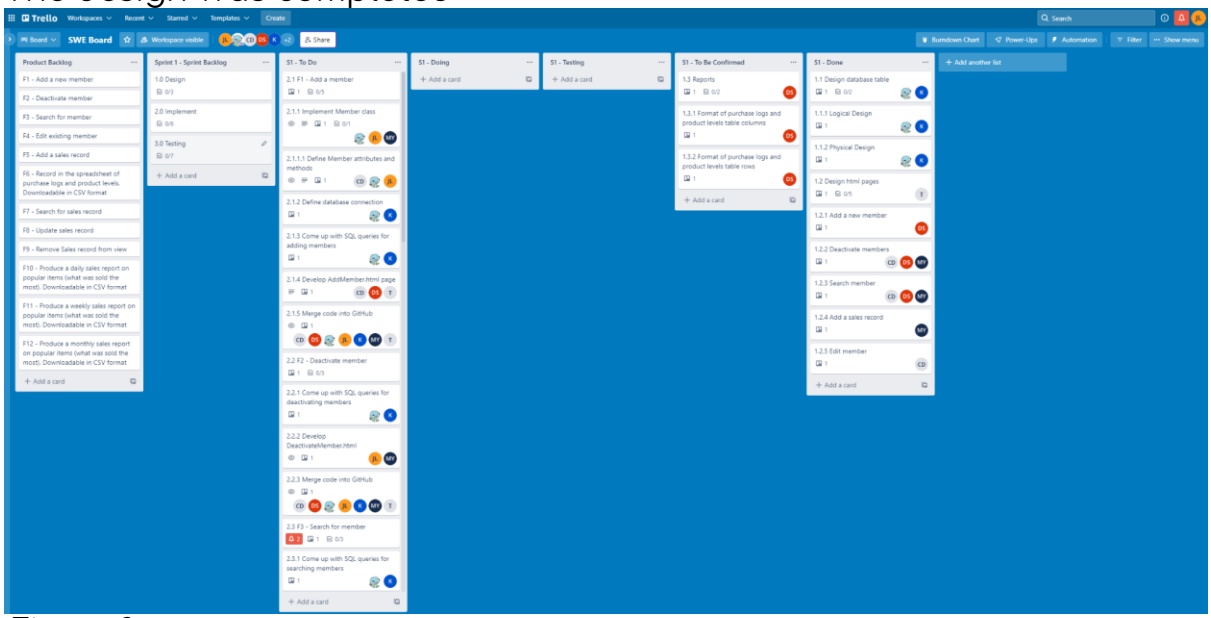


Figure 3

Day 05:

Started on Backlog item all subtask day 5

Figure 4

Day 06:

