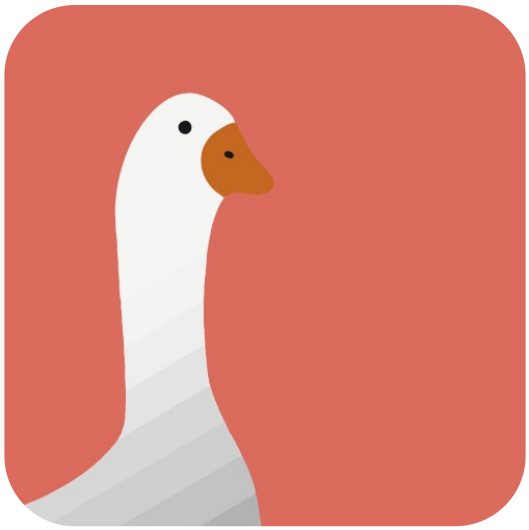


Financial Report 1

Penelope LTD (SwEng Group 2)

School of PET

24th February 2023

Contents

1 Introduction

This report aims to compare the actual time spent on a project with the estimated time projected during the planning stage. The report analyzes the factors that have led to the deviation between the estimated time and the actual time spent on the project. The report 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 report covers the first 21 weeks of the development period of Penelope LTD by Penelope LTD, which is equivalent to Week 1 of Autumn Term to Week 6 of Spring Term (inclusive).

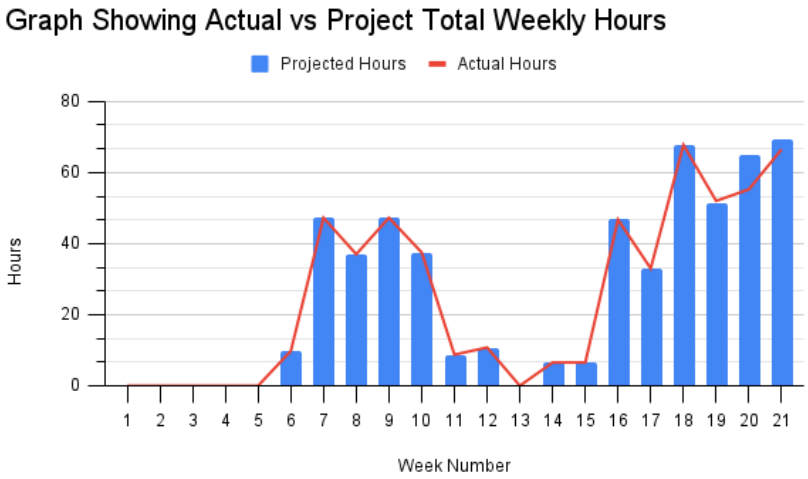
2 Variance

2.1 Calculation

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

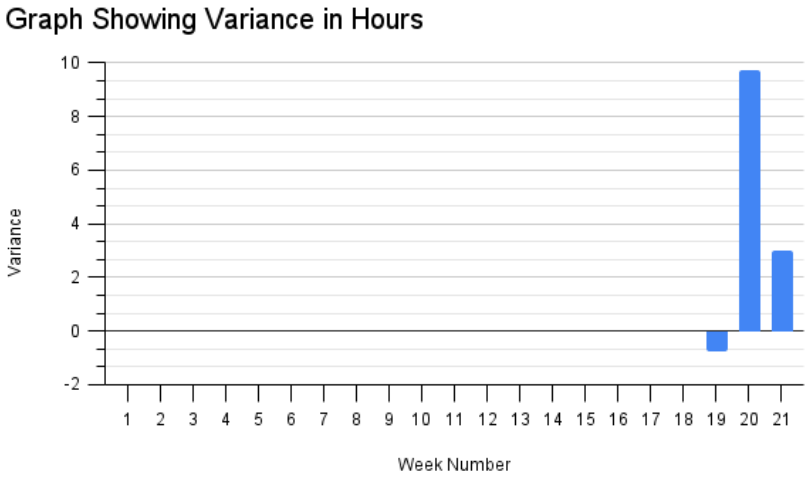
The variance in the hours is calculated by subtracting the actual hours from the projected ones. This means a positive variance reflects the company not meeting the planned hours and a negative variance means the team exceeded the planned hours.

2.2 Actual vs. Projected Hours



This graph provides an overview of how much work the team has done compared to how much was planned. It can be seen that on week 20 and 21 the team worked less than predicted.

