

Project Plan

ELECTRONIC PROJECT SUBMISSION APPLICATION

Version 0.1, 26-08-2020

Apollo Consulting

FOR THE ENVIRONMENTAL FORENSICS TEAM | DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT

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1. Project Definition

1.1. Statement of Purpose

The purpose of this project plan is to identify and define our approach towards effectively executing and implementing this project along with the facilitation of communicating between the stakeholders and the client. This project plan will exhibit the planning and development of a new system for the Environmental Forensics Team within the Department of Planning, Industry and Environment. The aim of this is for environmental officers to be able to collect samples, record information and pass around data at ease. This project plan will illustrate the risk management, project scheduling, resource allocation, quality, and control management.

1.2. Project Scope

The current system in place is a paper-based system, where when a sample is collected from the field, it is recorded on a document where it is then passed on to multiple officers for it to be further investigated. As this process can be quite lengthy and inconvenient, our team has been given the responsibility to design and implement a new approach to record, access and share data related to research projects. The end goal for this project is to improve the overall experience of using a system that can be easily accessed, thus increasing usability where investigations can be conducted more efficiently.

1.3. Assumptions

We have made the following assumptions:

- Any work to be completed that is not mentioned in the project schedule will be reviewed and adjustments will be made accordingly.
- Network access and configuration details will be provided by the client to aid in the Design and Implementation stage.
- All resources, licensing requirements will be collected at ease with no delays.
- Unexpected changes that will negatively impact the project completion will be communicated amongst all team members to initiate change control.
- Testing of the prototype will have minimal to no errors, with the prototype to be completed and presented to the client within the estimated time in the project schedule.

2. Risk Management

2.1. Risks

To be able to manage risk effectively, it is essential to identify all risks and assess the impact it will have on the overall project. By using a probability impact matrix, we will be able to visualise the impact and likelihood of the risk, as well as those who are responsible for managing these risks.

The table below captures the risks involved with this project, how it can be mitigated and who is responsible for managing that risk.

See Appendix A for the risk matrix that was used to calculate the risk level of each identified risk.

ID	Risk Description	Risk Level	Impact	Responsibility
R001	Project exceeding estimated end date	Moderate	The project will need to be rescheduled, which affects the project's budget for resources, time and money	Project Manager
R002	Compatibility/Useability of the system integration	Moderate	If the system isn't compatible with the overall goal for the Forensics team, the whole project would be dismissed, hence a waste of resources, time and money.	Software developer, UX/UI Design
R003	System may not be supported by current devices available to be used	Moderate	Similar to R002, the entire project will	Software Developer, UX/UI Design, Business Analyst
R004	Not understanding the project scope	High	If the project scope isn't clear to all parties involved, may need to amend project scheduling which results in lost of resources (time and money) affecting the overall budget	Project Manager
R005	System access limitations	Low	If users are unable to access the system, it will cause a delay in the overall research/investigation	Business Analyst
R006	App security/Data breach	Medium	If information is being recorded (possibly from an investigation that is confidential) is breached, it can result in a loss of trust and brand image. An expected expense like this will affect budgeting if required to update software to regain security	Client/All team members - Understanding what the company policy is by having clear communication to reduce a data breach from occurring.

2.2.Mitigation Plan

The following are mitigation strategies for the risks outlined in 2.1 above.

- R001: Ensuring that the project is on schedule as set by the project timeline and consistently checking that it is.
- R002: Ensure that all applications being used for the prototype is compatible and user friendly. Identify and prioritise the key features required to ensure usability.

- R003: Recognise which devices need to be upgraded/reinstalled to ensure that the system is compatible. Communicating with the client to understand what technologies are currently being used to work around that.
- R004: Proper communication channels must be strictly adhered to and frequency used to maintain consistency.
- R005: Before the launch of the prototype, ensure that all users required to use the system have access on levels that are relevant to their role.
- R006: Understanding the company policy and ensuring it is being implemented correctly throughout using the system. Conducting regular audits to monitor suspected activity and to track who has accessed which data.