Testing for all backlog iteams

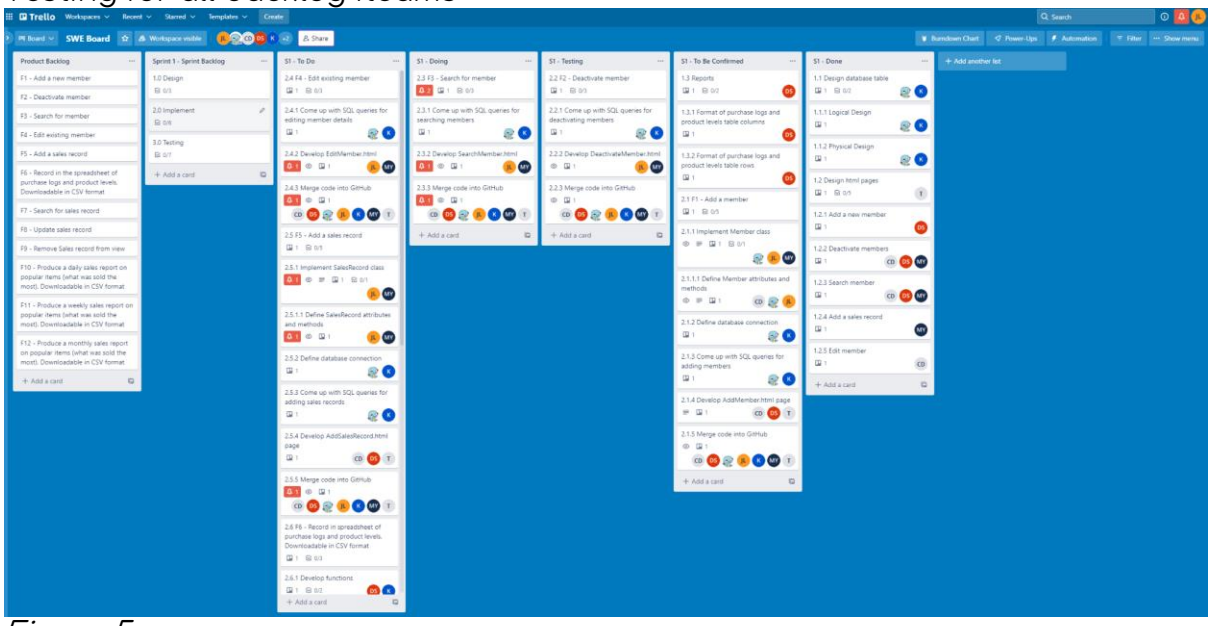


Figure 5

Day 07:

Finished testing and implementation now waiting for confirmation

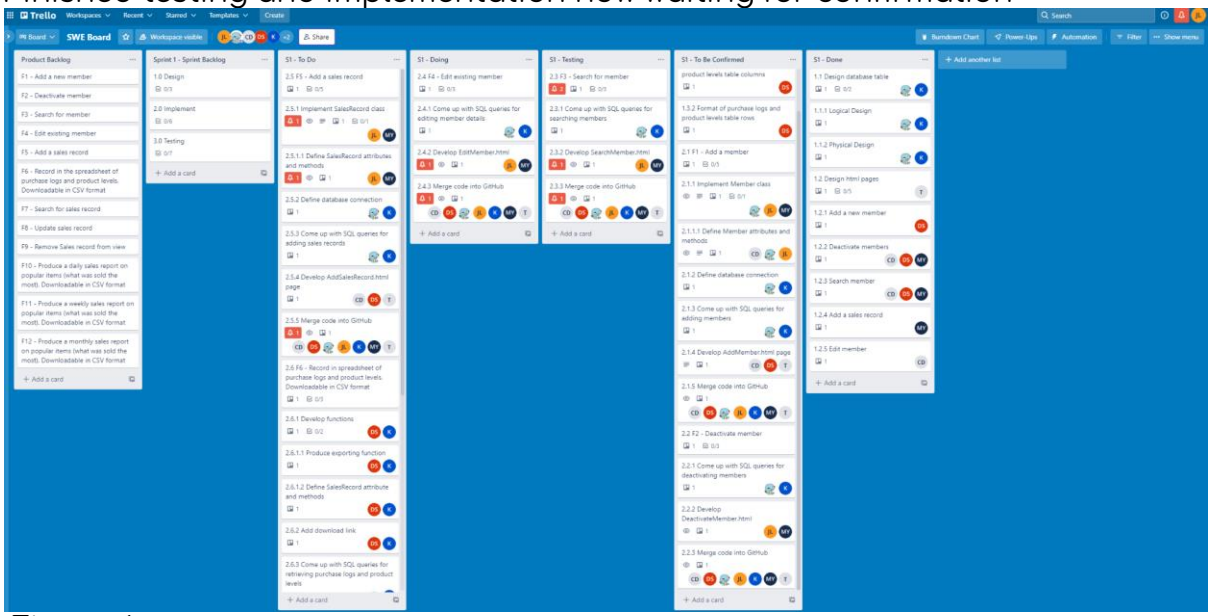


Figure 6

Day 08:

