Financial Report 3

Penelope LTD (SwEng Group 2)

School of PET

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Contents

1 Introduction

This report aims to compare the actual time invested in the project with the estimated time projected during the planning stage. It analyses the factors that have led to the deviation between the estimated time and the actual time invested in the project. This document also provides recommendations on how to improve the accuracy of future project duration estimations to ensure that projects are completed within the set time frame and budget. This paper covers the first 31 weeks of the development period of "Fauna Finder" by Penelope LTD, which is equivalent to Week 1 of Autumn Term to Week 2 of Summer Term (inclusive). The first 21 weeks of the development period were covered in the first financial report and the following fortnight was covered in the second. Therefore this report will focus primarily on weeks 24 to 31. However, previous weeks variances may be used to observe any trends.

2 Variance

2.1 Calculation

$$\text{Variance} = \text{Projected Hours} - \text{Worked Hours}$$

The variance in the hours is calculated by subtracting the actual worked hours from the projected ones. This means a positive variance reflects the company is not meeting the planned hours and a negative variance means the team exceeded the planned hours.
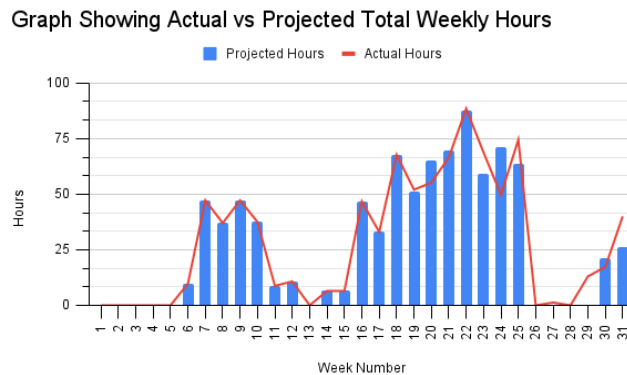
2.2 Worked vs. Projected Hours

Figure 1: Plot showing the team's overall accomplished and predicted weekly work hours.

As seen on Figure 1, the team worked much more than predicted on weeks 25, 29 and 31 whilst on week 24, the team worked less than expected. An explanation as to the potential causes is provided in subsequent sections.

2.3 Total Variance
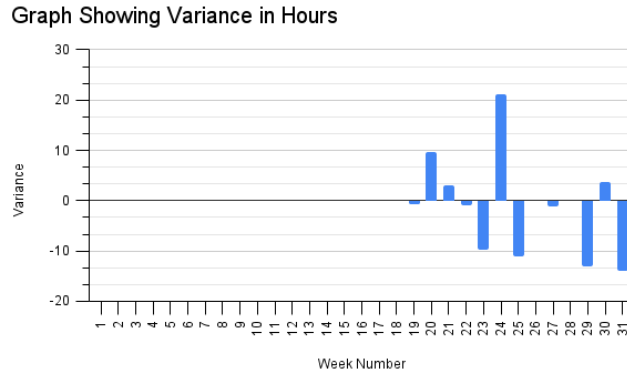
Graph Showing Variance in Hours

Figure 2: Plot representing the team's total variance in hours.

As shown on Figure 2, there is a very clear and large negative variance in the hours of weeks 25, 29 and 31. This means the team has used more hours than what was planned for in those weeks. The total variances in other weeks with the exception of week 24, are small enough to be ignored.

3 Department Variance

This section explores the variance in hours for each department to allow the company to adjust according to findings.

3.1 Most Significant Department Variance

The Software team appears to have the largest variance over the last few weeks. This is because it is the largest of all departments as all team members should contribute to the code and therefore fall under this division.

As seen on Figure 3, week 31 presents the largest negative variance because Giuseppe and Connall worked on the HTML tour and the customer app (Icarius) respectively. This large negative variance implies that the company has overspent by a significant amount that week. This could become a problem if this difference in hours is sustained. However, according to the Project Manager, the team is ahead of schedule so future weeks should see a positive variance which would add up to the total amount of hours budgeted in the business plan.

