



Financial Report Four for SWEng Group Three (SG3) Enterprise

Written by the Finance Manager for SWEng Group Three Enterprise.

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Introduction:

This document is the fourth and final Financial Report for our group and contains a Cash Flow Statement for the reporting period 08/01/2018 to 28/05/18 displaying forecast values, actual values, and any variances. It also includes data comparing actual and forecast hours per week per group member and per group member per task.

Our group's adherence to forecast hours and explanations for any significant variance are provided, along with further analysis of each group member's performance regarding hours spent, and of the group's progress regarding our product.

Information Assumptions:

For our cash flow statement, the following assumptions have been made:

- The cut-off date for this report is 28/05/18, as our timesheets have run to the Monday before that date. (Monday was set as the cut-off day to run from the Monday of each week for 7 days (if the cut-off date was set differently, there would be insufficient information to analyse the week of 01/06/18).
- All data used has been rounded to 2 decimal places.
- Most numbers can be rounded to the nearest penny and Interest is not an overhead.
- The "app development" activity in the Work Breakdown Structure includes the time taken to write the code being sold to other groups or companies.
- No costs other than those in the Finance Briefing Notes are considered (for example, costs of advertising are ignored because the product does not have a release date.)
- The dividing line between the actual and forecast values in the cash flow (as indicated by the vertical bold blue line in the cash flow) shows that actual values are from 08/01/18 to 28/05/18, and that forecast values are from 04/06/18 until the end of the development cycle for our product.
- Please note that the actual hours used in the first financial report were erroneous in dispersion. This has since been corrected in reports two, three and four, as shown by the actual hours contained in this report.
- The loan was finally approved in week 8 of the spring term, one week later than envisaged in the original forecast for the Financial Plan, and loan interest has been adjusted accordingly.
- The dates of the handover and acceptance of code, as shown in the contracts (see appendix D), were different to the dates predicted, and the cash flow has been subsequently modified from the original forecast for the Financial Plan.
- The Financial Plan forecast numbers are included at the bottom of the cash flow without adjustment for this fourth report in order to provide a clearer picture of actual performance against what was originally forecast and accepted in our original Financial Plan.

- Please note that, owing to necessary revisions of the original Financial Plan, the forecast 1,392.50 hours in the updated Financial Performance Review for the presentation on 4 June 2018 were understated. These were subsequently revised to 1,891.75 hours.
- The difference in the forecast cash balances between the Financial Performance Review (£11,580) and the forecast cash balance per Financial Report 4 (£9,797) represents increased wage costs incurred. (This means that wage costs and the Development Phase (Year 1) loss were both understated by £1,784 in the 4 June 2018 Financial Performance Review owing to increased hours worked in the week to 28 May 2018).
- Revised and updated overhead recovery rates are therefore as follows:

<u>Revised Overhead Recovery Rates:</u>	Updated Forecast Period £ 24 Weeks	Development Period £ 24 Weeks	Year 2- Launch Phase £ 52 Weeks	Year 3- Growth Phase £ 52 Weeks
Total Overheads (unchanged)	18,785	18,785	41,718	42,761
Total Direct Labour Hours (forecast unchanged)	1,891.75	1,392.5	1,365	1,365
Overheads divided by Hours	£9.30	£13.49	£30.56	£31.33

Cash Flow for SWEng Group Three Enterprise During the Reporting Period 8/01/18 to 28/05/18 (See Appendix A for Excel Document):

[illegible]

Table Comparing Actuals and Forecast Labour Hours Per Person,
including Percentage Differences:

[illegible]

The above table hours can be found in Appendix B, an excel document with spreadsheets per week displaying the hours each group member worked per week and per task. An analysis document (Appendix E) is also provided and this, together with the spreadsheet, shows actual performance per group member in comparison to hours originally forecast (also provided as Appendix F). Below is an hourly variance analysis per week, per member.