3. Resource Management

3.1. Project Resources

The following resources will be used in the development of this application:

Human resources:

- 1x project manager
- 1x designer
- 1x lead developer
- 2x assistant developers

Software:

- Flutter & Flutter SDK
- Firebase Realtime Database
- Dart SDK

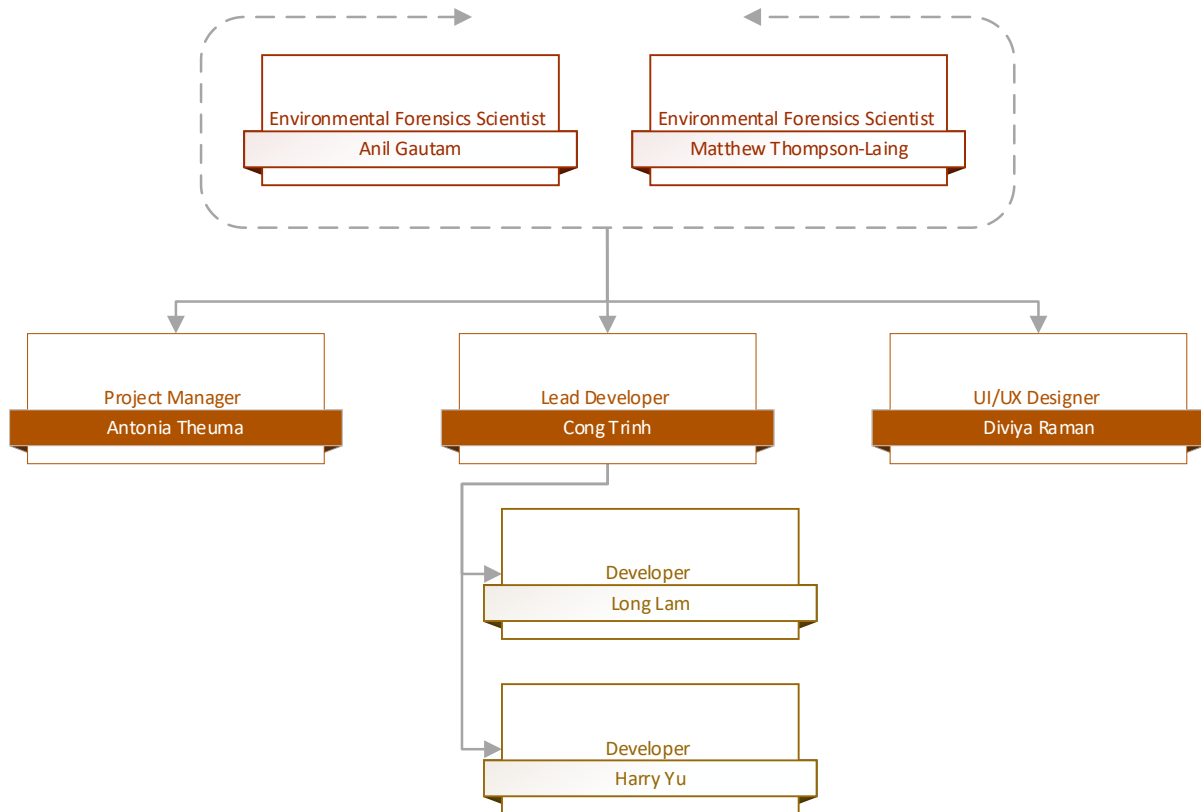
3.2. Team Organisation

3.2.1. Contact Details

Name	Role	Contact Details
Anil Gautam	Client	Anil.Gautam@environment.nsw.gov.au
Matthew Thompson-Laing	Client	Matthew.Thompson-Laing@environment.nsw.gov.au
Antonia Theuma	Project Manager	Antonia.Theuma@students.mq.edu.au
Cong Trinh	Lead Developer	Cong.Trinh@students.mq.edu.au
Diviya Raman	UI/UX Designer	Diviya.Raman@students.mq.edu.au
Dao Duong Long Lam	Developer	Dao-Duong-Long.Lam@students.mq.edu.au

Zezhong (Harry) Yu	Developer	Zezhong.Yu@students.mq.edu.au
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3.2.2. Organisational Structure



