L3 Lead Examiner Report 1806





Summer 2018

Level 3 National in Computing

Unit 3: Planning and Management of Computing Projects (31770H)

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Grade Boundaries

What is a grade boundary?

A grade boundary is where we set the level of achievement required to obtain a certain grade for the externally assessed unit. We set grade boundaries for each grade, Distinction, Merit and Pass.

Setting grade boundaries

When we set grade boundaries, we look at the performance of every learner who took the external assessment. When we can see the full picture of performance, our experts are then able to decide where best to place the grade boundaries – this means that they decide what the lowest possible mark should be for a particular grade.

When our experts set the grade boundaries, they make sure that learners receive grades which reflect their ability. Awarding grade boundaries is conducted to ensure learners achieve the grade they deserve to achieve, irrespective of variation in the external assessment.

Variations in external assessments

Each external assessment we set asks different questions and may assess different parts of the unit content outlined in the specification. It would be unfair to learners if we set the same grade boundaries for each test, because then it would not take into account that a test might be slightly easier or more difficult than any other.

Grade boundaries for this, and all other papers, are on the website via this link: http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx

Unit 3: Planning and Management of Computing Projects

Grade	Unclassified		Level 3	
Grade	Officiassified	Р	M	D
Boundary Mark	0	25	38	52

Introduction

This was the second examination season for Level 3 BTEC Computing Unit 3 Project Management.

This unit assessed through two parts, part A was the development of the PID and Gantt chart, which was 3 hours, and part B was the checkpoint and email, which was 2 hours.

This unit is a mandatory unit for all learners studying the extended certificate, foundation diploma, all diplomas and the extended diploma.

The examination for this unit will always contain four sections and each section will be link to a scenario that and used throughout the whole of that section. The scenario clearly stated at the beginning of each section.

Each section is broken down into activities, which will then test learners on different areas of the specification, and learners should expect to apply their knowledge to the scenario.

Learners given a scenario with additional information to support. They instructed to look at individual parts / sections of this during the examination in order to answer questions. The information brief may give learners:

- 1. Information about problems that they need to solve.
- 2. Interpret the scenario and apply solution using Project Management techniques and theory

All Activities of the examination paper provide differentiation at all attainment levels and the brief designed to escalate in difficulty so that a larger percentage of higher-grade marks depends on the skills, knowledge and understanding

- LE Report to be considered with paper and mark scheme
- Contextual introduction

Introduction to the Overall Performance of the Unit

The overall performance of learners overall was good though compared to the previous season for this unit there was a slight drop in the mean mark. It was evident that learners prepared for the rigour of this exam. The performance on the Activity 1 was excellent with many learners picking up marks for most sections. The number of blank responses was also significantly low again, further demonstrating that learners had been well prepared. Activity 2, Gantt chart showed massive improvements in comparison to January 2018, there was an increase in the number of centres using Project Management software and this was evident for many of the learners who gained marks in the top end of the criteria. Activity 3 and 4 were of high standard and demonstrated the learner's ability to apply theory to practical scenario. However, part of Activity 3 (project quality management) was another area that learners struggled with; they failed to include processes and activities that determine the quality of the policies, or objectives that meet the needs of the project.

There is still evidence that many learners are still not covering the full specification in depth. Activity 2b, the costing, was particularly poor; most learners were not able to use logical chains of reasoning to apply Project Management techniques such as those that relate to function points to determine accurate hours worked. Many learners were still using hours and days for the whole project to calculate cost rather than converting the functional points to number of hours needed for each person/activity.

Individual Questions

The following section considers each question on the paper, providing examples of learner responses and a brief commentary of why the responses gained the marks they did.

Activity 1

Scope

The scope of the project outlines what will and what will not be done by the development team. In this project we have been given three easy to understand requirements by our client. They are as follows:

A database system that is able to hold information on customers, order details and stock; a website that enables customers to input their orders into the database and forms of validation on inputs to reduce errors. These are the three requests that we will be following, we will not add any extra features unless requested to (within reason that can be turned down if we deem the request unreasonable) or unless further payments are made.