(NB: Variance W = the weekly variance in hours between actual and forecast, Variance C = the cumulative variance in hours between actual and forecast)

	15/01/18		22/01/2018		29/01/2018		05/02/2018		12/02/2018		19/02/2018		26/02/2018		05/03/2018		12/03/2018		19/03/2018		26/03/2018		02/04/2018		09/04/2018		16/04/2018		23/04/2018		30/04/2018		07/05/2018		14/05/2018		21/05/2018		28/05/2018		
Role	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	Actual	Forecast	
Alex B	2	6.75	6	3	13	7.5	5	19.5	4.5	19	7.75	10.25	4.25	10.25	13.5	10.25	2	12	0	9	1	9	0	9	0	5.25	0.75	6.5	1.5	6.5	5.5	6.5	12	4	5.5	7.75	9.5	9.75	12	9.25	
Variance W		-4.75		3.00		5.50		-14.50		-14.50		-10.50		-14.00		-4.75		-10.00		-9.00		-8.00		-9.00		-5.25		2.25		-5.00		-1.00		3.00		-2.25		-0.25		2.75	
Variance C		-4.75		-1.75		3.75		-10.75		-25.25		-35.75		-49.75		-54.50		-64.50		-73.50		-81.50		-90.50		-95.75		-93.50		-90.50		-84.50		-71.50		-55.25		-44.00		-31.25	
Alex F	4.5	27.5	11	16.5	21.5	2.5	3.5	7	10.25	6.75	14.5	7.25	6.5	7.25	13	7.25	2.5	6.75	0	3	0	3	5	3	7	3	9.5	5	5	2	5	7.25	14	0	2	9.5	6.75	22.25	24.75		
Variance W		-23.00		-5.50		19.00		-3.50		3.50		7.25		-0.75		5.75		-4.25		-3.00		-3.00		2.00		4.00		4.50		0.00		-3.00		-4.75		-2.00		2.75		-2.50	
Variance C		-23.00		-20.50		-9.50		-13.00		-9.50		-2.25		-3.00		2.75		-1.50		-4.50		-7.50		-5.50		-1.50		3.00		3.00		0.00		-4.75		-8.75		-6.00		-8.50	
Jack	4	23	10	7.75	7.5	10.5	16.5	26.25	17.75	26.25	15	27.25	26.75	27.25	34	26.25	0	30	0	30	3.75	30	19	2	6	2	4.5	2	3.5	2	0.75	20	5.25	7.5	37	4.5	40.75	9			
Variance W		-19.00		2.25		-3.00		-9.75		-15.00		-7.75		-10.50		-12.50		-6.75		-30.00		-30.00		-26.25		17.00		4.00		2.50		1.50		-19.25		-12.25		27.50		31.75	
Variance C		-19.00		-16.75		-14.50		-24.50		-39.00		-50.25		-60.75		-73.25		-85.75		-115.75		-145.75		-175.75		-205.75		-235.75		-265.75		-295.75		-325.75		-355.75		-385.75		-415.75	
Jeremy	2	13.75	12.25	13.75	10.5	14.5	9.25	9.75	13.5	9.5	4.25	8.5	9	8.5	7.5	8.5	13	8.5	0	3	0	3	2	3	0	3	0	5	0	5	0.5	5	0.75	4.25	3	6.25	10.75	8.25	16	8.25	
Variance W		-11.75		-1.50		-4.00		-0.50		4.00		-4.25		0.50		-1.00		-3.00		-3.00		-1.00		-3.00		-3.00		-5.00		-5.00		-4.50		-3.50		-2.50		7.75		7.75	
Variance C		-11.75		-10.25		-17.25		-17.75		-13.75		-18.00		-17.50		-16.00		-14.00		-17.00		-20.00		-21.00		-24.00		-24.00		-24.00		-24.00		-24.00		-24.00		-24.00		-24.00	
Karin	2	4	7.5	2	3	1	4	17	4.5	17	7	10	3	10	16.5	10	0.25	10	6	7	6	7	6	7	6	7	4.5	9	0	9	2	9	0.75	7.75	3	2	19.5	2	39	2	