3.2.3. Roles and Responsibilities

Name	Responsibilities
Antonia Theuma	Project management, documentation, editing
Cong Trinh	Programming lead (front and back end)
Diviya Raman	Wireframes, UI style guide, UX design
Dao Duong Long Lam	Database design, programming assistance
Zezhong (Harry) Yu	Business process design, programming assistance

4. Project Schedule

4.1. Tasks, Activities, Phases

Work breakdown structure (WBS)

WBS	Task Name	WBS (cont)	Task Name (cont)
1	Project Initiation	3.3.2	UI Implementation
1.1	Project Kickoff	3.3.3	UI Testing
1.2	Conduct Feasibility Study	3.4	Create Database
1.2.1	Current Systems Analysis	3.4.1	Database Schema Development
1.2.2	Determine Project Feasibility	3.4.2	Database Schema Implementation
1.2.3	Review Feasibility Study	3.4.3	Database Testing
1.2.4	Feasibility Study Complete	3.5	Integrate Software
2	Project Planning	3.5.1	API Structure Development
2.1	Create Project Plan	3.5.2	Integration
2.1.1	Define Project Scope	3.5.3	Prototype Created (v0.1)
2.1.2	Identify Resources	3.5.4	Prototype Created (v0.2)
2.1.3	Assess Risks	3.6	Create Technical Documentation
2.1.4	Create Quality Plan	3.6.1	Create Analysis Documentation
2.4.5	Project Plan Created	3.6.2	Create Design Documentation
2.2	Create Requirements Specification	3.6.3	Create Testing Documentation
2.2.1	Assess Operating Environment	3.7	Support and Training
2.2.2	Identify Product Feature Requirements	3.7.1	Create User Documentation
2.2.3	Define Software Requirements	3.7.2	Software Training Demo
2.2.4	Create Requirements Specification	3.7.3	Training Complete
2.2.5	Requirements Specification Created	4.	Project Monitoring and Controlling
3	Project Executing	4.1	Update Documents
3.1	Set Up Framework	4.1.1	Project Plan Update 1
3.1.1	Framework Design	4.1.2	Requirements Specification Update1
3.1.2	Framework Development	4.1.3	Project Plan Update 2
3.2	Create Functions	4.1.4	Requirements Specification Update 2
3.2.1	Input Form Development	4.1.5	Analysis Documentation Update
3.2.2	Logical Function Development	4.1.6	Design Documentation Update
3.2.3	Authentication Development	4.1.7	Testing Documentation Update
3.2.4	Function Testing	5.	Project Closing
3.3	Create User Interface	5.1	Project Report
3.3.1	UI Design	5.2	Project Handover Complete

4.1.1. Milestones

The following milestones will serve as a guide on completeness of the project and give the project team smaller goals to work toward:

- Feasibility Study accepted
- Project Plan and Requirements Specification accepted
- Design document produced
- Prototype submissions x2
- Training completed and signed off
- Project close – handover completed

4.2. Project Deliverables

The following list of project deliverables shall be provided:

- Project Plan
- Requirements Specification
- Design Document
 - Wireframes
- Testing Document
- Project Control Log
 - Risk Register
 - Change Request Log
- User Manual

4.3. Project Implementation Strategy

As this is a software development project, we will be using an Agile system development methodology so that we are able to quickly adapt to change and deliver working software at regular intervals. In software development projects, often requirements are not known, or will be changed as the project continues and new issues emerge. The Agile model is useful for situations where frequent feedback is needed and, as such, each iteration of the cycle results in usable working software with supporting elements until the final product is completed.

A blended approach using both the Agile and Waterfall framework will, however, work best for our project team as it will allow simple tracking of deliverables through the use of Gantt charts, while still being flexible enough to allow the re-working of tasks and timelines. For this reason, we will be using the five processes as outlined by the Project Management Institute (PMI):

- Project initiation
- Project planning
- Project execution
- Project controlling
- Project closing

Whilst these processes are part of a more traditional waterfall methodology, we will incorporate the Agile approach in the sense that the planning, execution, and controlling stages will be iterated for smaller cycles of the project.

4.4. Project Timeline

Please see Appendix C for the Gantt Chart of the project schedule.