Many learners struggled with the 'scope' section and were confused between the scope and business plan. The project scope should define be the work to be performed to deliver the product, with specified features and functions; this can include tools and techniques and sometimes the characteristics of the product. The scope should define the agreed limits of a project, for example, the project may agree to provide the Server and user database but might not provide ongoing support and maintenance. These facts should be defined in the scope section.

In the example, the leaner has met this well by focusing on the product features and functions and providing some limitations.

Assumptions

Assumptions			
Assumption	Validated by	Status	Comments
Project Team Members will be available when they are required.	Aaron Vinall	Open	We assume that the project team members will not have other responsibilities on other project that may cause them to be absent from working on this project.
Project team members will be physically/mentally able to work when required.	Aaron Vinall	Open	We assume that our project team members will not become ill during the project which may lead to them missing time working on the project.
Server Hardware will be functional	Aaron Vinall	Open	We assume that the Server Hardware that we plan on providing the client with will be operational and support the system that we create.
The client's business is running the correct version of PHP to support the developed website.	Aaron Vinall	Open	We aim to create the website using PHP technology as it gives us more control over the website code and is easier for more complex tasks than html and javascript. We assume that the client's business runs a version of PHP that will support our developments.
The project deadline will be met despite the short period of time given to work on the project.	Aaron Vinall	Open	Some sections may have to be shorter than normal due to time constraints and only being given two months to achieve the client's needs.

Stakeholders

Stakeholder	Responsibility
Martin Topp (Sponsor)	Owner of the company that is fulfilling the client's requests. The person who is most financially and has the most resources invested in the project due to the project using his employees and his company being paid for the work.
Janet Moss (Client)	Directing what is expected of the project, financially backing the project with the budget.
Aaron Vinall (Project Manager)	Directing the project team to create a product that matches the client's needs and requirements. In charge of maintaining standards and consistency in work throughout the project.
Project Team (Sameer Patel, Tom Drake, Michelle Kirkup, Freya Singh)	Tasked with the creation of the product including creation of documentation, designs and the database/website product as well as testing of the system.
Michael Jones (Finance Manager)	Providing costing information to the Project Manager, providing administration staff.
Lookas Sales Staff (Users) (Sue Miles, Ian Davis)	Users of the system, reporting back any further issues with the system after being trained how to use it correctly after the handover date.

The learner has clearly used their knowledge and understanding here by demonstrating their awareness of how project managers operate. It is good to see a link between strategy and project outcomes. The learner has approached this task by correctly interpreting and transferring the correct information from the brief to the PID. In most cases to reach top mark band, it expected that the learner would populate the last column with higher order of thinking. For example, in the assumptions and stakeholders section you would expect the leaner to have interpreted the scenario correctly and applied theory. The learner work would fit into **Band Mark 4 (10-12)** in the mark scheme.

Risk	Probability	Impact	Severity	Contingency Plan
Loss of data during development	2	3	6	Create regular backups of documentation, versions of the database and website throughout the development of the system. Store backups off site.
Project team member	1	2	2	Locate a contract
leaves				worker who has the same set of skills as the team member who left.
Project Manager leaves	1	3	3	Have a senior member of staff take over the project until a replacement is found.
Server Hardware is damaged on delivery	1	2	2	Order replacement hardware for the client at the cost of being a few days over the deadline.
Member of staff becomes ill	3	1	3	Allow other parts of the project to be worked on if the member of staff is essential to any major task.