Waiting for confirmation

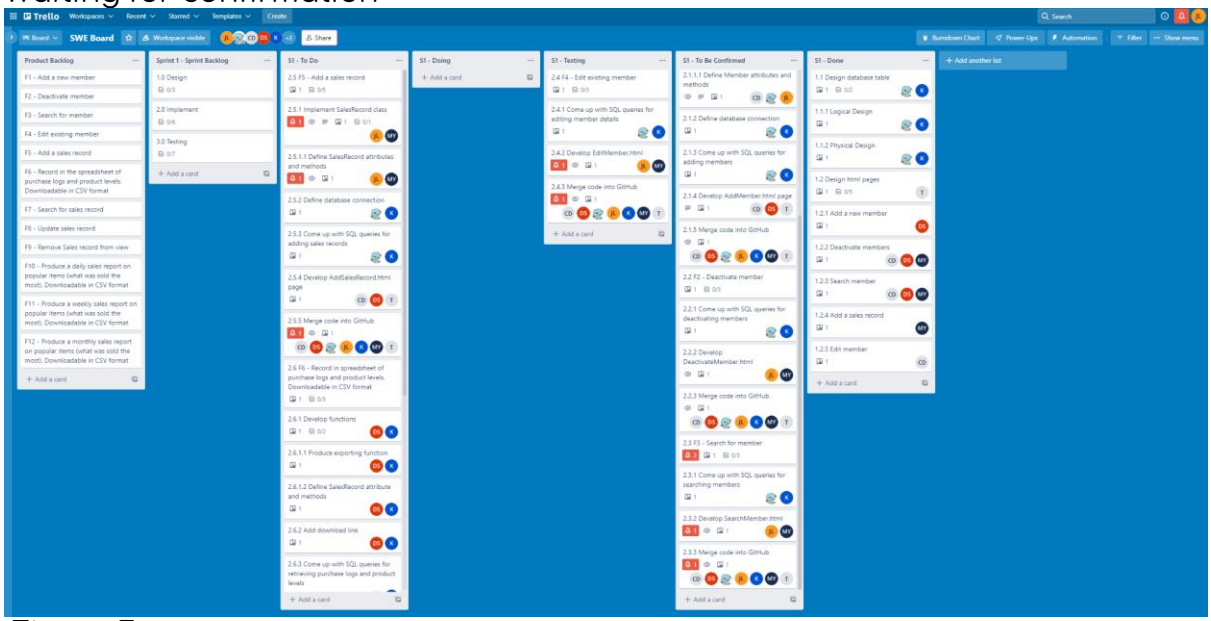


Figure 7

Day 09:

