FIT2002 IT Project Management
Assignment 1

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Deliverable 1 – Project Integration Management

1.1 – Project business justification

Justification form

Project Name	FIT's business strategy	Potential financial and other benefits	Initial assessment of the project value
Project 1: Special Consideration	• Special consideration is to provide the opportunity for student with an extension of the assignment and assessments. That allow student to handle the assignments among different units with a better efficiency. • With a better efficiency and decision of the plan of handling the assessments of the unit, unit can gain a higher score for the SETU from the student. That can increase the average score of each unit in SETU. • With special consideration of student unable to take or complete the assessment on time when facing immediate or exceptional circumstances, students are being more flexible to plan for the completion of the assessment tasks	• With streamline the process and improve the communication between the relevant can improve the efficiency of the process. • Reduction of the labour cost of handling the especial consideration due to the improve of the process and communication system.	• This project focus on the improvement of efficiency with handling the communication among the stakeholders.

	during immediate or exceptional circumstances. Therefore, student can have a better learning experience in the university. That can improve the overall ranking of the QILT Student Experience Survey.		
Project 2: Continuous Student Feedback on Teaching and Learning	• Introducing a system with the process of allowing student to provide continuous feedback on the unit, allow the student to provide the feedback towards the unit. For example, lecture resources etc. With the feedback raised by the student, teaching team can response to the feedback immediately. As a results, ranking for overall experience in the QILT Student Experience Survey can be improved. • With the introduction of a system with the process of allowing student to provide continuous feedback on the unit, feedback or concern from the student can be effectively handled. Therefore, average unit SETU score can be increase.	• With the continuous feedback provided by the student, financial resources of the unit can be distributed more effectively for the whole semester.	• This project can improve the learning experience of the student with providing the improvement and support to the students based on their feedback. • This project allows the improvement of the learning and teaching quality by the student's feedback.
Project 3: Early Intervention	• Ranking for overall experience in the QILT Student Experience Survey can be improved with showing the concern	• With providing the early intervention towards student's learning difficulties, the fail rate of the units may decrease.	• This project can enhance a high quality of the university life for the student in Monash University.

	and provide help towards student's academic difficulties. • With solution provided by the teaching team to tackle with student's difficulties, student can better their academic process. Therefore, SETU score of units can be improved. That can increase the average SETU score to 4.25.	So, the retake rate of the units will also decrease. Therefore, this project may not be benefit in finance aspect.	• This project can contribute to the reputation of Monash University by improving the academic process for the students.
Project 4: Applications for Credit	• With the ease of use for applying the credit, efficient learning experience can be provided to the student. As a result, ranking for overall experience in the QILT Student Experience Survey can be improved.	• This project can attract more students to study in Monash University with the flexible uses of the credit transfer system. Therefore, it can be benefitted in terms of the great financial return.	• Efficient and flexible Credit system can assure student's academic quality by ensuring accurate assessment provided to student. • With the consistent, accurate assessment provided to the student, education service quality can be guaranteed.

Justification memo

PROJECT MEMORANDUM

Date: 30th August 2022
From: Hiu Lam Lau (Project manager)
To: FIT's senior manger
Subject: Justification of the project supported strategy, benefits, and value

The purpose of this memo is to justify how each project support with the business strategy, potential financial benefit and the value.

Project 1 - Special Consideration
For the business strategy, this project can provide the opportunity for student with the extension for the assessment. Student can handle the assessment among different units efficiently. With the better efficiency of managing the assessment, students are more willing to provide a higher score to the units. Therefore, average score of each unit in SETU can increase.

For the financial and other benefit, this project can reduce the labour cost in handling the special consideration by efficient process and communication system.

For the value, this project focus on the improvement of efficiency by better the communication among the stakeholders.

Project 2 - Continuous Student Feedback on Teaching and Learning
For the business strategy, this project allows students to provide continuous feedback and the response from the teaching team can be applied immediately. Therefore, ranking for overall experience in the QILT Student Experience Survey can be improved.

For the financial and other benefit, financial resources of the unit can be allocated effectively.

For the value, this project can improve student's learning experience by providing the improvement and support to the students.

Project 3 - Early Intervention
For the business strategy, this project will show the concern and provide help towards the student's learning difficulties. So, ranking for overall experience in the QILT Student Experience Survey can be improved.

For the financial and other benefit, this project may not benefit in financial aspect directly. It is because the unit fail rate and unit retake rate will decrease by providing help to the students in learning process.

For the value, this project can enhance the high quality of the university lifestyle for the student in Monash University.

Project 4 - Applications for Credit
For the business strategy, this project can provide efficient learning experience to the student. As a results, ranking for overall experience in the QILT Student Experience Survey can be improved.

For the financial and other benefit, this project can be benefitted by attract more students to study in Monash with a flexible credit transfer system.

For the value, student's academic quality can be assured with the accurate assessment provided to the student. Which is based on the efficient and flexible credit system.

Task 1.2 – Justified weighted scoring model

Score model

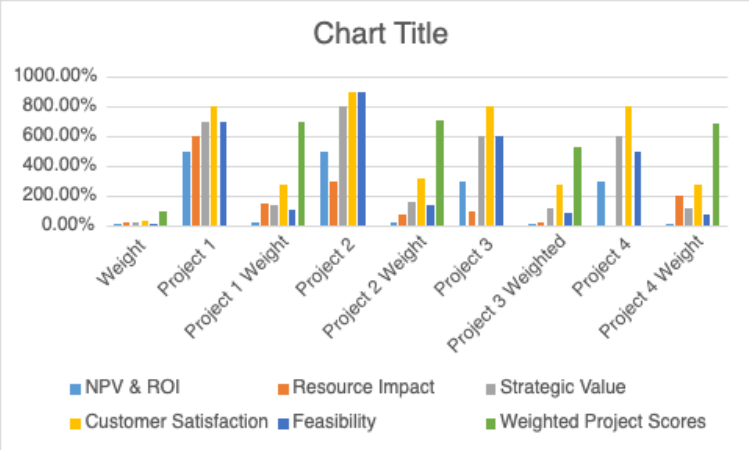
Criteria	Project 1	Project 2	Project 3	Project 4
1) NPV and ROI	3/10	2/10	5/10	4/10
2) Resource Impact	6/10	3/10	1/10	8/10
3) Strategic Value	7/10	8/10	6/10	6/10
4)	8/10	9/10	8/10	8/10