Here, the learner has to understand that project management is complex and certain things need considered before the project starts. The risk factors need to be appropriate and appropriate contingency plans thought of. It is expected that in this section the learner would demonstrate an understanding of risks tht would be common in many projects and risks specific to this particular project. Note that in order to achieve the very highest marks, general risks should, where possible be contextualised. In this example there is consideration of the relevant risks and use of logical chains of reasoning showing a full awareness of the given scenario. The learner has considered probability of risk being Low as there is no indication that the organisation cannot complete the work. Impact is medium to high, as the corrective action would require other staff employed. The severity of risk is also set from low to medium because any problems that arise are dealt with inhouse. **Mark Band (2) 3-4**

SMART objective	Achieved?	Date and Comments
The consultant will have completed analysis of the client's current system and have documentation ready to present by 28/08/2018	In progress.	A time of two weeks has been allocated to the consultant to examine the current system that we aim to replace. 14/08/2018
The consultant will have completed the design for the new system by 11/09/2018	No Progress Made. (Not started)	A time of two weeks has been allocated for the consultant to work on and complete the designs for the new system that we aim to implement for the client. Cannot start until 28/08/2018 at the earliest.
The new system consisting of a database and website should be ready for initial launch by 8/10/2018.	No progress made. (Development has not begun).	This is the handover date for the client's business to begin using the developed system. 14/08/2018
The systems integrator will have completed the test plan for use in the testing phase by 8/10/2018.	No progress made.	The test plan will be used to test each component of the new system thoroughly after the system has been created before it is handed over to the client.
The Database, Website and Interface will be ready for testing by 04/10/2018	No progress made.	This date gives time for the staff to identify problems and quickly solve them, this gives less time than what is normal (identified by the feasibility report) but is necessary due to time restraints within the project.

In this example, the objectives reflect the Project Lifecycle stages, Analysis, Design, Implementation, Testing and Evaluation/Review, and then add relevant information from the scenario. These are specific and time constrained and relevant to the given scenario. The above candidate has considered all areas using logical chains of reasoning that show a full awareness of the given scenario.

Objectives

SMART objective	Achieved?	Date and Comments
Developing the website		
Developing the database		
Developing the interface		
Installing server and related		
software		

Objectives

SMART objective	Achieved?	Date and Comments
Did the team finish the project on time?	yes	October 8th
Will the project run within the budget?	yes	October 8th
Will the new system be running side by side with the old system by 8 th October?	yes	October 8th

Remember the objectives should be based upon clearly defined project goals, and then break those down further into the component tasks. These help define your success factors, which the learner needs evaluate in the activity 4. Getting this right first time will help later. It is important to ensure they are 'SMART' objectives. Learners still struggle with this and the above are two examples, which clearly illustrate responses that are too generic and do not use SMART features.

Communication Plan

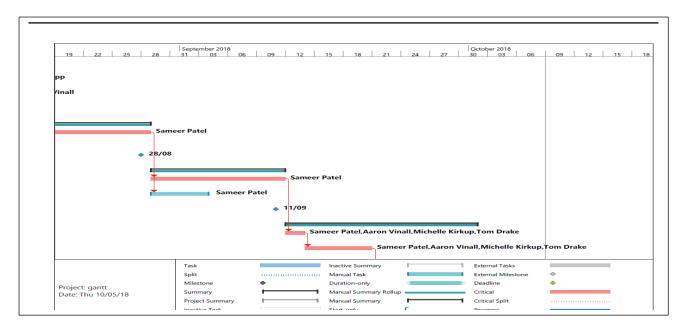
Stakeholder(s)	Frequency	Туре	Purpose
Janet Moss (Client)	Bi-Weekly	One to One	Discuss the progress of the project, gather feedback from the client to inform any changes needed to be done.
Martin Topp (Sponsor)	Weekly	Email	Inform of the progress made to the project. Sharing necessary documentation.
Sameer Patel, Tom Drake, Michelle Kirkup (Project Team)	Bi-Weekly	Conference	Present any new documentation, issues or developments in the project. Bring up any concerns relating to the project.
Janet Moss (Client)	Once 7/10/2018	One to One	Confirm that the client's business is ready for the new system to be enabled before launch.