Waiting for confirmation

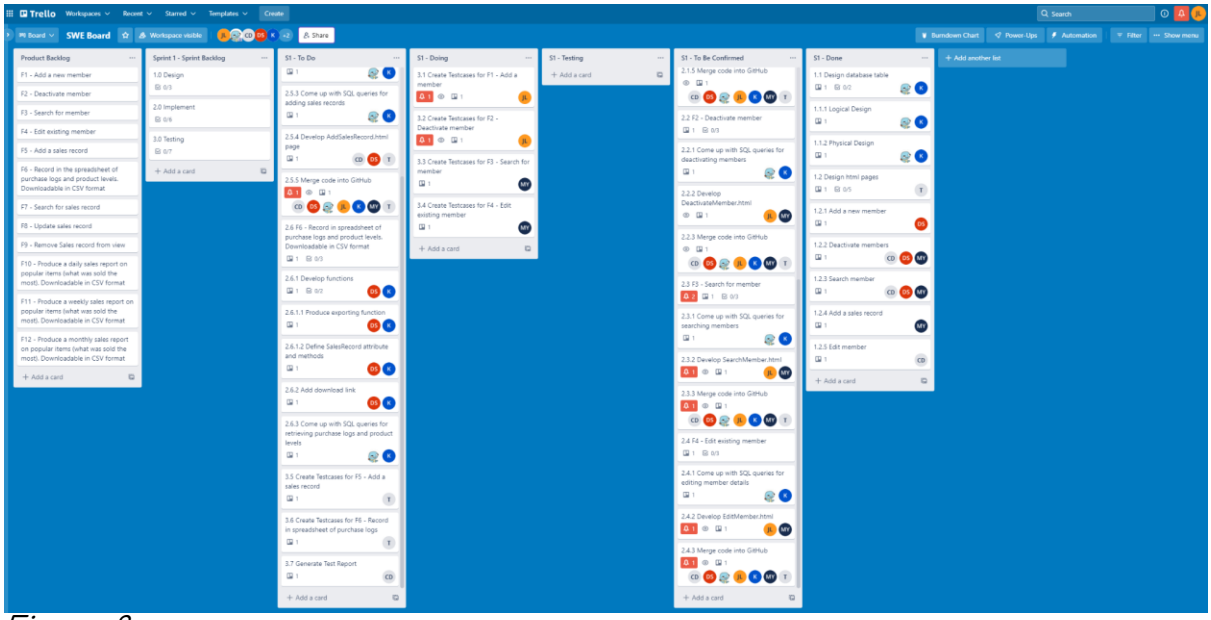


Figure 8

Day 10:

Waiting for confirmation

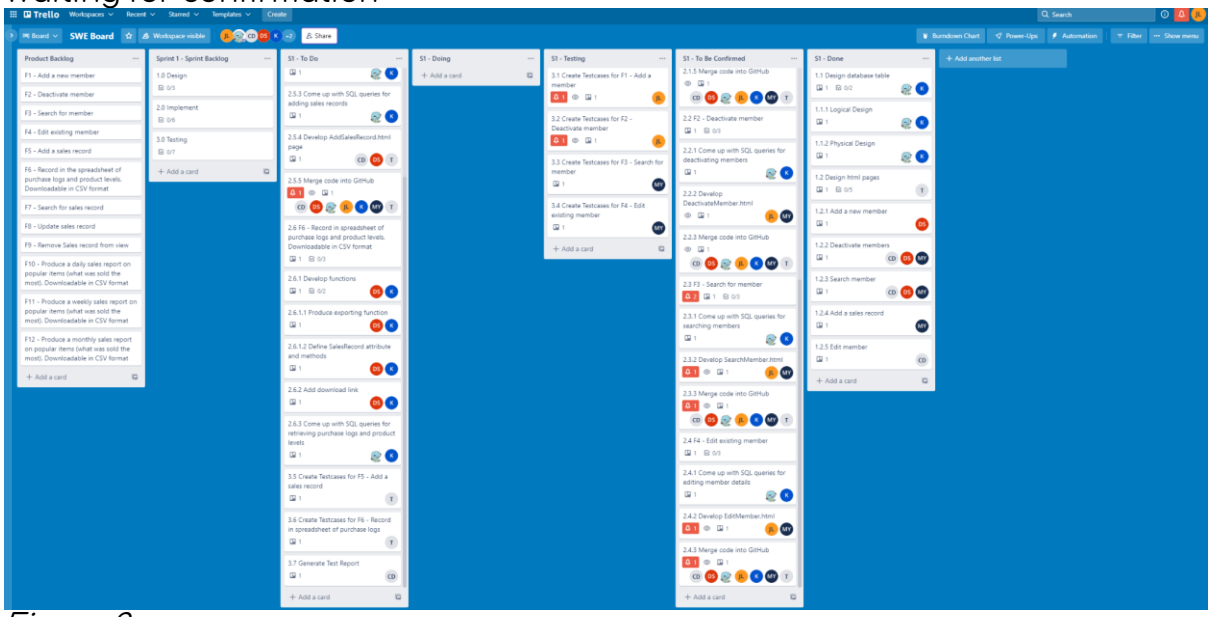


Figure 9

Reflection

Come up with SQL queries for deactivating members

The actual time taken is larger than the estimated time. As Actual time taken to complete an SQL query is 78 minutes approx whereas the time calculated using the estimation calculation, is 60 minutes. Not within the 10% effort estimation. Above the 10%,66 minutes or below the 10%, 54 minutes. Therefore, there was an underestimation and low accuracy of how long this sub-task will take.