Variance W		-3.00		5.50		2.00		-13.00		-12.50		-11.00		-15.00		-1.50		-3.75		-1.00		-1.00		-1.00		-1.00		-4.50		-9.00		-7.00		-7.00		1.00		17.50		37.00	
Variance C		-3.00		3.50		5.50		-7.50		-20.00		-31.00		-46.00		-47.50		-57.25		-59.25		-59.25		-60.25		-61.25		-65.75		-74.75		-81.75		-88.75		-95.75		-102.75		-109.75	
Harve	2	10.5	3	2	10.75	16	4.75	30	10.5	30.5	12.25	20.5	2.5	20.5	3	20.5	10.75	11.75	10.25	4.25	10.25	10.25	6.25	10.25	1	12.25	0	12.25	0	12.25	0.75	11	0	7.5	4.75	14	12	31.75			
Variance W		-8.50		1.00		-5.25		-25.25		-10.00		-7.25		-10.00		-17.50		4.75		1.50		-6.00		-14.00		-4.00		-10.25		-10.25		-10.25		-10.25		-10.25		-10.25			
Variance C		-8.50		-7.50		-12.75		-38.00		-50.00		-67.25		-77.25		-94.75		-109.00		-123.50		-138.50		-153.50		-168.50		-183.50		-198.50		-213.50		-228.50		-243.50		-258.50		-273.50	
Miranda	5	12	13.25	30.5	27	30	22.25	32.5	31.75	31.25	28.5	22.5	23	27.5	45	24.75	25.5	13.5	0.5	11	1.25	10	5.25	5	5.5	5	4.75	7	6	7	23.5	7	1	22.25	4.75	22.25	32.25	10	61.5	2	
Variance W		-7.00		-17.25		-11.00		-9.25		0.50		-6.00		-4.50		20.25		12.00		-10.50		-9.75		-2.25		0.50		-1.00		16.50		-21.25		-17.50		-15.25		19.25		59.50	
Variance C		-7.00		-24.25		-35.25		-44.50		-44.00		-38.00		-42.50		-22.25		-10.25		-20.75		-29.50		-29.25		-28.75		-32.00		-32.00		-32.00		-36.75		-54.25		-40.00		19.50	
St John	5	12.5	8	12.5	5.5	10.5	6	13.75	12	12.5	11.5	8.75	12.5	8.75	7.5	8.75	6.5	8	5	3	0	3	0	3	0	3	12	5	9.25	5	11	5	2.75	9	0	15	27	17	37.75	12.5	
Variance W		-7.50		-4.50		-13.00		-7.75		0.50		-2.75		-3.75		-1.25		0.50		2.00		-3.00		-3.00		-3.00		-7.00		-4.25		-6.00		-4.25		-15.00		10.00		25.25	
Variance C		-7.50		-12.00		-25.00		-32.75		-32.25		-34.50		-37.00		-38.50		-40.50		-42.50		-44.50		-46.50		-48.50		-50.50		-52.50		-54.50		-56.50		-58.50		-60.50		-62.50	
Total	26.5	110	71	88	101.5	72.25	155.75	113.75	152.75	121.75	151	17.5	134	145.75	133.25	117.25	110.75	22.25	16.25	12.5	75.25	46.25	70.25	43.75	30.5	46.5	51.75	26.25	51.75	40	51.75	26	92.25	21.5	70.25	150.25	45.25	242.25	99.5		
Variance W		-13.50		-17.00		-9.75		-33.50		-39.00		-34.25		-40.50		-5.50		-8.50		-52.00		-42.75		-24.00		5.25		-9.25		-25.00		-3.75		-45.25		-48.75		15.00		145.75	
Variance C		-13.50		-100.50		-110.25		-193.75		-232.75		-242.00		-290.50		-328.00		-374.50		-427.50		-490.25		-544.25		-609.00		-684.00		-769.25		-865.00		-971.25		-1088.00		-1215.25		-1353.00	