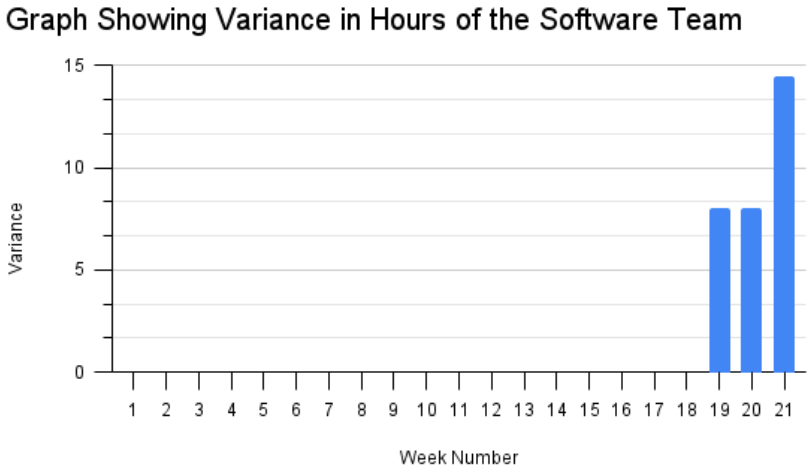
2.3 Total Variance



As seen on the graph above, it is clear that there is a large positive discrepancy in week 20 (Spring Term Week 5) implying that the team did not do enough hours on that week. What this suggests for the company is that, even though the company is saving money (as it does not have to pay as much wages in those weeks), the company may be pushing work further down the timeline. Pushing back tasks does not necessarily put any strain on the finances of the company as any week with positive variance adds to the "buffer" money that the company has to cover for over-working or over-spending. However, pushing back tasks might create a back-log and a rush toward the end of development. The progress of the company is analysed in further detail in the next sections by analysing the variance in hours of each team to understand which departments might be at the origin of the back-log.

3 Department Variance

3.1 Most Significant Department Variance



This graph shows the variance for the Software team as it is the team with the biggest discrepancy. As seen on the graph, weeks 19, 20 and 21 show that the department did not do as much work as initially planned. This change is largely due to a large part of the team not showing up to the lab sessions to work on the software development for various reasons. Week 21 is the one with the largest variance due to the fact that most employees focused on the Tender Presentation due the following week. This variance should reduce as the team refocuses on Software Development.

3.2 Supplemental Department Variance

Found below are the graphs showing any remaining department's variance.

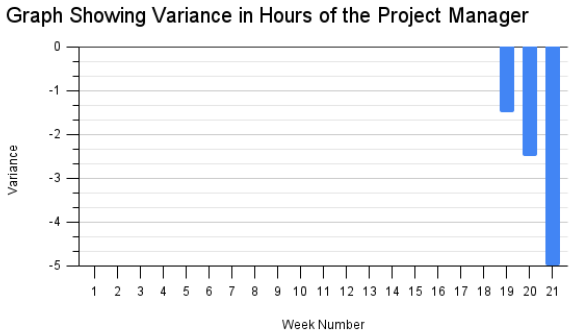


Figure 1: The Project Manager's variance is quite large. It peaks in week 21 (Spring Term Week 6) over-working 5 hours. This is due to underestimating the amount of preparation the Project Manager required for the tender presentation.

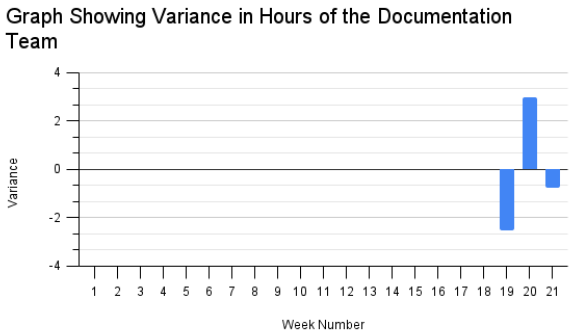


Figure 2: The variance in the Documentations team is relatively small and roughly evens out over a few weeks.