Freya Singh (Project Team/Administration)	Once 02/10/2018	ı	Inform/Request Freya that she is required for the
reamy Administration			testing phase for the next day.

The communication plan is a crucial component of the project; the frequency and method of communication should be appropriate for the target audience, and should demonstrate logical chains of reasoning that show awareness of the given scenario. To achieve higher marks learners should consider method and purpose carefully. This example demonstrates that the candidate has thought about why the communication is necessary thinking about what to discuss during the communication. The learner would fit into **Mark band 3 (4).**

Activity 2

D	0	Task Mode	Task Name		Duration	Start	Finish	Predecessors	Employee(s)	10	13 16
1		*	Start of the Pr	oject	0 days	Mon 13/08/18	Mon 13/08/18			•	13/08
2		*	Initiation		2 days	Mon 13/08/18	Tue 14/08/18				
3		*	Feasability S	study	1 day	Mon 13/08/18	Mon 13/08/18		Martin Topp		Martin Topp
4		*	Project Initia Document	ation	1 day	Tue 14/08/18	Tue 14/08/18	3	Aaron Vinall		Aaron Vina
5		*	Project has initiated	been	0 days	Tue 14/08/18	Tue 14/08/18				14/08
6		*	Analysis		10 days	Wed 15/08/18	Tue 28/08/18				t e
7		*	Analysis of C Current Syst		2 wks	Wed 15/08/18	Tue 28/08/18	4	Sameer Patel		¥
8		*	Completation Analysis	on of	0 days	Tue 28/08/18	Tue 28/08/18				
9		*	Design		10 days	Wed 29/08/18	Tue 11/09/18				
10	•	*	Design of ne system	ew.	2 wks	Wed 29/08/18	Tue 11/09/18	7	Sameer Patel		
11	÷	*	Creation of Test Plan	the	4 days	Wed 29/08/18	Mon 03/09/18	7	Sameer Patel		
12		*	Project Desi Completed	gn	0 days	Tue 11/09/18	Tue 11/09/18				
13		*	Construction/	Develo	14 days	Wed 12/09/18	Mon 01/10/18				
14		*	Server Configuration		2 days	Wed 12/09/18	Thu 13/09/18	10	Sameer Patel,Aaron		
15		*	Website Developme		5 days	Fri 14/09/18	Thu 20/09/18	14	Sameer Patel, Aaron		
			Tas	k			Inactive Summary		External Tasks		
			Spl	it			Manual Task		External Milestone		
			Mil	estone		*	Duration-only		Deadline	4	
	ct: ga	ntt 10/05/18	Sur	nmary		$\overline{}$	Manual Summary Rollup		Critical		
Date	. mu	10/03/18	Pro	ject Sumr	mary		Manual Summary		Critical Split		
				ctive Task	-		Start-only	E	Progress		
			Ina	ctive Mile	otono.		Finish-only	3	Manual Progress		



In this example, the learner has clearly used a project development tool. The learner has provided a Gantt chart with list of tasks, which follow the project life, cycle, in order of the scenario and shows final task and changeover. Clear dates with time constraints are demonstrated. They have added milestones and resources to each task, in this case the allocation of task to the correct worker. It should be noted that if resources are not on the Gantt chart then the leaner could not achieve mark band 3, pleased to say in the summer series this was correctly done by many centres. This learner achieved **Mark band 3 (7-8).**

Resource Name	Days Needed	Amout Needed
Server hardware	N/A	1
Windows Server O.S	N/A	1
Developer laptops	10	3
Tester laptops	22	2
Training Materials	N/A	1
Staff Name	Role	Days working
Dominic Needham	Project Manager	40
Sameer Patel	Consultant	21
Sameer Pater Tom Drake	Communication	15
Michelle Kirkup	Systems Integrator Graduate Employee	31
Freya Singh	Administration Staff	2
,		_
Budget	Estimated Cost	Contingency
20.0.00		