As a result of Microsoft Project rounding hours for tasks, the total hours forecast for tasks for a particular week does not equal the total hours forecast for all group members for that week (financial reports work to the closest quarter hour, unlike in Microsoft Project). The following table illustrates the impact of these roundings.

Table Reconciling the Forecast Labour Hours of the Financial Business Plan and the Rounded Work Breakdown Structure (Per Task)																							
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total Up To	
Commencing Date of Week	08/01/2018	15/01/2018	22/01/2018	29/01/2018	05/02/2018	12/02/2018	19/02/2018	26/02/2018	05/03/2018	12/03/2018	19/03/2018	26/03/2018	02/04/2018	09/04/2018	16/04/2018	23/04/2018	30/04/2018	07/05/2018	14/05/2018	21/05/2018	28/05/2018	03/06/18	
Forecast from Financial Business Plan																							
Alex B-Multimedia and Content Manager	0	6.75	3	7.5	19.5	19	18.25	18.25	18.25	12	9	9	9	5.25	6.5	6.5	6.5	4.00	7.75	9.75	9.25	131.5	
Alex F-QA & Documents Manager	0	27.5	16.5	2.5	7	6.75	7.25	7.25	7.25	6.75	3	3	3	3	5	5	5	14.00	2.00	6.75	24.75	74.75	
Jack-Software Manager	0	23	7.75	10.5	26.25	26.25	27.25	27.25	27.25	28.25	30	30	30	2	2	2	2	20.00	7.50	9.50	9.00	148.25	
Jeremy-Design Manager	0	13.75	13.75	14.5	9.75	9.5	8.5	8.5	8.5	8.5	3	3	3	3	5	5	5	4.25	6.25	8.25	8.25	78.25	
Kevin-GUI Developer	0	4	2	1	17	17	18	18	18	18	7	7	7	7	9	9	9	7.75	2.00	2.00	2.00	77	
Marco-Project Manager	0	10.5	2	16	30	30.5	20.5	20.5	20.5	18.75	10.25	10.25	10.25	10.25	12.25	12.25	12.25	11.00	7.50	14.00	31.75	130	
Miranda-Finance Manager	0	12	30.5	38	32.5	31.25	22.5	27.5	24.75	13.5	11	10	5	5	7	7	7	22.25	22.25	18.00	2.00	194.25	
St John-Marketing Manager	0	12.5	12.5	18.5	13.75	12.5	8.75	8.75	8.75	8	3	3	3	3	5	5	5	9.00	15.00	17.00	12.50	87.25	
Total For Group	0	110	88	108.5	155.75	152.75	131	136	133.25	113.75	76.25	75.25	70.25	38.5	51.75	51.75	51.75	92.25	70.25	85.25	99.50	882	
Forecast from WBS/Per Task																							
Meetings	0	8	8	8	8	8	16	16	16	16	0	0	0	0	16	16	16	16	16	16	16	216	
Documentation	0	73.75	18.5	26.75	28	25.25	0	0	0	0	0	0	0	0	0	0	0	26.1	45.3	79.5	323.15		
Finance	0	0	22.5	22.5	18.75	18.75	13.75	18.75	16	5	5	5	5	5	5	5	7.35	20.1	16	16	245.55		
Research and Design	0	28	38.75	37.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0	0	104.2	
Development	0	0	0	13.5	101	101	100.59	100.59	100.52	92.4	70.97	69.77	60.6	33.18	30.6	30.6	49.5	55.47	7.5	7.5	3.5	680.57	
Deliverables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total For All Tasks	0	109.75	87.75	108.2	155.75	153	130.34	135.34	132.52	113.4	75.97	74.77	65.6	38.18	51.6	51.6	72.85	91.57	69.7	84.8	115	880.13	

Analysis of Group Adherence to Forecast Labour Hours (From Appendix E, Using the Forecast Hours from the Work Breakdown Structure):