Customer Satisfaction				
5) Feasibility	7/10	9/10	6/10	5/10

Weight scoring model

Criteria	Weight	Project 1 Weight	Project 2 Weight	Project 3 Weight	Project 4 Weight
1) NPV and ROI	15%	0.15	0.1	0.25	0.2
2) Resource Impact	15%	0.9	0.45	0.15	1.2
3) Strategic Value	35%	2.45	2.8	2.1	2.1
4) Customer Satisfaction	30%	2.4	2.7	2.4	2.4
5) Feasibility	15%	1.05	1.35	0.9	0.75
Weighted Project Scores	100%	6.95	7.4	5.8	6.65

Bar chart of the model and results



<u>Weight Scoring Criteria</u>
Criteria 1: NPV and ROI (weight: 5%)
This project is to enlarge the financial value with providing the higher NPV value (Net Present Value)

Criteria 2: Resource Impact (weight: 15%)
This criteria is referring to how the project is to affect the existing resource on staffing, technology, systems.

Criteria 3: Strategic Value (weight: 35%)
This project is to support Monash FIT's business strategies.

Criteria 4: Customer Satisfaction (weight: 30%)
This project is to emphasise the improvement of the original customer service. And provide a great user experience with the system. This project will provide the higher customer satisfaction level. So that, the project will meet the FIT's business strategy by improve ranking for overall experience in the QILT Student Experience Survey.

Criteria 5: Feasibility (weight: 15%)
This project is going to ensure the feasibility of the implementation for the project with evaluating the higher feasibility level of the project.

Results

Project 1: Special Consideration

- Criteria 1: This project is only improving the existing system and there is no direct financial profit bringing to Monash. Therefore, the project is still being negative for the financial status and only scored for 3/10.
- Criteria 2: This project is going to improve the efficiency and effectiveness of the special consideration by reducing the waiting time of request results. Therefore, this project will score for 6/10.
- Criteria 3: This project is going to increase the score of QILT and SETU for the unit. However, the percentage of students who will request for the special considerations is small. So, the influence of this project may not be obvious towards the students in majority. Therefore, this project only scored as 7/10
- Criteria 4: This project improve the waiting time of the response towards the request of the special consideration. Also, all the information of the special consideration request can be seen among the teaching staff and improve the communication among the teaching team. Therefore, this project scored as 8/10.
- Criteria 5: Special consideration system had already existed. Fewer require of the resources with only the improvement of the system. Also, guideline of the how the existing special consideration system work is stated. Therefore, this project scored as 7/10.

Project 2: Continuous Student Feedback on Teaching and Learning

- Criteria 1:With the highest cost/ budget spend on this project in compare to the other projects. Therefore, the continuous student feedback on teaching and learning scored as 2/10.
- Criteria 2: With changing the format of SETU system from one-time survey to continuous survey system, more existing resources will be spent on the project. Therefore, the customer satisfaction scored as 3/10.
- Criteria 3: After the introduction of a system with the process of allowing student to provide continuous feedback on the unit, student can provide the comments towards the units or teaching staff continuously and the teaching staff can response to the comments. Therefore, students' comment can be considered, and teaching staffs are able to know the feedback from the students and make new arrangement. As a result, the ranking of overall experience in the QILT Student Experience Survey may be able to be improved. So, the customer satisfaction scored as 8/10.
- Criteria 4: With the improvement of the feedback providing system to let the student provide the feedback and the staff can response continuously, the satisfaction among the stakeholder can be achieved. Therefore, the customer satisfaction scored as 9/10. Which is the highest score among all the projects.
- Criteria 5: Due to the existent of the SETU system, the system of collecting continuous feedback can be constructed feasible. Therefore, the feasibility scored as the highest score, 9/10 among all projects.

Project 3: Early Intervention

- Criteria 1: This project is aiming to better the academic progress of the student by creating the system to inform the teaching team when students are facing difficulties with their studies. There is no direct financial benefit bringing to Monash. Therefore, NPV and ROI for this project scored as 5/10
- Criteria 2: Due to the lack of physical system and website for Early Intervention, more resources are required for this project. Therefore, resource impact for this project scored as 1/10.
- Criteria 3: With the support to the students by recognized students' needs towards their study difficulties by the teaching staffs, students may give a higher score in the SETU for the units. Therefore, the strategic value scored as 6/10.
- Criteria 4: With the aim of helping teaching staffs to identify and provide help to the students who are facing the difficulties, students can improve the academic results. At the same time, teacher staffs can ensure all students can achieve well in the academic process. Therefore, the customer satisfaction for this project scored as 8/10.
- Criteria 5: Due to the lack of existing system for the early intervention, a new system must be designed and implemented. Which is not as feasible as project 1 and 2. Therefore, feasibility for this project scored as 6/10.

Project 4: Applications for Credit

- Criteria 1: This project is mostly structured with policy and guidelines. Therefore, more financial resources are required for the digital system building and construction. As a results, NPV and ROI for this project scored as 4/10.
- Criteria 2: This project will be more efficient in helping to reduce the request for human resources on the process of applying for credit procedure. Therefore, resource impact for this project scored as 8/10.
- Criteria 3: This project is support FIT's strategic direction of development. Therefore, the strategic value for this project scored as 6/10.
- Criteria 4: This project can clarify the procedure of applying for credit. Therefore, customer satisfaction for this project scored as 8/10.
- Criteria 5: Due to the lack of existing system for this project, the feasibility of this project is getting low. Therefore, feasibility for this project scored as the lowest score, 5/10.