5. Quality Management

5.1. Quality Control & Management

Quality management shall be employed on this project, in accordance with Apollo Consulting's project management standards. This will involve:

- Issuing and maintaining a Project Plan
- Issuing and maintaining a Requirements Specification
- Change Control procedures, as defined in section 5.4, will be applied to manage risks, issues, and changes
- Progress meeting updates every fortnight between The Department of Planning, Industry, and Environment, and Apollo Consulting
- Formal customer acceptance of deliverables upon closing.

Apollo Consulting will be complying with the ISO 10006:2017 standard. This defines the guidelines for quality management in projects.

5.2. Quality Management Tools

Apollo Consulting will be using various quality management tools to ensure that the quality of the final product and all deliverable is maintained. Tools such as reviews, audits, and testing will be used regularly to meet the project quality baseline.

Cause-and-effect analysis helps to identify main causes and root causes of a problem. The following is a diagram that depicts cause analysis of the potential problem of low customer satisfaction. This will help to identify early on how to avoid the problem by directly managing risks that could potentially lead to the unwanted result.

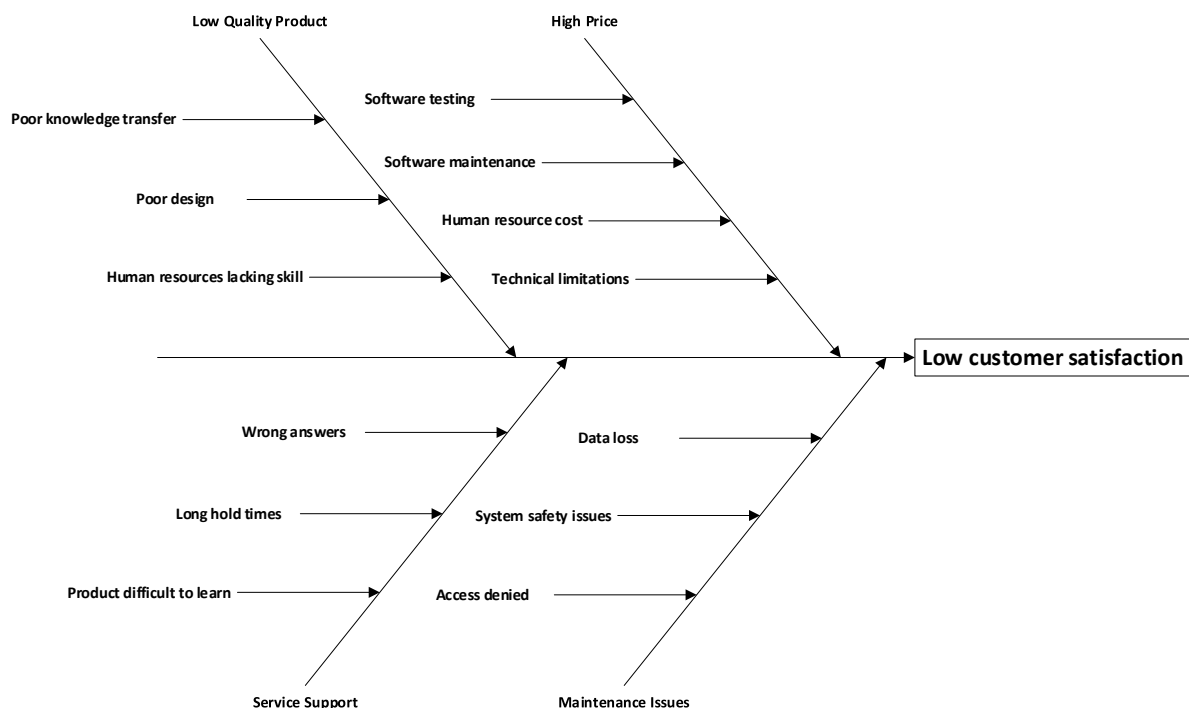


Figure 1 - Cause and Effect Diagram

5.3. Change Management

Employing good change management practices can help to deliver a higher quality product and aids the project in the following ways:

- Resolve the impact of human factors: developers may not be able to guarantee the quality of the product under long-term work. Exchange management can solve the impact of boring work.
- Solve the knowledge gap: different developers have different expertise. Change management can exchange their knowledge so that they can better use their areas of expertise.
- Deliver useful information: Developers in different positions are all working on the same project. In order to meet the needs of customers, it is necessary to transfer information to each other, and change management can help them have a good understanding of the entire project.