Figure One: Stacked Column Chart of Actual Team Hours Per Week

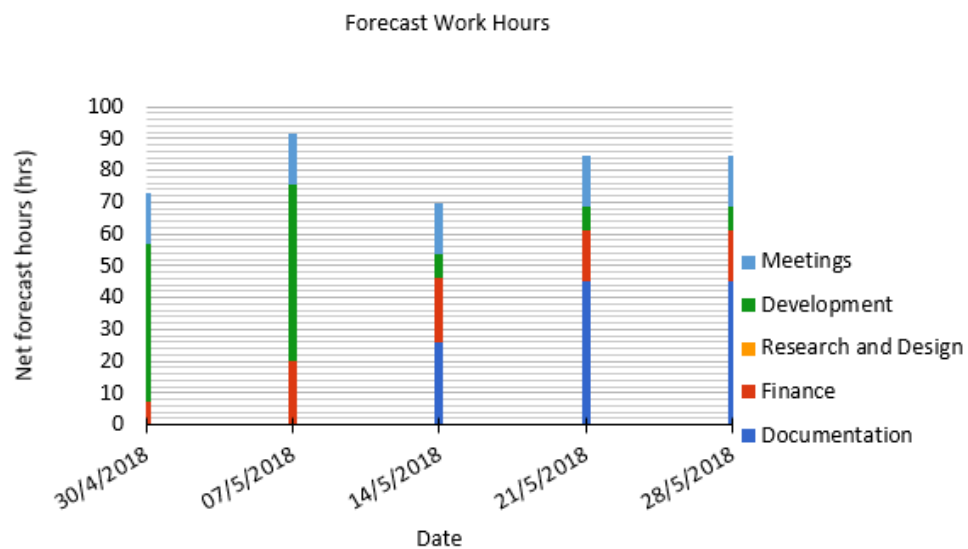


Figure Two: Stacked Column Chart of Forecast Team Hours Per Week

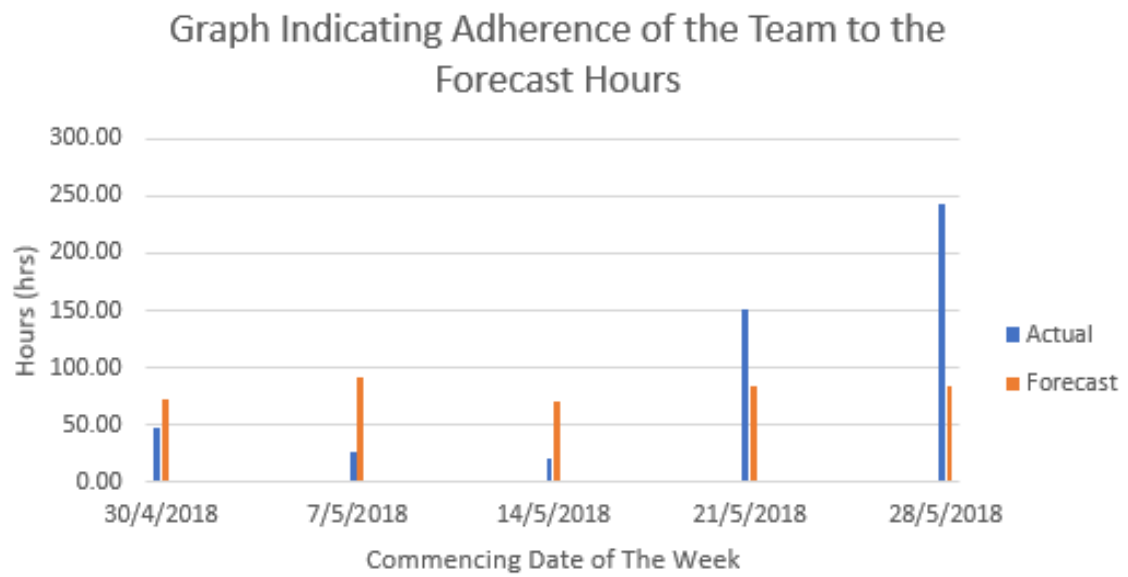
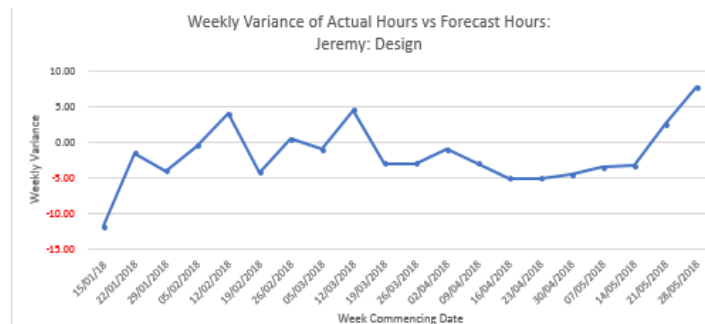