<u>Recommendation</u>
For criteria 1, project should achieve the lowest negative value of the NPV.
For criteria 2, the project should reduce the requirement of the resource of the existing system/ website.
For criteria 3, the project should support the FIT's business strategies.
For criteria 4, the project should gain the majority customers' satisfaction.
For criteria 5, the project should be feasible for the implementation.

Task 1.3 – Project charter

Project Charter

Project Title: Continuous Student Feedback on Teaching and Learning
Project Start Date: 1st September 2022 **Projected Finish Date:** 25th November 2022

Budget Information: FIT's allocated $2 million for improving student's interactions with the faculty by implementing a set of projects by Faculty Student and Academic Service team. Including this project.

Project Manager: Hiu Lam Lau, 0412345678, hlau0019@student.monash.edu

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Project Objectives:

To improve the quality of learning and teaching experience of the student, Monash introduced the SETU system for student to provide the feedback towards the unit. To ensure the feedback from the student can be respond immediately as possible, FIT is going to introduce a system with the process of allowing student to provide continuous feedback on the unit.

Main Project Success Criteria:

This project must be completed within 9 months and within the budget of $600,000. Also, this project must improve the existing SETU system with continuous, flexible feedback collecting format. To encourage the student to voice the feedback and allow the teaching to respond.

Project management approach:

- Determine the scope of the project by creating the scope statement.
- Develop project planning by creating work breakdown structure.
- Develop project schedule by creating the Gantt chart and the network diagram.
- Develop project cost and budget by creating the cost model and NPV model.
- Identify the hardware and software needed for creating the project.
- Conduct regular meeting or interview with the project team or stakeholders.
- This project will adopt the waterfall framework for the project management approach.

Roles and Responsibilities

Role in the project	Name	Position in the organization/contract	Contact Information	Sign-off
Project manager	Hiu Lam Lau	Manager	hlau@monash.edu	Hiu Lam Lau
Non-IT team member	Peter Walker	Business analyst	Peter.Walker@monash.edu	Peter Walker
Non-IT team member	Lucy Lee	Human resource manager	Lucy.Lee@monash.edu	Lucy Lee
Non-IT team member	Mila Smith	Secretary	Mila.Smith@monash.edu	Mila Smith
IT team member	Brian Shaw	Manager	Brian.Shaw@monash.edu	Brian Shaw
IT team member	Kyle Howard	Web designer	Kyle.Howard@monash.edu	Kyle Howard
IT team member	Phoenix Pham	Front-end web developer	Phoenix.Pham@monash.edu	Phoenix Pham
IT team member	Lucas Perry	Backend web developer	Lucas.Perry@monash.edu	Lucas Perry

IT team member	Anna Smith	Data engineer	Anna.Smith@monash.edu	Anna Smith
IT team member	Dora Clark	Data scientist	Dora.Clark@monash.edu	Dora Clark
IT team member	Noah Nelson	IT security specialist	Noah.Nelson@monash.edu	Noah Nelson

Deliverable 2 – Project Scope Management

Task 2.1 – Scope statement

Scope Statement

Project Title: Continuous Student Feedback on Teaching and Learning

Date: September 1, 2022

Prepared by: Hiu Lam Lau, Project manager, hlau0019@student.monash.edu

Project Justification:

Mr. Peter Barton, Student and Academic Services Manager, Faculty of Information Technology, Monash University, request this project to achieve the FIT's business strategic, the KPIs. The new system will improve the quality of learning and teaching of the units by changing the format of SETU system from one-time survey to continuous survey with the response towards student's feedback.

Product Characteristics and Requirements:

- Ways of providing feedback: The new system/ website (moodle) will allow the student to provide feedback when or after student are reading or completing the assignment or watching the video.
- System arrangement schedule: The new system should start the SETU survey from Week 1 with collecting the feedback from the student.
- Feedback collection format: The new system should conduct a flexible feedback collection method for student to provide the feedback. For example, scale-based question, open-ended question but not too lengthy in the new system.

Associated risks:

- Security risk: Data (feedback) may expose from the database.
- Server stability: Server may shut down due to different reasons and lead to the unstable operating for the feedback providing system.

Summary of Project Deliverables:

(i) Project management-related deliverables:

- Scope statement
- NPV
- ROI
- Project charter
- WBS
- Gantt chart
- Network diagram
- Cost model

(ii) Product-related deliverables:

- Intranet site design: Provide the new design for letting student provide the feedback after the completion of the lecture recording or assessment.
- Feedback database: Teaching team can access to the database to retrieve the feedback data from the students. Other than retrieving data, database should allow the creation of feedback data, update of the feedback data from the student.

Project Success Criteria:

- Complete the project within 9 months
- Complete the project with the limit budget of $600,000
- Project must be designed with a flexible format for collecting student's feedback

Deliverable 3 – Project Schedule Management

Task 3.1 – Milestone description with SMART criteria

<u>Project initialisation (Milestone 1)</u>

- Specific:
  Project initialisations contain few activities to be completed. So that, project initialisation is regarded as completed.
- Measurable:
  There are several deliverables for the project initialisation. Including project charter, scope statement.
- Assignable:
  Required activities for the project initialisation can assign to the project manager, business analysis and IT team leader.
- Realistic:
  It is realistic for initialising the direction of the project with the project manager, business analysis and IT team leader at the beginning of the project.
- Time-based:
  The expected date of the project initialisation is marked in the Gantt chart. Before the start of the project planning.

<u>Project planning (Milestone 2)</u>

- Specific:

Project planning contain number of tasks to be completed. Therefore, project planning is regarded as completed.