Any changes to the design or implementation will be requested by Apollo Consulting to the Department of Planning, Industry and Environment for change approval. A Change Request Form (see Appendix 2) will be completed for the Department to organise their Change Advisory Board (CAB) meetings.

5.4. Communication Management Strategy

Primarily communication will occur between the two key groups of project team members:

- Department of Planning, Industry, and Environment
- Apollo Consulting

A remote meeting will take place fortnightly to discuss project status and address actions taken and goals to be achieved in the next fortnight.

5.5. Conflict Management

Issues will be captured in an Issues Log on Notion.so. They will be assigned an owner and actions will be identified to resolve them.

Any additional work that is requested, but not outlined in the scope, will be captured as a variation in the Change Log on Notion.so. After consideration and negotiation between the parties, the change will either be accepted and implemented or treated as a separate scope of works for an additional project not to be currently undertaken by Apollo Consulting.

6. Appendix

6.1. Appendix A









































		Severity		
		Critical: 3	Medium: 2	Marginal: 1
Probability	Probable: 3	High: 6	High: 6	Moderate: 3
	Occasional: 2	High: 6	Moderate: 4	Low: 2
	Improbable: 1	Moderate: 3	Low: 2	Low: 1



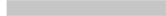
















6.2. Appendix B

CHANGE REQUEST FORM		
Change Description		
Project Name:	Change Name:	Change Number:
Requested By:	Contact:	Date:
Description of Change:		
Reason for Change/ Proposed Course of Action:		
Priority (Circle): 1. High 2. Medium 3. Low		
Impact on Deliverables:		
Impact of Not Responding to Change (and reason for impact):		
Date Needed:	Approved By:	Date:

6.3. Appendix C

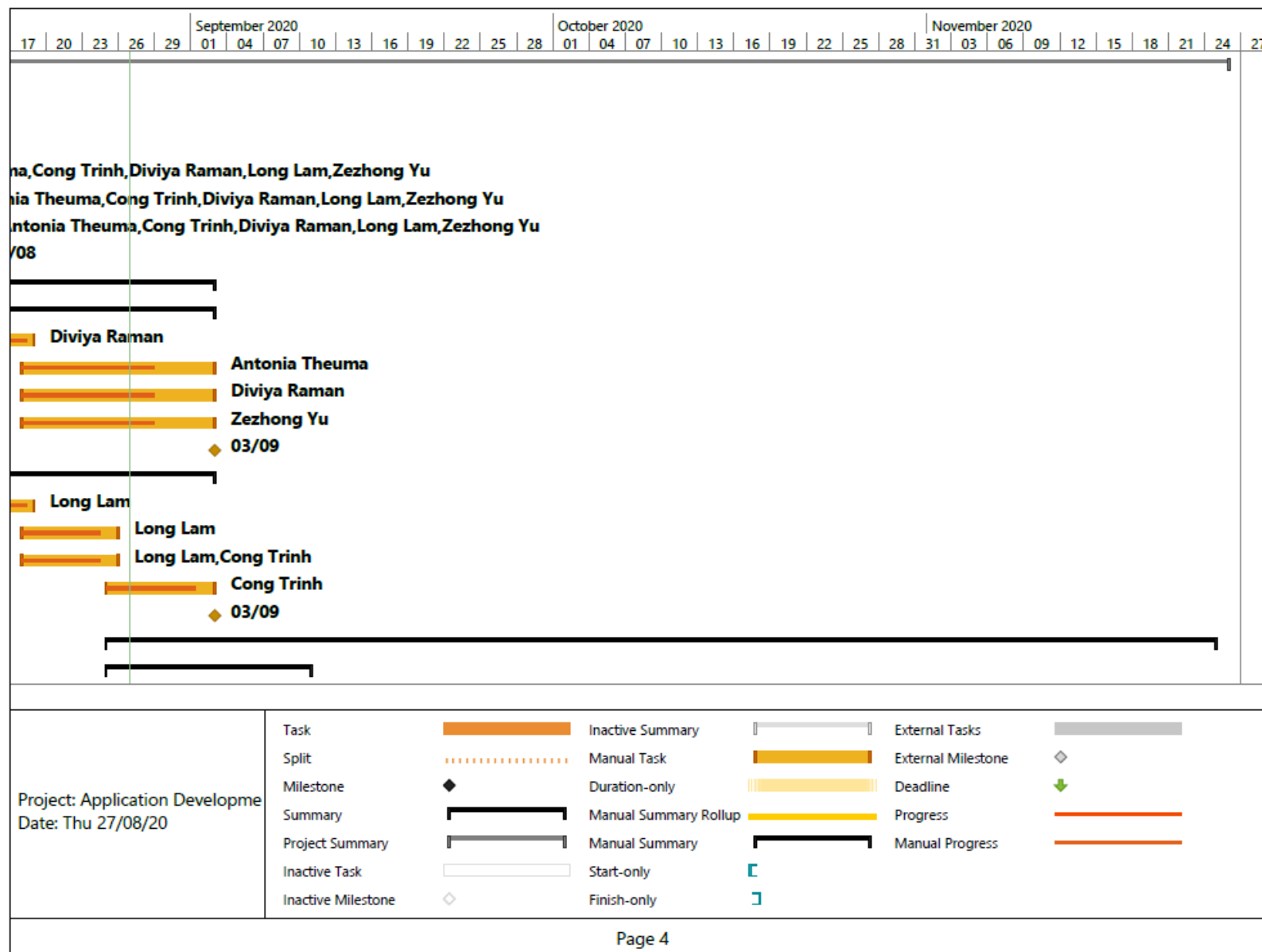
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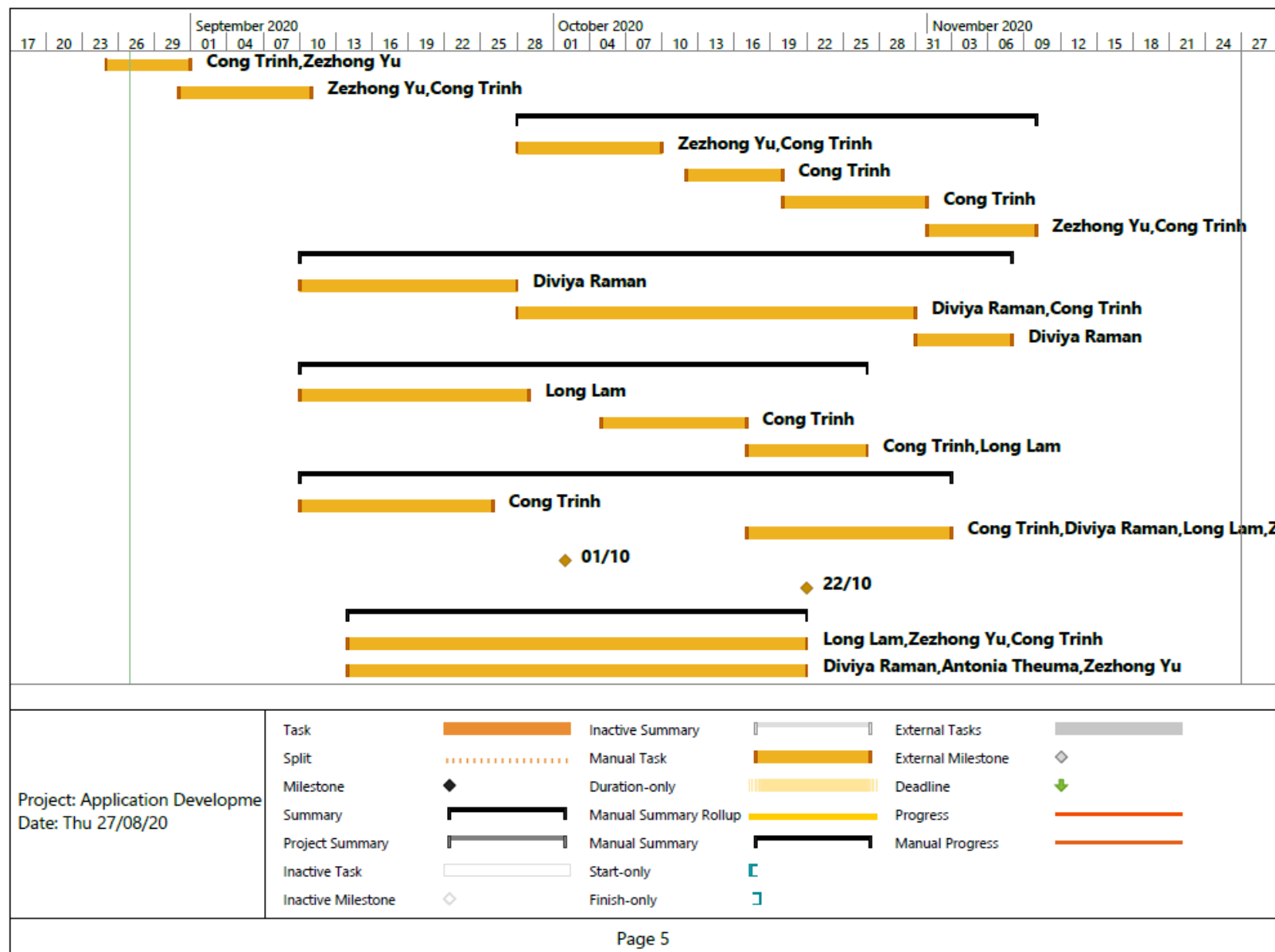
ID	 Task Mode	Task Name	Duration	Start	Finish	August 2020								
						24	27	30	02	05	08	11	14	17
23	 	Framework Design	5 days	Tue 25/08/20	Mon 31/08/20									
24	 	Framework Development	9 days	Mon 31/08/20	Thu 10/09/20									
25		Create Functions	31 days	Mon 28/09/20	Mon 09/11/20									
26	 	Input Form Development	10 days	Mon 28/09/20	Fri 09/10/20									
27	 	Logical Function Development	6 days	Mon 12/10/20	Mon 19/10/20									
28	 	Authentication Development	10 days	Tue 20/10/20	Sat 31/10/20									
29	 	Function Testing	7 days	Sun 01/11/20	Mon 09/11/20									
30		Create User Interface	42 days	Thu 10/09/20	Sat 07/11/20									
31	 	UI Design	13 days	Thu 10/09/20	Sun 27/09/20									
32	 	UI Implementation	25 days	Mon 28/09/20	Fri 30/10/20									
33	 	UI Testing	7 days	Sat 31/10/20	Sat 07/11/20									
34		Create Database	33 days	Thu 10/09/20	Mon 26/10/20									
35	 	Database Schema Development	13 days	Thu 10/09/20	Mon 28/09/20									
36	 	Database Schema Implementation	10 days	Mon 05/10/20	Fri 16/10/20									
37	 	Database Testing	7 days	Sat 17/10/20	Mon 26/10/20									
38		Integrate Software	38 days	Thu 10/09/20	Mon 02/11/20									
39	 	API Structure Development	12 days	Thu 10/09/20	Fri 25/09/20									
40	 	Integration	12 days	Sat 17/10/20	Mon 02/11/20									
41		Prototype Created (v0.1)	0 days	Thu 01/10/20	Thu 01/10/20									
42		Prototype Created (v0.2)	0 days	Thu 22/10/20	Thu 22/10/20									
43		Create Technical Documentation	28 days	Mon 14/09/20	Wed 21/10/20									
44	 	Create Analysis Documentation	28 days	Mon 14/09/20	Wed 21/10/20									
45	 	Create Design Documentation	28 days	Mon 14/09/20	Wed 21/10/20									