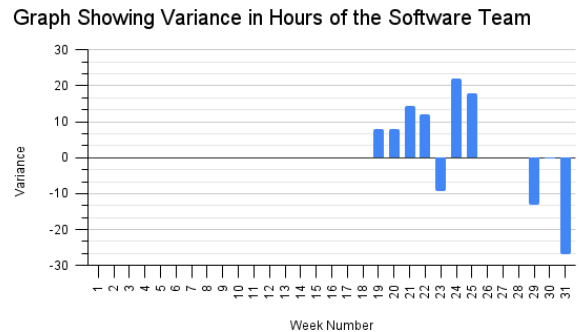**Graph Showing Variance in Hours of the Software Team**

Figure 3: Weekly hour variance of the Software Team

The Finance department is the next largest variance in hours in the organisation. This is, however, a positive variance (as seen on Figure 4) explained by the fact that the team overestimated the hours needed to write these reports. Originally, the department was expected to spend some time each week on the reports but it was soon discovered that it was more cost effective to only spend the week before the deadline. This implies that there will usually be a large positive variance leading up to the deadline of the financial reports. This is not a problem as budget saved here can be used to mitigate the excess of the software team.

3.2 Supplemental Department Variance

There is little variance in the Project Manager's hours and any small variances seen on Figure 5, cancel each other out in the surrounding weeks.
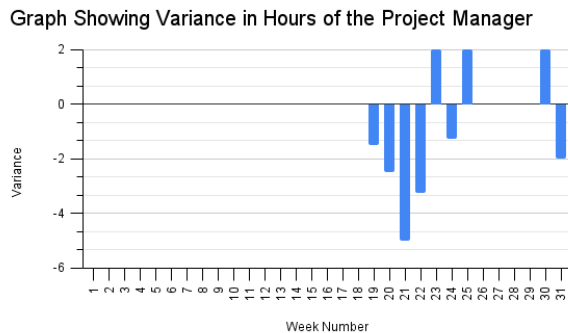

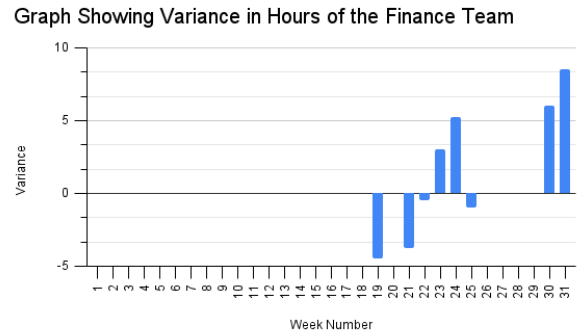Figure 5: Project Manager's Weekly Hours Variance

Figure 4: Weekly hour variance of the Finance Team

The Documentation team's variance is relatively small (see Figure 6) as the team is spending slightly less hours than originally planned on documents.
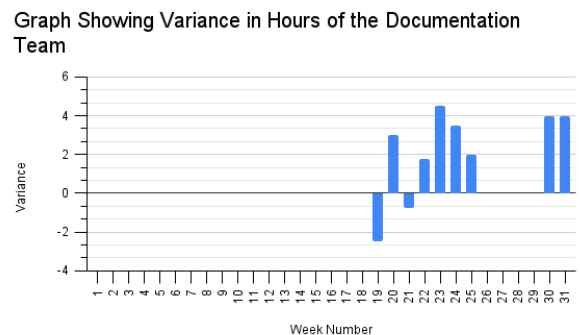