- Measurable:
  There are several deliverables for completing the project planning. Including team charter, project schedule and human resource recruitment document.
- Assignable:
  Required tasks and deliverables can assign to the project manager, business analysis, IT team leader and human resources manager.
- Realistic:
  Human resources planning and scheduling is needed for the whole project in the planning stage of the project.
- Time-based:
  The expected date of project planning milestone is marked in Gantt chart. Before the project implementation.

Web design completion (Milestone 3)

- Specific:
  Web design include functional and non-functional aspects to be designed. Therefore, web design is recognized as completed.
- Measurable:
  Once the database and the user interface are well-designed, the milestone is marked as completed.
- Assignable:
  Required tasks and designs can assign to the project manager, IT team members.
- Realistic:
  Well structure design for the system is necessary before the construction of the program.
- Time-based:
  The expected date of the web design completion is marked in Gantt chart. Before the construction of the system.

System building completion (Milestone 4)

- Specific:
  Front-end interface, backend server, database, and security structure to be fully developed. Therefore, system building is masked as completed.
- Measurable:
  Once the Front-end interface, backend server, database is developed, the milestone is marked as completed.
- Assignable:
  Required tasks can assign to the IT team members.
- Realistic:
  This is the important stage of the whole project with building the system.
- Time-based:
  The expected date of the system building completion is marked in Gantt chart. Before the system testing.

System testing completion (Milestone 5)

- Specific:
  All-rounded system testing will mark as completed for the Milestone 5.
- Measurable:

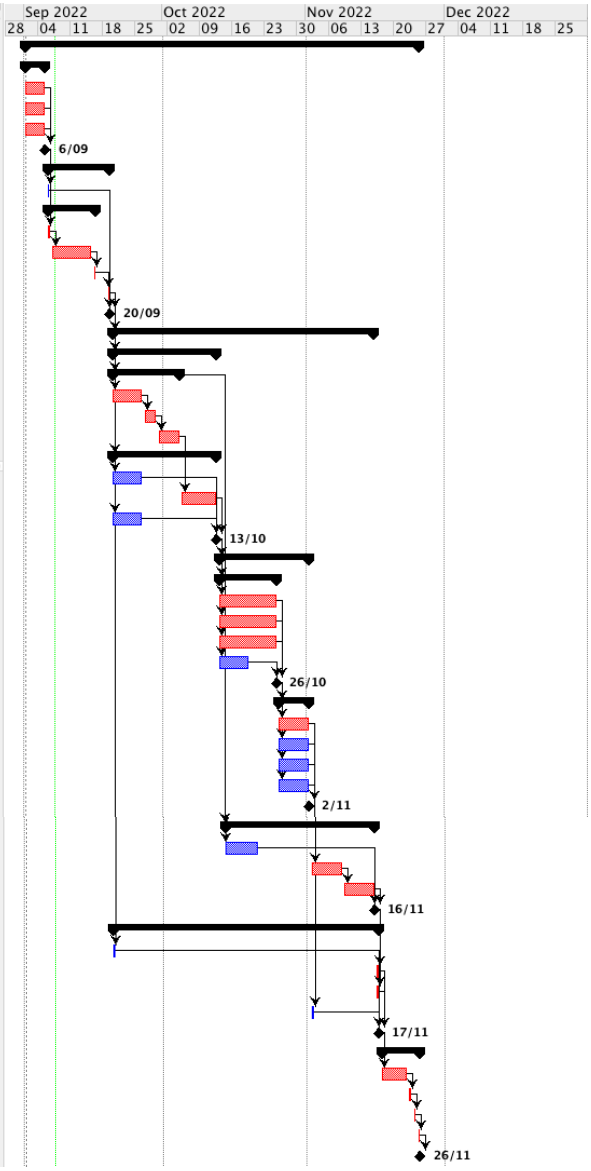
Passing all the system tests. Including front-end, backend, database and security testing to be considered as completed.

- Assignable:
  Required testing tasks can assign to the IT team members.
- Realistic:
  IT team members, front-end developer, backend developer, data scientist, IT security specialist are qualified to complete the testing.
- Time-based:
  The expected date of the system building completion is marked in Gantt chart. After the all the implementation of the system.

Task 3.2 – Gantt chart

View the full Gantt chart in PDF format, please go to appendix - 4.