Cost (£)	Total Cost (£)
4050	4050
550	550
30	900
23	1012
250	250
	6762
Cost per day (£)	Total Cost (£)
	Total Cost (£)
175	
175 154	7000
175 154 135	7000 3234
154	7000 3234 2025

The main points of this sections primarily is the benefits of meeting quality requirements, this should include less rework, higher productivity, lower costs, therefore increased stakeholder satisfaction and increased productivity. In this example, the learner has shown some reasonable understanding, having included hardware resources and cost, the time needed for each employee with cost, but they have not shown any evidence of how they attained the number of days required. This example could have been improved by demonstrating that the function points have been used to determine an accurate estimate of the cost of staff, based on work on this project. However, it has come under budget but the learner has not shown how they have calculated the costs from the functional points or how they have found the most efficient use of resources. (Max mark 4 out 6).

Activity 3

Quality Management

Implementation of Quality Management Standard ISO/IEC 25010:2011.

- This was done on my own accord since no quality measurement standards were mentioned by the Janet Moss (Client) or Martin Topp (Sponsor).
- I feel that the usage of a Quality Management Standard increased the work ethic of the project team by providing them a standard to strive towards achieving.

Standardisation of all deliverables and documents created during the project.

- Standardisation essentially means that all deliverables and documents from the project fall under the same standards in terms of quality and contents.
- This removes inconsistencies in the documentation for example without standardisation some documents may be in-detail and provide a lot of insight while others could contain little to no information.

Maintaining the project using the steps of the development life cycle.

- The logical order to follow when creating a product for a client was followed from start to finish.
- Each stage was worked on by a suitable set of individuals to produce a high standard of work.

Employees were tasked with working from home if their work wasn't up to standards to correct their mistakes.

- It was important that all work was up to standard, especially the project's deliverables and the training materials that were handed over to the client.
- Working from home was a good alternative to requesting more time since we were already on a tight deadline.

Regular communication occurred between the project team and with myself and the client.

- This helped keep the client informed on what the progress of the project was like and informed us of areas where quality may have been lacking.
- Communications between team members was important to maintain a professional working atmosphere and to inform each other what needed completing by when.

Quality management looks at the processes and activities that determine the policies, objectives and responsibilities so the project is successful. The learner in the above example, has clearly done this focusing on standards as well as the project and sustaining it. They have demonstrated planning, performance and control quality key features that make up Quality management.

Quality Management

At the commencement of this project, the core stakeholders of this project came together and concocted the subsequent success criteria:

- The new system will ensure at least 98% of orders are recorded accurately.
- The new system will allow them to process 20% more orders on a day-today basis.
- The new system will increase the total orders by at least 5% due to the addition of online sales.
- The new system will lead to a £6000 increase in sales per annum.
- · Reduce record keeping errors.
- For our Client, Janet, to manage her customer details, order details and stock effortlessly.
- Have a website that will allow customers to place orders.

As Project Manager, I would like to congratulate our Consultant, Systems Integrator and the Graduate employee for analysing the system, developing a test plan for the system, delivering the requested training and also helping out with the initial testing of the system, according to what they were given.

One major fault that occurred within the running of the new system was regarding the system not accepting online payments. Once identified, the rectifying of this fault took two days.

Additionally, the system is at the beginning of its "Parallel running phase". This is where the old system is running in parallel with the new system. This is occurring for one month. After the deadline for this objective has been complete, the new system will be the only system that is operating.

In the example above, the learner has written a lot but does not really discuss planning, performance, quality control, or key features of the project/solution. The learner has focused too heavily on the project life cycle rather than effectively monitoring the implementation or what standards applied, and how it will demonstrate compliance. They do discuss some quality control measurements, but this is not insufficient detail, to achieve the higher marks.

Time:	Behind schedule due to design and code issues.
Cost:	Under budget, having spent
	£25,417.
Quality:	Up to ISO/IEC 25010:2011
	Quality Management Standards.