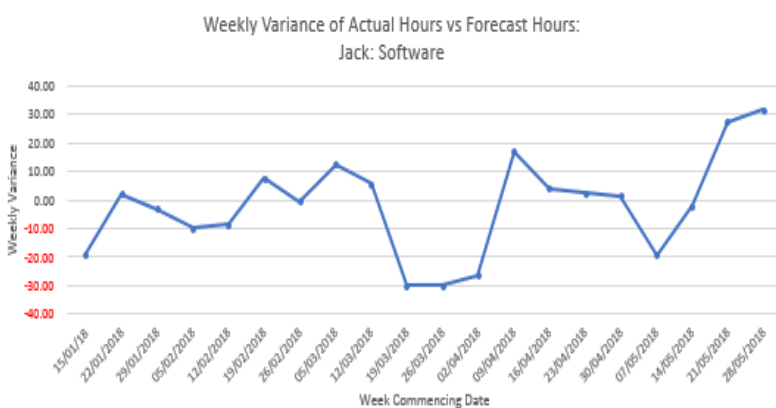
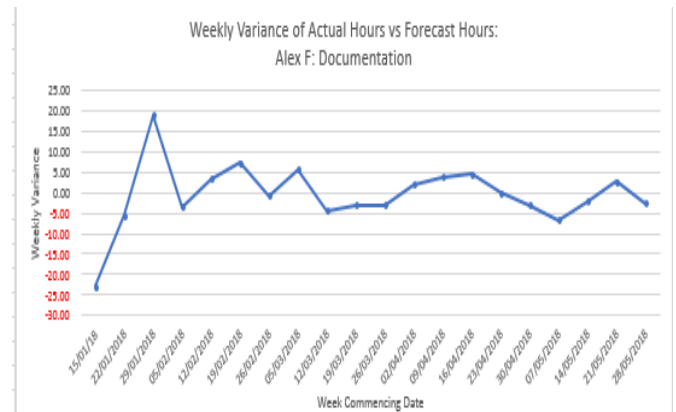
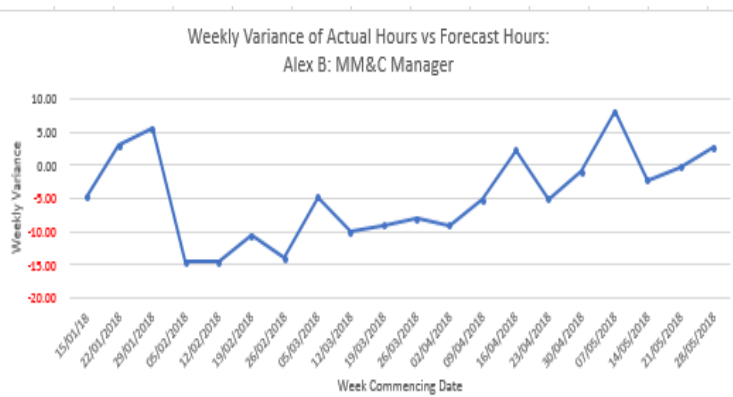


Figure Three: Cluster Column Chart of Actual Weekly Team Hours Compared to Forecast Weekly Team Hours.