	Name	Duration	Predecessors
1	**0. Continuous Student Feedback on Teaching & Learning**	62 days?	
2	**1. Project Initialing**	3 days?	
3	1.1 Determine the scope	3 days?	
4	1.2 Project charter	3 days?	
5	1.3 Project kick-off meeting	3 days?	
6	1.4 Project initialisation (Milestone 1)	0 days?	3;4;5
7	**2. Project Planning**	10 days?	
8	2.1 Team charter	0.5 days?	6
9	**2.2 Human resource planning**	9 days?	
10	2.2.1 Define which industry professionist is needed for the project	1 day?	6
11	2.2.2 Select professionist	7 days?	10
12	2.2.3 Recruitment	1 day?	11
13	2.3 Work breakdown structure	1 day?	12
14	2.4 Project planning (Milestone 2)	0 days?	8;13
15	**3. Project excuting**	41 days?	**14**
16	**3.1 Web design**	17 days?	**14**
17	**3.1.1 Functional design**	11 days?	**14**
18	3.1.1.1 Data (feedback and response) process design	5 days?	14
19	3.1.1.2 Database design	3 days?	18
20	3.1.1.3 Data analyse method design	3 days?	19
21	**3.1.2 Non-functional design**	17 days?	**14**
22	3.1.2.1 User interface design	5 days?	14
23	3.1.2.2 Data interchange format design	6 days?	20
24	3.1.2.3 Security of the system design	5 days?	14
25	3.1.3 Web design completion (Milestone 3)	0 days?	22;23;24
26	**3.2 Construction**	14 days?	**25**
27	**3.2.1 Programming**	9 days?	**25**
28	3.2.1.1 Website interface	9 days?	25
29	3.2.1.2 Database creation	9 days?	25
30	3.2.1.3 Data analyse process develop	9 days?	25
31	3.2.1.4 Update backend server	5 days?	25
32	3.2.1.5 System building completion (Milestone 4)	0 days?	28;29;30;31
33	**3.2.2 Program testing**	5 days?	**32**
34	3.2.2.1 Front-end testing	5 days?	32
35	3.2.2.2 Backend server testing	5 days?	32
36	3.2.2.3 Database usage testing	5 days?	32
37	3.2.2.4 System security testing	5 days?	32
38	3.2.2.5 System testing completion (Milestone 5)	0 days?	34;35;36;37
39	**3.3 Document**	22.26 day...	**17**
40	3.3.1 Program report	5 days?	17
41	3.3.2 Testing report	5 days?	34
42	3.3.3 Meeting report analyse	5 days?	41
43	3.3.4 Documentation analysis (Milestone 6)	0 days?	40;42
44	**4. Project monitor and controlling**	42 days?	
45	4.1 Updated the original project baseline	1 day?	13
46	4.2 Evaluate and control risk from analyse report	1 day?	43
47	4.3 Monitor and evaluate the project scope	1 day?	43
48	4.4 Control chart analyse(monitor project quality)	1 day?	38
49	4.5 Project control workshop (Milestone 7)	0 days?	45;46;47;48
50	**5. Project closing**	7 days?	
51	5.1 Generate final Report	4 days?	49
52	5.2 Final presentation	1 day?	51
53	5.3 Client approval	1 day?	52
54	5.4 Project review from client	1 day?	53
55	5.5 Final review of the report (Milestone 8)	0 days?	54



Gantt chart summary

The project length is 62 days. The beginning day of this project is 1st September. The final day of this project is 17th January. The final presentation and client approval will take place on 23th November.

Therefore, we can start the training session for the new system and make sure the system can deliver on schedule.

Project stages estimation:

- Project initiating stage will last for 3 days.
- Project planning stage will last for 10 days.
- Project executing stage will last for 41 days.
- Project monitor and controlling stage will last for 42 days, which will parallel process with the project executing stage.
- Project closing stage will last for 7 days.

Project stages dependency:

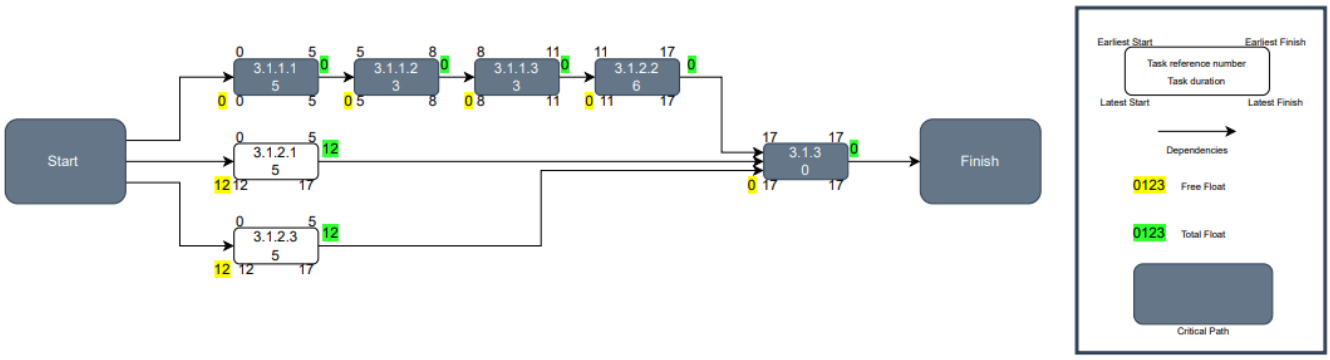
- Project initiating will start at 1st September
- Project planning will start after the completion of the project initiating stage milestone (Milestone 1)
- Project execution will start after the completion of the project planning stage milestone (Milestone 2)
- Within the project execution, system construction will begin after the system design had complete (Milestone 3). After the construction complete (Milestone 4), general test will be conducted (Milestone 5).
- Within Project document, program document will start processing after the system building completion (Milestone 4) parallelly. For the testing document, it will start process with the start of the program testing in project execution stage parallelly. For the meeting report analyse, it will start after all the program report and testing report had complete.
- Project monitor and controlling will keep processing within the whole project stages.
- Project closing will start after the Milestone 7 completed.

Assumptions:

- According to the Victorian Public Holidays guideline, there are 249 working days in 2022 and 2023. Here are the public holidays that may affect the project schedule. (Australia | Victoria | How Many Working Days in Year 2022?, n.d.), (Australia | Victoria | How Many Working Days in Year 2023?, n.d.)
    - Friday before the AFL Grand Final: Friday, 30 September 2022
    - Melbourne Cup: Tuesday, 1 November 2022
    - Christmas Day Observance: Monday, 26 December 2022
    - Boxing Day Observance: Tuesday, 27 December 2022
    - New Year's Day Observance: Monday, 2 January 2023
    - There will a period of holidays over the Christmas. The Christmas holiday will start at 24 December 2022 and end on 10 January.

Task 3.3 – Network diagram for the ‘design phase’ of the project

View the full network diagram in PDF format, please go to appendix - 5.