Issues log

Date Raised	Raised By	Description	Action Taken	Date Closed
02/10/2018	Janet	The Client,	The user	04/10/2018
02/10/2018	Moss	Janet Moss,	interface has	04/10/2018
	(Client)	has identified	been	
	(Circine)	a problem	redesigned to	
		with the user	account for	
		interface. She	Janet's colour	
		is colour blind	blindness.	
		which makes	Dilliulicss.	
		the user		
		interface		
		inefficient for		
		her to use.		
03/10/2018	Michelle	During testing	Corrections	05/10/2018
00, 10, 2010	Kirkup	Michelle	were made to	00, 10, 2010
	(Graduate	Kirkup	the code	
	Employee)	discovered	behind the	
		that the	online	
		website was	payment	
		unable to	system, fixing	
		accept	the bug that	
		payments	caused	
		therefore	payments to	
		nothing was	be declined.	
		able to be		
		added to the		
		database.		
05/10/2018	Janet	Janet's	Our Graduate	N/A, on-
	Moss	workers	Employee,	going.
	(Client)	reported back	Michelle	
		to her that the	Kirkup, has	
		error	been tasked to	
		messages	work with	
		given by our	Janet's staff to	
		website and	identify these	
		user interface	issues and	
		when invalid	develop more	
		inputs were	in-depth error	
		given were	messages	
		unclear.	where	
			applicable.	
05/10/2018	Aaron	Due to errors	Negotiations	08/10/2018
	Vinall	in the code	with Janet	

There is a consideration of the relevant additional information, in this example, that shows a full awareness of the scenario and information given in the brief. The information is entered accurately with all sections fully completed; requirements have been met by the learner's work. In this section, we are looking for accurate and relevant information, which has been thought about before, being entered into each section. **Mark band 3** (6-8).

Lessons Learned

Throughout the project there have been several instances where myself or my team have learned valuable lessons regarding project management and development of the type of solution that was requested by our client.

Our Graduate Employee, Michelle Kirkup, likely gained the most knowledge from this project as she was tasked with working on most tasks despite her lack of experience. She now has a firmer understanding on Database Management, Website Development and C based Language coding from working on the database, website and user interface. We as a team have learned that at times it is beneficial to give graduate employees such as Michelle Kirkup a larger role in projects because it provides a fresh outlook on situations and benefits us in the long run by providing the employee with more essential skills.

I have also learned that when working with a project that involves designing user interfaces I should take people with impaired vision into account to create a more user friendly, accessible solution for my client. In this situation the person with impaired vision was the Client, Janet Moss. If it was a regular employee this issue may have gone un-noticed therefore we would have been providing an inferior product.

I have also learned the importance of testing in a project. With the given time frame of this project a lot of cutbacks were required to deliver the product on time (or as close to being on time as possible). One of the cutbacks I made was limiting the amount of time spent testing to a mere two days. This obviously was not enough time given the severity of the issues identified late into those two days which caused further setbacks than necessary.

Another lesson that I was able to gather from this project was that I should encourage the concept of black box testing for projects which have a deadline as short as this one as it puts less pressure on the dedicated testers and would have also caught onto problems such as the payment procedure being declined by the system.

This project has also taught me the boundaries of my team and made it easier to identify the pace that they are able to produce a solution at. Because of the sort time-frame for this project it was constant work for everyone on the team and even then, there was problems with delivering the system on time. In future I will more thoroughly evaluate the deadline given to me and attempt to negotiate if I believe that the deadline is too short. This was not an easy project by any means so being constantly under stress of completing by the deadline may have had an impact on the performance of my team.

The mark band 3 criterion, "Lessons learned are relevant and insightful, showing thorough understanding of project management concepts" has been met. In this section it is expected that a learner will take taught, theoretical content and apply it to the given scenario. In the above example, the learner gives the reasoning behind the corrective action; they also include the causes of issues. They have also mentioned what has been experienced. In order to improve on this answer, the learner could have included some lessons learned about communication management.