Figure 6: Documentation team's Weekly Hours Variance

The Media department has a significant amount of negative variances (see Figure 7). This is due to the team starting the design of the HTML tour earlier than planned. Therefore, a significant positive variance is expected in the coming weeks.
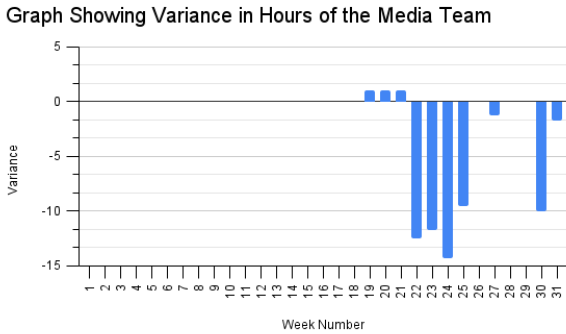
There is no variance in the Marketing department (see Figure 8) as a result of correctly predicting that the team would not be involved at this stage of the development. Hours should increase as the final group presentation deadline approaches.
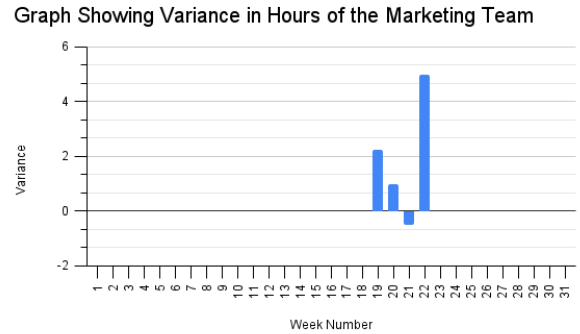

Figure 7: Media team's Weekly Hours Variance

Figure 8: Marketing team's Weekly Hour Variance

As seen on Figure 9, the QA department has exhibited minimal variances with the exception of week 25, which was impacted by miscommunication issues. The Project Manager erroneously believed that more progress had been made on the Testing and Integration Plan in the preceding weeks, when in reality, this was not the case. Combining this misunderstanding with a temporary loss of contact with the QA manager resulted in the team being required to expend significant effort to meet the document deadline that week. As a consequence, Roman has assumed the role of QA Manager and measures have been implemented to prevent a recurrence of this situation in the future.
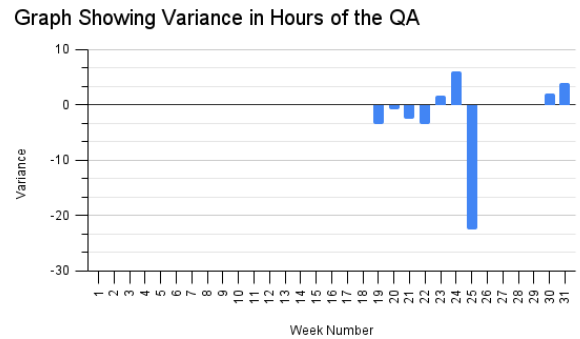

Figure 9: QA team's Weekly Hour Variance

3.3 Most Significant Individual Variance

This section explores the variance in hours for each team member to allow the company to adjust according to findings.

As seen on Figure 10, Connall's most significant variance comes after the spring break as he dedicated extensive hours integrating the various components of Icarius, a computer app that interacts with the server. This variance is expected to slightly reduce in the coming weeks.

Figure 10: Connall's Weekly Hour Variance

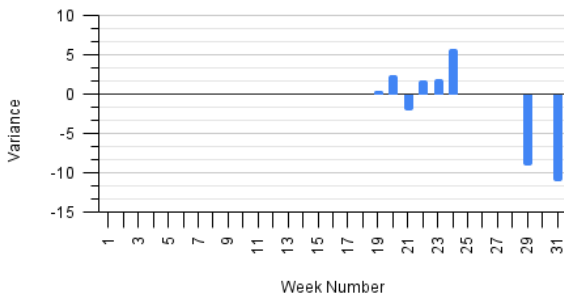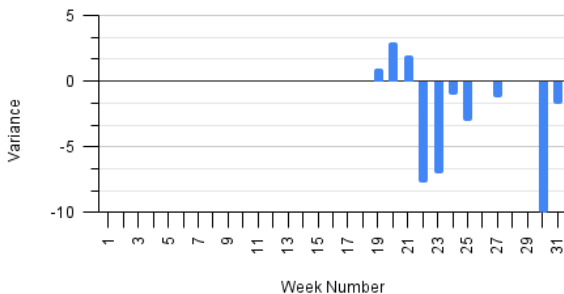As seen on Figure 11, a considerable negative variance was observed in Roman's hours around the Test and Integration Plan deadline due to the same factors mentioned in the QA variances. This variance reflects the substantial amount of effort Roman contributed towards the composition of the plan.