Task reference number	Task name	Duration (day)	Dependencies
3.1.1.1	Data (feedback and response) process design	5	Start after the previous milestone completed
3.1.1.2	Database design	3	Start after 3.1.1.1 completed
3.1.1.3	Data analyse method design	3	Start after 3.1.1.2 completed
3.1.2.2	Data interchange format design	6	Start after 3.1.1.3 completed
3.1.2.1	User interface design	5	Start after the previous milestone completed
3.1.2.3	Security of the system design	5	Start after the previous milestone completed
3.1.3	Web design completion (Milestone 3)	0	Monitor of the process of 3.1.2.2, 3.1.2.1, 3.1.2.3 completion

Deliverable 4 – Project Cost Management

Task 4.1 – one-page cost model

WBS Items	#Units/Hrs	Cost/Unit/Hr.	Subtotals	WBS Level 2 Totals	% of Total (result rounded to 2 decimal places)
1.Project Management				$179,250.75	37.41%
Project manager	265.5	$108	$28,674		
IT team members	1903.5	$63	$119,920.5		
Non-IT team members	490.5	$62.5	$30,656.25		
2.Hardware				$100,000	20.87%
Desktop and laptop device	10	$8,000	$80,000		
Servers	2	$10,000	$20,000		
3.Software				$100,000	20.87%
Database creation	1	$15,000	$15,000		
Software license(s)	85	$1000	$85,000		
4.Testing (20% of the total software costs)			$20,000	$20,000	4.17%
Subtotal (Before Reserve)			$399,250.75		
5.Reserves (20% of the subtotal)			$79,850.15	$79,850.15	16.67%

Task 4.2 – Cost model summary

Cost model assumption

- Salary of IT team members
  - IT team leader - $60/hr
  - Wed designer - $50/hr
  - Front-end developer - $65/hr
  - Backend developer - $66/hr
  - Data engineer - $70/hr
  - Data scientist - $65/hr
  - IT security specialist - $65/hr

  For the salary of all members that belong to IT team in the cost analyse, it is assumed to be average salary of all members. The calculation will be ($60 + $50 + $65 + $66 + $70 + $65 + $65)/7 = $63. Therefore, the estimated salary for the IT team members is $63.

- Salary of non-IT team members
  - Business analyst - $100/hr
  - Human resource Manager - $65/hr
  - Human resource administrator - $33/hr
  - IT team secretary - $52/hr

For the salary of all members that belong to non-IT team in the cost analyse, it is assumed to be average salary of all members. The calculation will be ($100 + $65 + $33 + $52)/4 = $62.5. Therefore, the estimated salary for the non- IT team members is $62.5.

- Hardware cost is assumed to include the desktop, laptop and server expenses for the system development of this project.

- Software cost is assumed to include all license fee that are required to develop the system for this project. For example, SQL server license, Microsoft license, etc.

- Testing cost is assumed to be 20% of the total software costs. The calculation will be $100,000*20% = $ 20,000.

- Reserve cost is assumed to be 20% of the subtotal, which is $399,250.75. Therefore, the calculation will be $399,250.75*20% = $79,850.15.

Reflective Report

Decision making:
We include a lot of decision making in our team during the project initiating stages. For example, we need to decide the weight score criteria and the score among our own projects. Before we start making the decision, we need to prepare the information or the calculation model. For example, business strategy, NPV model, etc. As a result, decision can be made in a fair way with the demonstration of the information of our own project.

Conflict resolution:
Disagreement happened in the team sometime. Respectful communication environment is emphasized even when we got the conflict among the group members. The usual solution towards the conflicts or disagreement is to search the solution in the Ed forum or the resources in the additional weekly resources. Also, we will attend the consultation to ask the question to refer to our conflict.

Feedback:
We provide different feedbacks to other group members for the calculation of the business model (NPV and ROI). Other than the calculation, we will express the opinion on the content of the memo, summary between the group members. The feedback can allow us to ensure the direction of our reports is correct. And ensure the quality of the project in structure and content.

Improvement:
Further elaboration of the meeting deliverables and conclusions should be made after the meeting.

Appendix

Appendix – 1

NPV Calculations

Project 1: Special Consideration
Discount rate: 8%

	Project Initiating	Project Planning	Project Development	Project Implementation	Project closing	Total
Benefits	$0	$0	$0	$0	$0	$0
Costs	$6,800.00	$13,600.00	$237,000.00	$13,600.00	$5,440.00	$276,440.00
Cash flow	$(6,800.00)	$(13,600.00)	$(237,000.00)	$(13,600.00)	$(5,440.00)	$(276,440.00)
NPV: $(219,793.12)						

Project 2: Continuous Student Feedback on Teaching & Learning						
Discount rate: 0.2%						
	Project Initiating	Project Planning	Project Executing	Project monitor and controlling	Project closing	Total
Benefits	$0	$0	$0	$0	$0	$0
Costs	$12,136.50	$30,398.25	$340,906.00	$5,017	$15,831	$404,289.25
Cash flow	$(12,136.50)	$(30,398.25)	$(340,906.00)	$(5,017)	$(15,831)	$(404,289.25)
NPV: $(401,909.21)						

Project 3: Early Intervention						
Discount rate: 8%						
	Project Initiating	Project Planning	Project Designing	Project Implementation	Project closing	Total
Benefits	$0	$0	$0	$0	$0	$0
Costs	$15,360.00	$15,360.00	$71,040.00	$120,000.00	$25,600.00	$247,360.00
Cash flow	$(15,360.00)	$(15,360.00)	$(71,040.00)	$(120,000.00)	$(25,600.00)	$(247,360.00)
NPV: $(229,037.04)						

Project 4: Applications for Credit						
Discount rate: 8%						
	Project Initiating	Project Planning	Project Executing	Project monitor and controlling	Project closing	Total
Benefits	$0	$0	$0	$0	$0	$0
Costs	$16,320.00	$72,320.00	$108,000.00	$50,400.00	$9,600	$256,640.00
Cash flow	$(16,320.00)	$(72,320.00)	$(108,000.00)	$(50,400.00)	$(9,600)	$(256,640.00)
NPV: $(206,426.84)						