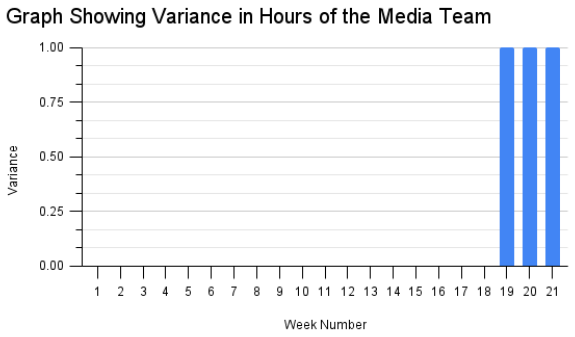


Figure 3: The Media team's variance is relatively small but is consistent throughout the weeks.

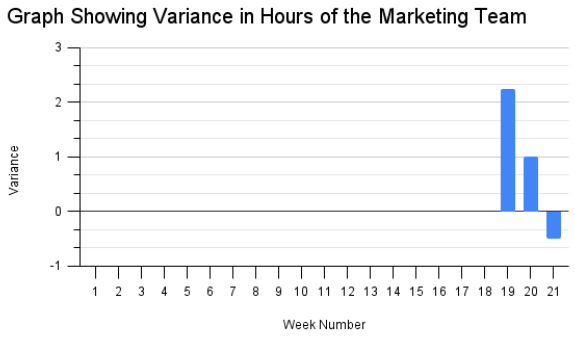


Figure 4: The Marketing team's variance is relatively small.

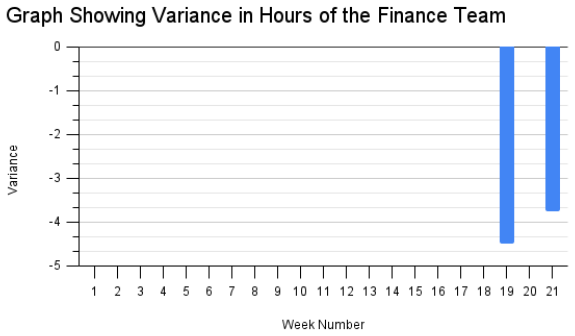


Figure 5: The Finance team's variance can be seen to have 2 over-worked weeks. These are the weeks just before deliverable due dates (Financial Business Plan and Financial Report 1). To recoup these over-worked periods, the finance team may need to find ways to cut down time. This could be achieved by possibly having better delegation between the manager and the team.

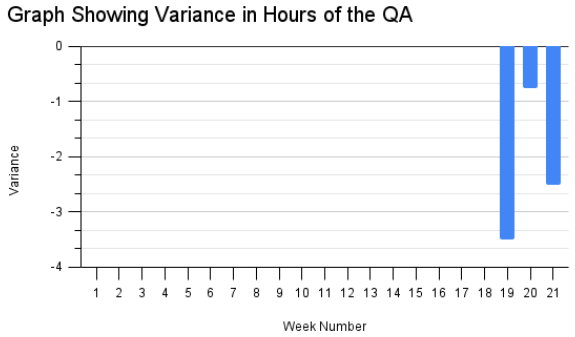
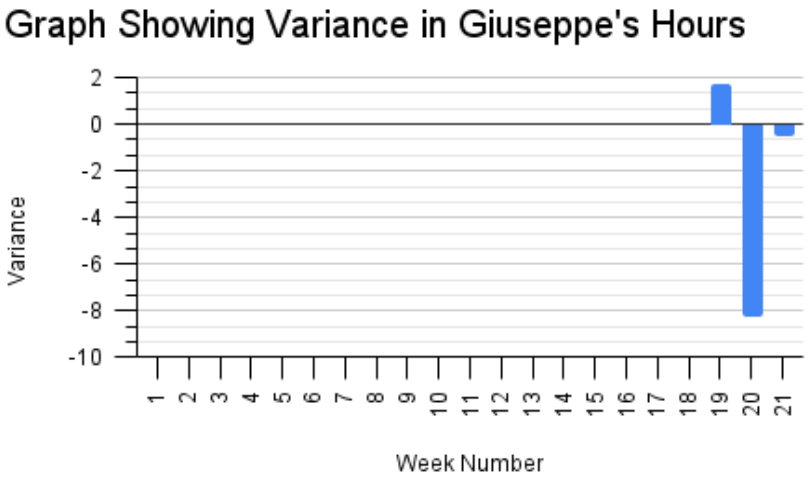


Figure 6: The QA team's variance is also relatively large compared to other teams but can be explained by the large section of quality assurance added to the tender presentation.