Figure 11: Roman's Weekly Hour Variance

Dawid's ongoing negative variances in the last few weeks, seen on Figure 12, can be attributed to his involvement in designing the HTML tour and the information page for the Android app.
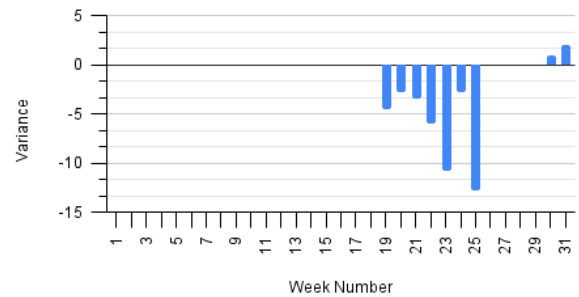

Figure 12: Dawid's Weekly Hour Variance

3.4   Supplemental Individual Variance

Found below are the graphs showing the remaining employees' variances.

A minor positive variance is observed in Figure 13 for Ethan's performance which can be ignored as it will most likely cancel out in upcoming weeks.

Harry's variance is relatively small. Any positive variances observed (Figure 14) prior to the spring break appear to level in the subsequent weeks.
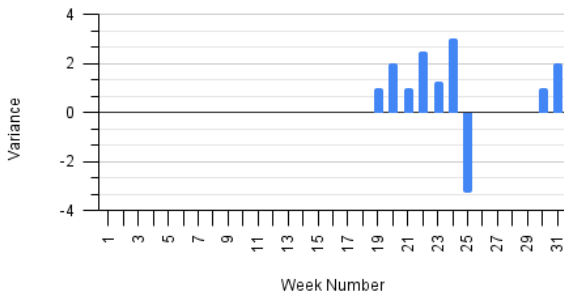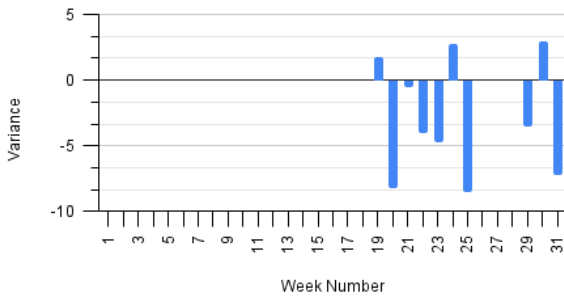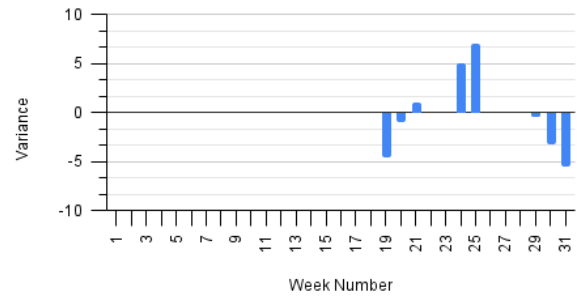

Figure 13: Ethan's Weekly Hour Variance

Figure 14: Harry's Weekly Hour Variance

Giuseppe's variance exhibit considerable fluctuations, with both positive and negative deviations observed in Figure 15. Overall, the variance is negative which can be aatributed to the fact that he has been tasked with writing the HTML code for the tour Dawid designed.

The majority of Ophelia's variances are relatively minor and can be ignored. However, during week 24, a relatively significant positive variance is observed in Figure 16, which could be attributed to the decreased workload of the finance and documentation departments.