Appendix – 2

ROI Calculations

Project 2: Continuous Student Feedback on Teaching & Learning	
Total discount benefits	$0
Total discount costs	$276,440.00

ROI (in 3 months)	-100%

Project 2: Continuous Student Feedback on Teaching & Learning	
Total discount benefits	$0
Total discount costs	$404,289.25
ROI (in 3 months)	-100%

Project 3: Early Intervention	
Total discount benefits	$0
Total discount costs	$227,571.20
ROI (in 3 months)	-100%

Project 4: Applications for Credit	
Total discount benefits	$0
Total discount costs	$256,640.00
ROI (in 3 months)	-100%

Appendix – 3

Work Breakdown Structure (List format)

0. Continuous Student Feedback on Teaching & Learning
1. Project initiating
   - 1.1 Determine the project scope
   - 1.2 Project charter
   - 1.3 Project kick-off meeting
   - 1.4 Project initialisation (Milestone 1)
2. Project planning
   - 2.1 Team charter
   - 2.2 Human resources planning
     - 2.2.1 Define which industry specialist is needed for the project
     - 2.2.2 Select professionist
     - 2.2.3 Recruitment
   - 2.3 Work breakdown structure
   - 2.4 Project planning (Milestone 2)
3. Project executing
   - 3.1 Web design
     - 3.1.1 Functional design
       - 3.1.1.1 Data (feedback and response) process design
       - 3.1.1.2 Database design
       - 3.1.1.3 Data analyse method design
     - 3.1.2 Non-functional design
       - 3.1.2.1 User interface design
       - 3.1.2.2 Data interchange format design
       - 3.1.2.3 Security of the system design
     - 3.2.3 Web design completion (Milestone 3)
   - 3.2 Construction
     - 3.2.1 Programming
       - 3.2.1.1 Website interface

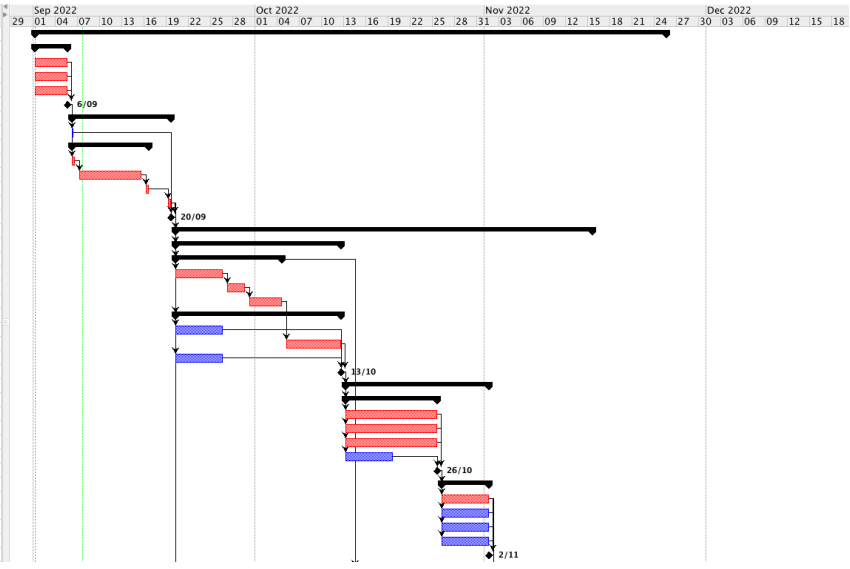
3.2.1.2 Database creation
3.2.1.3 Data analyse process develop
3.2.1.4 Update backend server
3.2.1.5 System building completion (Milestone 4)
3.2.2 Program testing
3.2.2.1 Front-end testing
3.2.2.2 Backend server testing
3.2.2.3 Database usage testing
3.2.2.4 System security testing
3.2.2.5 System testing completion (Milestone 5)
3.3 Documentation
3.3.1 Program report
3.3.2 Testing report
3.3.3 Meeting report analyse
3.3.4 Documentation analysis (Milestone 6)

4. Project monitor and controlling
   4.1 Update the original project baseline
   4.2 Evaluate and control risk from analyse report
   4.3 Control chart analyse (monitor project quality)
   4.4 Project control workshop (Milestone 7)
5. Project closing
   5.1 Generate final report
   5.2 Final presentation
   5.3 Client approval
   5.4 Project review from client
   5.5 Final review of the project (Milestone 8)

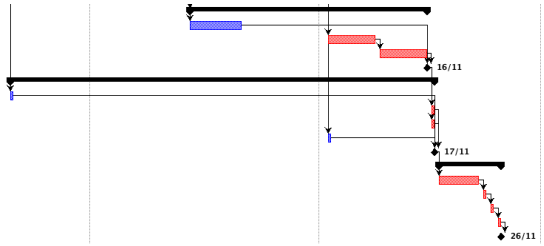
Appendix – 4

Gantt Chart (Full version)