4 Significant Individual Variance

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

4.1 Most Significant Individual Variance



As seen on the graph above, there is a very large discrepancy in Week 20. This is mostly due to Giuseppe working on the contracts for the other groups. It was unclear at the point of planning when the contracts would be signed and so was projected later in the term. This means a positive variance should be seen later in the Spring Term. Overall this means that Giuseppe over-worked while most other employees under-worked resulting in a net positive variance.

4.2 Supplemental Individual Variance

Found below are the graphs showing the remaining employees's variance.

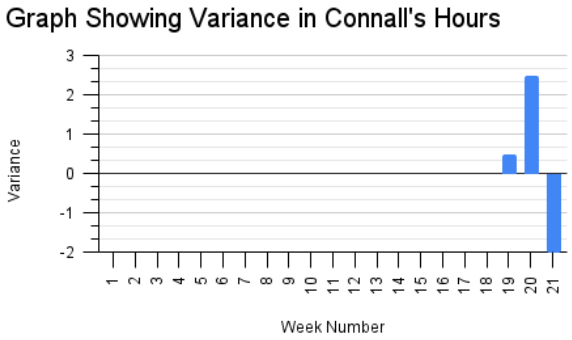


Figure 7: Connall's variance is relatively small and slightly evens out.

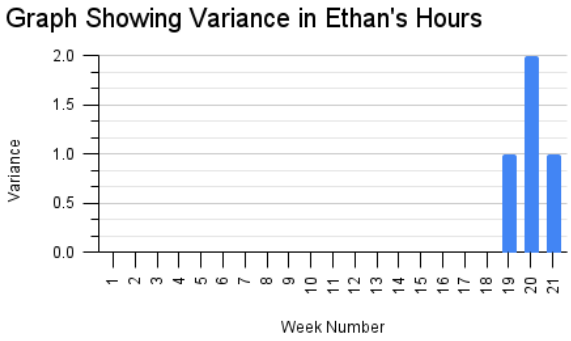


Figure 8: Ethan's variance is relatively small but could accumulate to a substantial amount over the following weeks. He may need to pick up extra work in another department that might need more help.

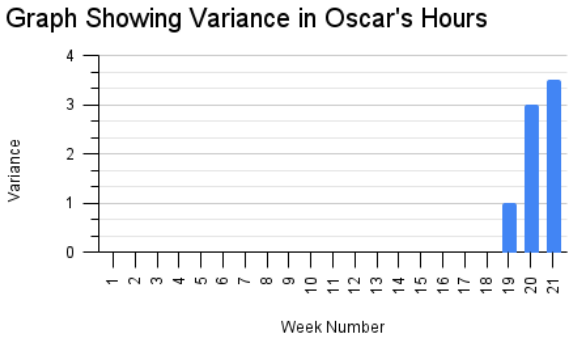


Figure 9: Oscar's variance is positive and growing, which suggests he may need to be put on more projects in order to increase his hours.

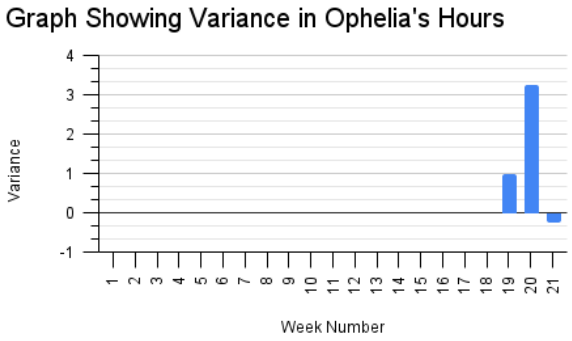


Figure 11: Ophelia's variance is relatively small.

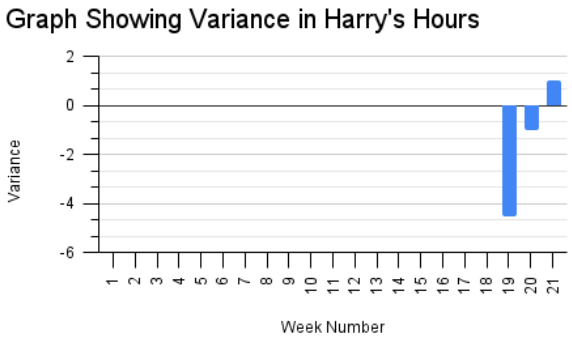


Figure 10: Harry's variance shows a little negative variance, this is because he has been working on the GUI for the second app (Icarius) which is the interface between the "university" (the admin staff that will add to the server) and the server itself. This could suggest that the amount of hours predicted to complete this task were underestimated.