Activity 4

Subject Project Closure Report - Data Record System

Dear Janet,

We are pleased to hear that you are happy with the system that we have provided as part of our Data Record System project that we completed for your company. As part of the project closure I am writing this email to you to inform you of the project's process and to evaluate the project from my perspective. This will include information about how our time was used, the procedures that we followed and how I consider our project to compare to the criteria you specified at the beginning of the project.

To begin with, I feel that the budget that was allocated to us was fair. We did not go over budget, but we were only just below the threshold. I had overlooked the opportunity of setting aside a contingency budget with the remaining amount but feel that even if I had the amount of money that would have been allocated would not have been sufficient for that role in the costing. On the other hand, if I was to re-do this project I would request a larger time scale to be allocated to the project. It was a struggle to complete the project in the given time which caused me to have to make some major cutbacks in vital stages including testing. If extra time was allocated to the project I believe that we would have been able to deliver a more stable product. Despite this I hear that you are pleased with the product that we were able to provide in such a short time which is great to hear. At the end of the project we had spent roughly \$25,417 of the \$25,500 budget and had gone over the deadline by 8 days. As stated before we had to make some cutbacks in terms of duration that phases of the project could go on for, therefore we went under budget. As for going over the deadline this was because of vital problems with both the code and the design was discovered at the end of the project which required many days to correct. Despite these factors I feel that the project was a success.

At the beginning of the project you made it clear what you wanted us to produce. You told us that you required a system that would be able to store data efficiently (reduction of record keeping errors in comparison to your old system), have a method of managing the data stored in the database (customer, order and stock details) and lastly the creation of a website that will handle the payments and store orders using the new database. From this I was able to create a project scope which allowed us to focus on these key features and not step outside of the scope.

The success criteria of the project were as follows:

- Create a relational database solution with the following tables to be stored: customers, orders and stock. This database should be over 98% accurate.
- Develop a payment processing website that can communicate with the database to store data.
- Develop a user interface that allows people to easily manage the contents of the database.
- Produce training materials to inform users of the system how to effectively use each component.

Overall, I believe that each of these criteria has been met with the deliverables that were handed over to you. On top of meeting the criteria we also provided your company with necessary hardware to run the new system from which was not part of the success criteria. First of all, the database solution that we created has had no problems storing any data so far, if the data is valid the database will accept it. This backed up by the current %100 acceptance of valid data. For the handover for the database we have provided the structure of tables for the relational database that are necessary to be able to store data as requested, the structure provides the database management software with a set of columns for each section which identifies what is supposed to be stored where along with

formatting details. My team have also created a website which does as requested, enables a customer to enter their details and place orders for product or services sold by your company. A user interface was created and eventually configured to your liking as previously we had forgotten to account for accessibility within the user interface. Lastly our Graduate Student had produced a set of training materials which were readily available for the day of the launch.

As part of my role as a Project Manager I have obviously been the person in charge of the team that has worked on your project. I will attempt to explain project management that I have undergone through each stage of the Project Life Cycle, a five-part cycle that is common in any system development.

The first part of the Project Life Cycle is initiation. There were two notable individuals working on the project at this point in time. Those being me and Martin Topp, the owner of M&M Developers. At this stage I created the first version of the Project Initiation Document after Martin had conducted his feasibility study on your company. I had no issues with managing at this point as the project was simple and in its earliest stage and only really had myself to manage.

The next step of the project life cycle was the planning. This stage consisted mainly of my consultant Sameer Patel and his work with your old system. He was tasked by me to analyse the old system and come up with a design for the new system that included the essential functionality of the old system. Only one problem arose around this time, that being the understanding that the deadline we were given may be too short for the project, so Sameer was tasked with both the analysis of your system and the design of a new one simultaneously. This may have led to some loss of quality in the work by Sameer however if there is any I haven't noticed the decline. The work that Sameer produced was up to ISO/IEC 25010:2011 standards which was selected by me.