Figure 15: Giuseppe's Weekly Hour Variance
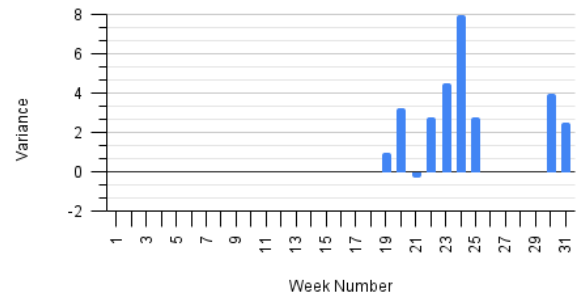

Figure 16: Ophelia's Weekly Hour Variance

As seen on Figure 17, Oscar's variance is relatively small and can be disregarded.
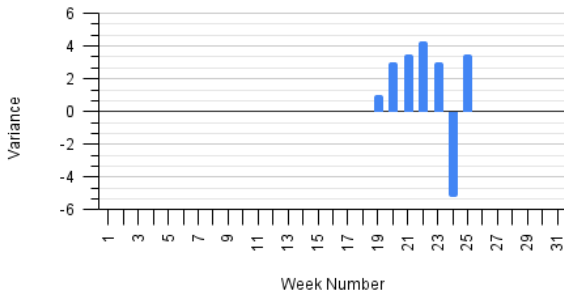

Figure 17: Oscar's Weekly Hour Variance

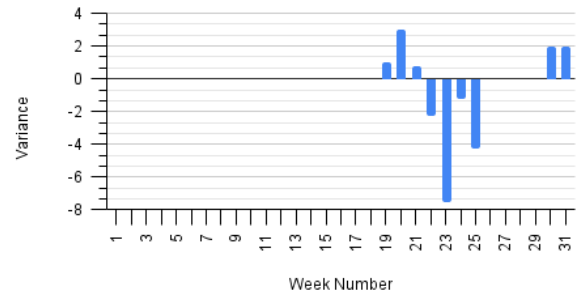As seen on Figure 18, Ana's variance is relatively small and can be disregarded.

Figure 18: Ana's Weekly Hour Variance

As seen on Figure 19, Tom's variance is relatively small and can be ignored.
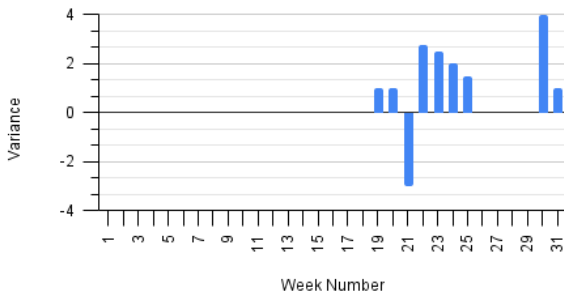

Figure 19: Tom's Weekly Hour Variance

Alan's positive variance (Figure 20) can be accounted for by his current lack of communication with the team, resulting in no logged hours. The Project Manager is aware of this situation and attempts to rectify the situation have thus far been unsuccessful. These attempts have been documented for future reference.
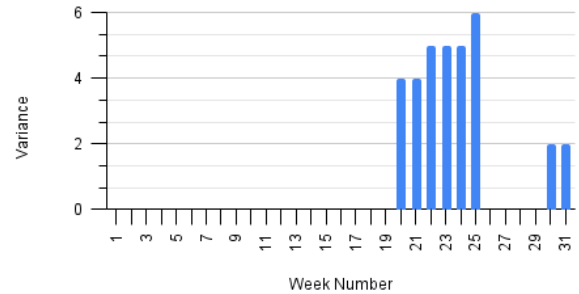

Figure 20: Alan's Weekly Hour Variance

4 Contracts

The contract process proceeded without any significant issues. As evidenced by the previous financial report, the contracts were signed during week 23, and the following week, we received the commissioned work. The 'image handler' component met the acceptance criteria, and in compliance with the agreement, we provided the other team with the 15% bonus of £54. However, the 'text handler' component did not meet the acceptance criteria, and therefore no bonus was awarded. Further information on this matter can be found in the 'Actual Cash Flow' sheet in the finance spreadsheet document.

5 Conclusion

In summary, as illustrated in Figure 2, the total deviation in the number of hours spent on the project is trending toward a negative variance. Despite this, the project remains within acceptable tolerance, and the buffer amount

remains sufficient to avoid bankruptcy. However, the Project Manager should proactively investigate any worker who is investing significant hours in the project without much return, as this inefficiency could potentially escalate into a financial issue.