	Name	Duration	Predecessors
1	0. Continuous Student Feedback on Teaching & Learning	62 days?	
2	1. Project Initialing	3 days?	
3	1.1 Determine the scope	3 days?	
4	1.2 Project charter	3 days?	
5	1.3 Project kick-off meeting	3 days?	
6	1.4 Project initialisation (Milestone 1)	0 days?	3;4;5
7	2. Project Planning	10 days?	
8	2.1 Team charter	0.5 days?	6
9	2.2 Human resource planning	9 days?	
10	2.2.1 Define which industry professionist is needed for the project	1 day?	6
11	2.2.2 Select professionist	7 days?	10
12	2.2.3 Recruitment	1 day?	11
13	2.3 Work breakdown structure	1 day?	12
14	2.4 Project planning (Milestone 2)	0 days?	8;13
15	3. Project excuting	41 days?	14
16	3.1 Web design	17 days?	14
17	3.1.1 Functional design	11 days?	14
18	3.1.1.1 Data (feedback and response) process design	5 days?	14
19	3.1.1.2 Database design	3 days?	18
20	3.1.1.3 Data analyse method design	3 days?	19
21	3.1.2 Non-functional design	17 days?	14
22	3.1.2.1 User interface design	5 days?	14
23	3.1.2.2 Data interchange format design	6 days?	20
24	3.1.2.3 Security of the system design	5 days?	14
25	3.1.3 Web design completion (Milestone 3)	0 days?	22;23;24
26	3.2 Construction	14 days?	25
27	3.2.1 Programming	9 days?	25
28	3.2.1.1 Website interface	9 days?	25
29	3.2.1.2 Database creation	9 days?	25
30	3.2.1.3 Data analyse process develop	9 days?	25
31	3.2.1.4 Update backend server	5 days?	25
32	3.2.1.5 System building completion (Milestone 4)	0 days?	28;29;30;31
33	3.2.2 Program testing	5 days?	32
34	3.2.2.1 Front-end testing	5 days?	32
35	3.2.2.2 Backend server testing	5 days?	32
36	3.2.2.3 Database usage testing	5 days?	32
37	3.2.2.4 System security testing	5 days?	32
38	3.2.2.5 System testing completion (Milestone 5)	0 days?	34;35;36;37



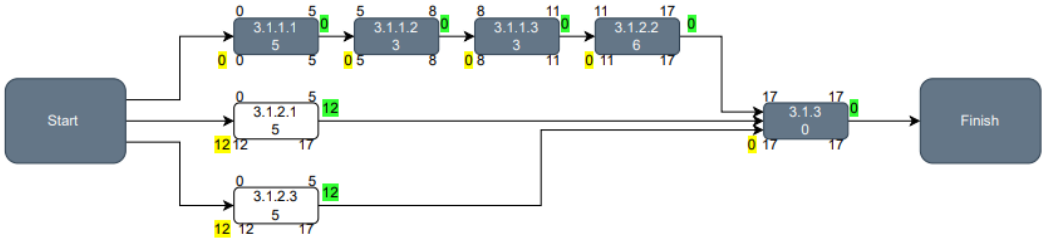
39	⊟3.3 Document	22.26 day...	17
40	3.3.1 Program report	5 days?	17
41	3.3.2 Testing report	5 days?	34
42	3.3.3 Meeting report analyse	5 days?	41
43	3.3.4 Documentation analysis (Milestone 6)	0 days?	40;42
44	⊟4. Project monitor and controlling	42 days?	
45	4.1 Updated the original project baseline	1 day?	13
46	4.2 Evaluate and control risk from analyse report	1 day?	43
47	4.3 Monitor and evaluate the project scope	1 day?	43
48	4.4 Control chart analyse(monitor project quality)	1 day?	38
49	4.5 Project control workshop (Milestone 7)	0 days?	45;46;47;48
50	⊟5. Project closing	7 days?	
51	5.1 Generate final Report	4 days?	49
52	5.2 Final presentation	1 day?	51
53	5.3 Client approval	1 day?	52
54	5.4 Project review from client	1 day?	53
55	5.5 Final review of the report (Milestone 8)	0 days?	54

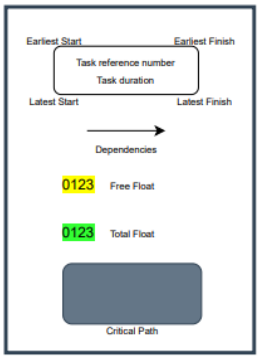


Appendix – 5

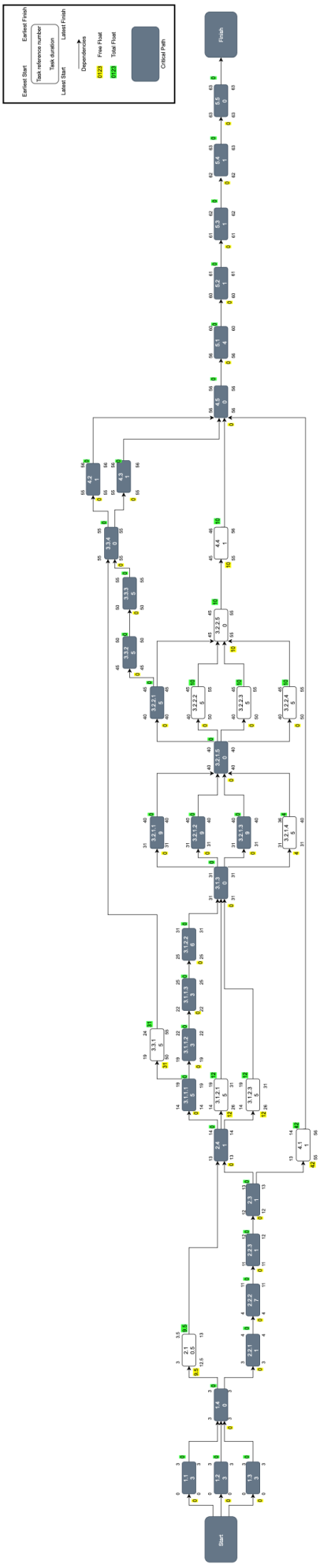
Network Diagram (Full version)

Design Phase





Full Version


Earliest Start
Earliest Finish
Task reference number
Task duration
Latest Start
Latest Finish
Dependencies
Free Float
Total Float
Critical Path
Start
Finish

Reference

1. Australia | Victoria | How many working days in year 2022? (n.d.). Australia.workingdays.org. Retrieved September 4, 2022, from https://australia.workingdays.org/how_many_working_days_in_year_2022_Victoria.htm
2. Australia | Victoria | How many working days in year 2023? (n.d.). Australia.workingdays.org. Retrieved September 4, 2022, from https://australia.workingdays.org/how_many_working_days_in_year_2023_Victoria.htm