Analysis of Group Adherence to Forecast Labour Hours (From Appendix F, Using the Forecast Hours from the Financial Business Plan):



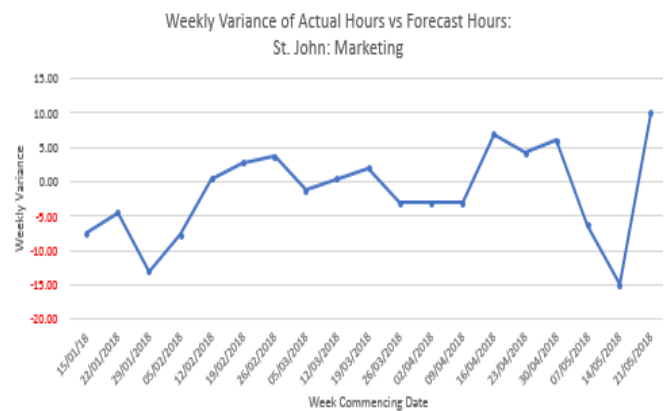
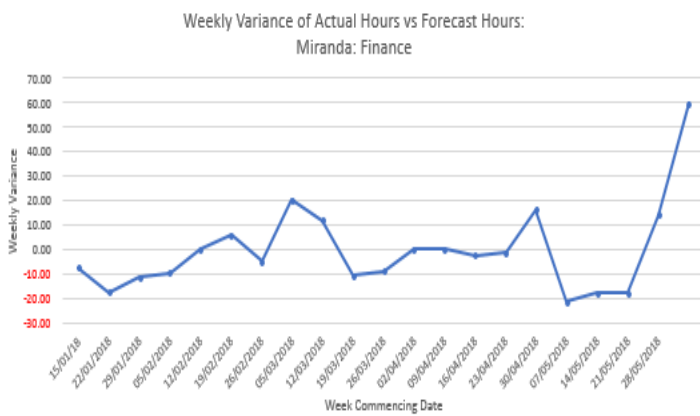
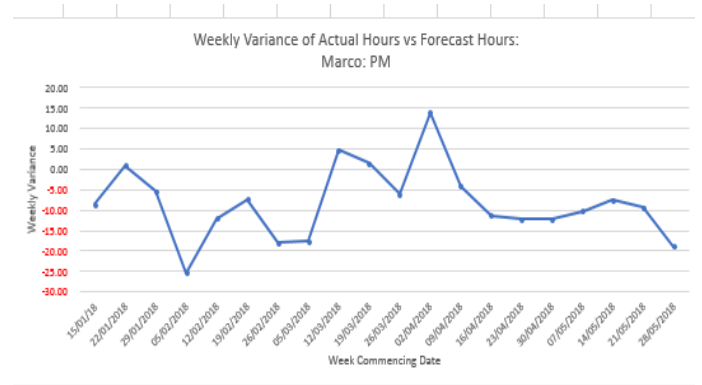
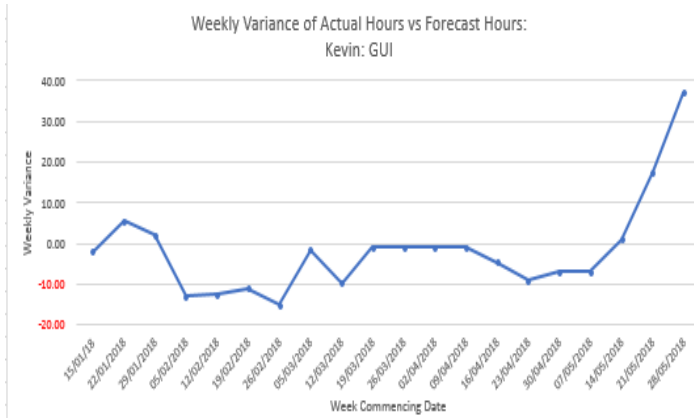


Figure Four: Charts indicating weekly variance between predicted and actual hours worked, for the entire group and then per group member.