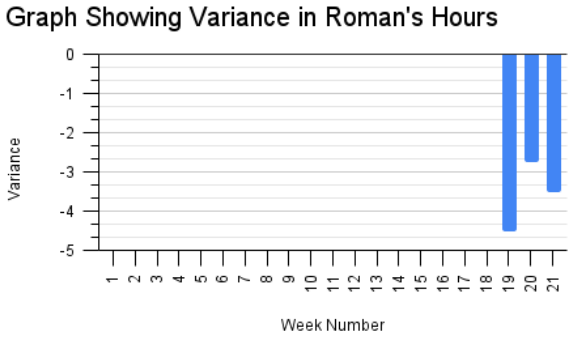


Figure 12: Roman's variance shows some constant negative variance. Since he has been testing the server code, the Programming/Software manager may need to delegate this work to another employee.

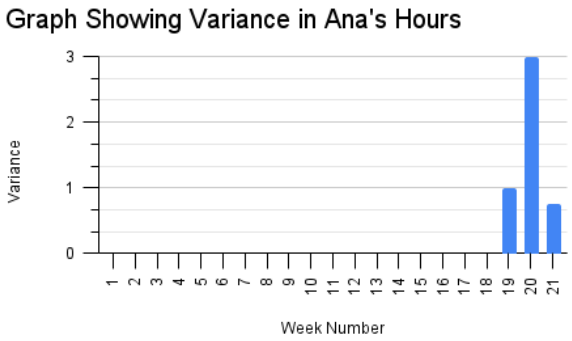


Figure 13: Ana's variance is relatively small.

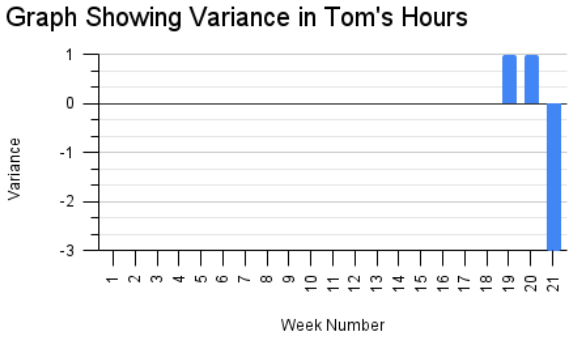


Figure 14: Tom's variance is relatively small and almost cancels out over the few weeks.

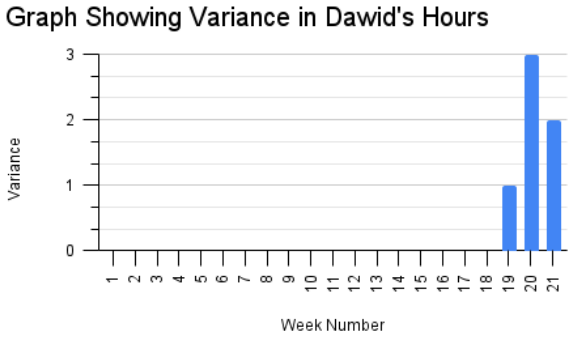


Figure 15: Dawid's variance is relatively small but may need to increase workload if the following weeks are under-worked.

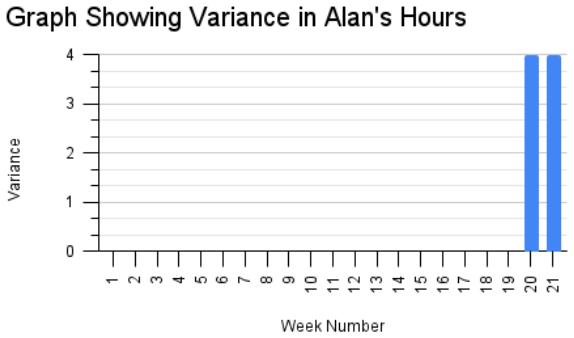


Figure 16: Alan has a large variance, this is mainly due to his absence at the weekly scheduled lab sessions (focused on developing the app) and other meetings.

5 Conclusion

To summarise, the analysis of the data on the variance in the projected and actual hours spent by employees in the team has provided valuable insights into the factors that contribute to discrepancies in estimated and actual work hours. While some individuals were able to consistently deliver within the projected time frame, others struggled to do so, due to several reasons.