Next was the execution. This is where my team had to put the plan into action and develop the system and eventually launch it. During this time, I had several people working under the project team including one from another department of M&M Developers (Financial) who assisted with testing. Other project team members were involved in the creation and in-house testing of the system. Notably our Graduate Student Michelle Kirkup had spent a significant amount of time on the project and was one of the reasons that we were able to get the project completed as close to the deadline as possible. Due to constraints I had also requested that some employees spent time at home working on and refining their work to bring each deliverable up to the standards that I was up holding.

Once that stage had been completed, which was what caused us to go over the deadline, the next stage was launched. This stage was the period of parallel which lasted up until the closure date. This stage was mainly overseen by our graduate employee Michelle Kirkup who worked closely with your staff to make refinements to areas like the error display system and to train your employees with the materials that she had created. I had little to do with this part of the project since it mainly consisted of the one employee.

Lastly, we initiated the Closure period of the project life cycle. This is the stage that we are currently on with this email. I have been put in charge of writing this email by Martin Topp to feedback to you what the project was like from our team's perspective and to outline details like this so that you are aware of what we plan to do in the future and to formally conclude the project.

Lessons learned, transferable lessons with explanation, successes and project issues
Through working on this project there have been many examples of lessons that have been learned
by myself and people who worked alongside me on the project. Notably these lessons include gaining
skills in the creation of relational database solutions, developing websites and the design of a user
interface. One of the more important lessons was bought up to us by you when you had informed us
that our user interface design was difficult for you to use due to your vision impairment. This was a
reminder to myself and the project team that accessibility is an important factor in creating solutions

The final stage is the email or review of the project success. In this section we are looking for three main areas:

- 1. Success criteria "There is an accurate summary of how quality criteria were met showing an awareness of the scenario throughout".
- 2. Review of the project, and linking this to the project lifecycle.
- 3. summary of lesson learnt.

For the success criteria we are expecting the candidate to look back at part A of the exam and see if they have met their objectives, and if so how and if not why not, in this case the learner has produced an insightful review and has met this criterion by discussing the success criteria individually and providing examples of how each criterion was met. **Mark Band 3(3)**

The information given in the scenario has been utilised effectively to provide details of deliverables success, such as the project coming in close to budget. They have also covered process success such as the new system delivered by the team to match the designs, and performance success such as the project team working together with the aim of developing a new system of high quality. **Mark band 4 (8-9)**

Mark band 4 (8-9)

Summary

Overall, taking into consideration that this is the second time this paper has been sat, the quality and understanding of learners' work has been improved. Although performance was slightly weaker compared to 1801, in this series there was a larger cohort with a number of new learners sitting the paper for the first time therefore a slight drop in performance could have been expected. With this in mind, performance was still strong, with a much better spread of marks across the paper.

Based on performance in this examination series, learners are offered the following advice to help continue this improvement:

- It is recommend that centres encourage learners to try focusing on using and applying techniques so that the functional points are correctly converted to the correct cost of the employee rather than assuming number of hours needed to work. Also, learners should be making sure that all costs are included, such as any hardware used.
- Learners are reminded that scope and business case are two separate entities
 and candidates should try distinguishing this. Scope is focusing on particular
 functions and features whereas the business case is more about the reasons for
 starting the project. Learners should consider the project worth for the required
 investment as well as things like market demand, customer requests etc.
- Further guidance on objectives should be considered. Learners should add comments, giving good reason/justification for each objective. It would be useful to try using less generic objectives, such as following the project lifecycle, and more applicable ones which are appropriate to the given scenario.
- Learners should try understanding the different components that make up
 quality management within a project as this will help with areas such as lesson
 learnt especially as many learners confused this with the evaluation. The lesson
 learnt should be based on the unforeseen issues to the project sponsor so this
 may need to be made clearer to learners. This deeper understanding will help
 demonstration of knowledge and higher order skills.





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