Comments and Explanations for Each Week:**Throughout the Current Reporting Period:**

- It is clear from the above tables, charts, and cash flow that, over the first few weeks of this reporting period, the hours we worked are significantly less than those forecast. This is because:
 - Over this time there was a one year-group-wide coursework deadline as well as multiple exams, which lead to the majority of our group working fewer hours than usual. This led to fewer hours than we were forecast.
 - In addition, during the development phase, some timesheets were not completed in full (incorrect, insufficient information, or filed too late). Therefore, it was agreed that any late or incorrectly completed timesheets would not be included (no wages accrued for that particular week).
 - Furthermore, one of our group members was unwell over this reporting period, which also had an impact on hour actual hours worked.
- Due to an automatic process on Microsoft Project when it comes to distribution of hours, we were originally allocated more hours than we needed at the development phase. We believed these hours would be 'used' later on throughout the development phase of our product (ie: when more programming will be executed, the task we believe will take the most time).
- The above point was proven over the final two weeks, where our group has dedicated far more time than before,. This resulted in us reducing our overall group development phase percentage difference in hours between actual and forecast by approximately 10%, although we are still approximately 20% under our forecast hours.

30/04/18 to 06/05/18:

- During this week our entire team was focussed mainly on an out-of-module coursework deadline, which lead to the majority of the team working significantly fewer hours than predicted.
- In addition, Financial Report Three was due this week, which led to more hours being spent on Finance-related tasks. Also, it was at this point that one of our group members' ill health began to impact on work done. This led to the creation of 2 Deputy Finance Manager roles in the following week's meeting.
- After the deadline, more time was dedicated to programming before the exam period, resulting to an increase in hours worked on the final iteration of our product.

07/05/18 to 13/05/18:

- This week was the week before the beginning of our group's exams, and so, following a meeting, it was agreed that we would prioritise our exams temporarily over our product (including there being no meeting the following week), and while there was a slight increase in the hours spent on the product, the amount of time was lower than typical in the weeks prior to a deadline.

14/05/18 to 20/05/18:

- This week was the week with the maximum number of exams, which resulted in one of our lowest total hours worked during this process. As previously mentioned, this week's meeting was cancelled, and while there was some time spent on the programming and finance (despite a group member's ill health), we did not come close to our predicted hours.

21/05/18 to 27/05/18:

- During this week there were still exams, and so there were fewer hours spent on the programming for the final iteration of our product. However the Financial Performance Review was due on 26/05/18, which required time to be spent on research and creating forecast documents. This led to an increase in hours spent on financial tasks.

28/05/18 to 03/06/18:

- Prior to this week, features were created that included the shopping list, manual synchronisation to the user, haptic feedback (vibrations) and settings to disable, app sound effects, and instructional videos.
- During this time most of our group no longer had any other exams or deadlines, except for one or two, and so there was a significant increase in the time dedicated to the project, especially in preparation for the final iteration of the product and the sales presentation that was on 04/06/18. This underlined the point that, throughout the development phase, the distribution of the forecast hours by Microsoft Project had been incorrect.
- In addition, unfortunately, there was an error in research conducted by one of the Deputy Finance Managers (Research), as well as a lack of use of churn and retention rates, which in turn led to the Finance Manager re-creating a second version of the Financial Performance Review prior to the sales presentation, in order for correct income, ratios and values to be displayed, from net present value, burn rates, overhead recovery rates etc.

Summary:

- SWEng Group Three (SG3) Enterprise is currently within budget and is working efficiently whilst dealing with events such as exams and ill-health of a group member.
- Over the duration of the development phase, our group has been working fewer hours than had been forecast by the group and the Project Manager. While we were approximately 20% under our forecast hours, we not only completed the majority of tasks related to the iterations of our product, but also created multiple versions of financial documents and prepared a better sales presentation.
- In addition, as the launch date for our product approaches, we have dedicated a significant amount of time to our product. This has resulted in us meeting our predictions from previous reports (that more time would be spent towards the end of the development phase, despite the temporary lull in hours worked due to exams and similar deadlines).
- Furthermore, although fewer hours have been worked than was originally expected by the end of the development phase, our group does intend to invest more time in future app iterations, as well as spend more time and money on advertising our product following its release this summer. This is likely to result in efficient usage of any money surplus owing to unused hours by the end of the development phase.