Moreover, having a percentage of error of -23.07 %. As it the SQL implementation took 18 minutes more than estimated. This may be triggered by different sections of the sub-task being completed on different days. Such as Implementation was done on Day 5, as seen in *figure 4*. Which took 30 minutes. Testing of the SQL query was done on Day 6 depicted in *figure 5* taking 48 minutes. Moreover, causing this large percentage of error. The development team did not take into account how there are different stages in development, as stated before and depicted in the Trello board figures.

Ultimately each stage took different times and was even completed on different days seen in *figures 2 - 9*. Hence that these sections may push the time taken above or below the time estimated. Depending on the day the developer completing the SQL may be tired or have other work to complete on the Trello board. Consequently, this may cause the tasking 18 minutes more.

To decrease and improve this percentage error and increase accuracy again it is suggested that take into account multiple variables, which may affect the development time of the sub-task. Such as developer availability, developer tiredness and well how development is planned. As such is the task completed all in one day or broken up into sections such as depicted in *figures 2 - 9.*

Develop deactivating members.html page

Reflecting on the actual time of 87 minutes compared to the estimated calculation of 90 minutes. Henceforth this demonstrates that the estimated calculation is accurate as it falls within the 10% below estimation for this sub-task. Moreover, the estimated time which is 81 minutes has a difference of 6 minutes less from the actual time taken. Furthermore a 3-minute difference from the estimated time of 90 minutes. Therefore this depicts that the calculated estimated time was accurate as the estimated time falls into the 10% range.

This may be due to, everyone in the development team having more of a grasp of the Html compared to SQL. This allowed for more acuate estimation as everyone had more idea of their ability to accurately come up with the time needed to complete the Html. Correspondingly testing was roughly taken into account during the estimation of the time taken to complete the task. As the validating is a part of the completion of the Html page checking if there are any warnings or errors which inhibit the function and appearance of the HTML page.

Merge code with git hub

This sub-task included uploading, pushing the code and then actually testing the code to see if the code properly was uploaded correctly. Hence it was estimated that it would take 45 minutes to upload and push all code written for the deactivate member page. However, it took 25 minutes, thus giving a percentage of error of 80%. Furthermore, not within the 10% range below 10% 40.5 minutes or above 10% 49.5 minutes.

This is caused by overestimating and hence extra time given to complete the task of uploading the code in addition to the amount of time taken to load the code properly. The justification for this extra time was due to the code may have multiple functionalities in one file. That needs time to be uploaded. However, deactivated members seen in the Trello board have competed earlier. Hence didn't have a large file to upload. Furthermore, there was an issue with the code itself being fairly small to medium in size. Hence the code took approx 15 minutes to push and upload and as well another 10 minutes to test if the code uploaded correctly to the most recent push.

To improve accuracy and decrease the percentage of error so that the actual time falls into the estimated 10% range. Firstly retain an idea of the amount of code needed to complete the task. So loading time may be able to be calculated beforehand. Also, have an idea of when the other more complex task will be completed in the same file. Therefore, slowing down the loading of code to the respiratory. Moreover, this will help increase accuracy and decrease percentage error.

Image citation:

Services, I., 2022. Professional Estimating Services | Industrial Engineering | Vista Projects. [online] Vista Projects. Available at: <https://www.vistaprojects.com/engineering/professional-estimating/> [Accessed 9 May 2022].