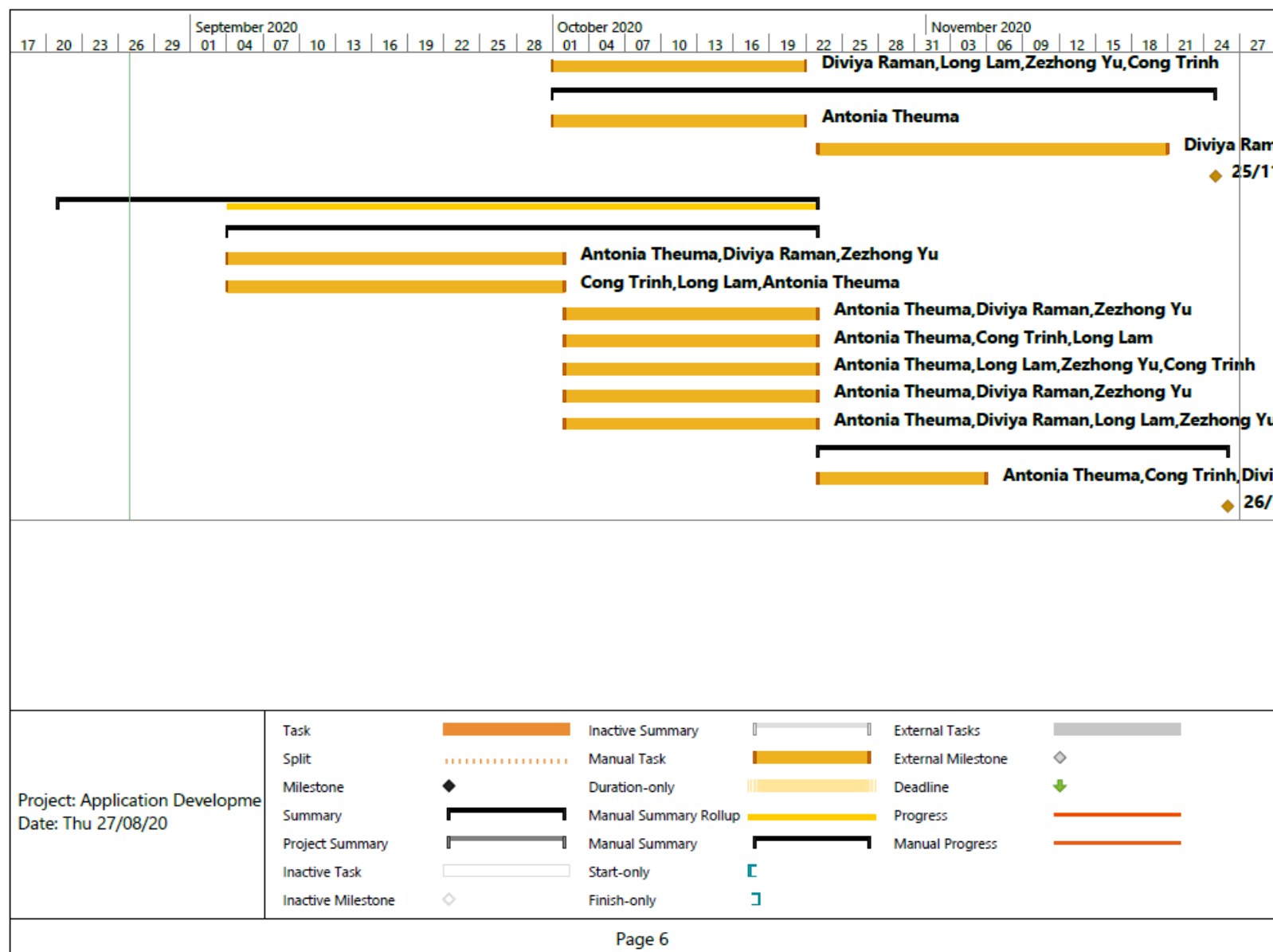
Project: Application Development Date: Thu 27/08/20	Task		Inactive Summary		External Tasks	
	Split		Manual Task		External Milestone	
	Milestone		Duration-only		Deadline	
	Summary		Manual Summary Rollup		Progress	
	Project Summary		Manual Summary		Manual Progress	
	Inactive Task		Start-only			
	Inactive Milestone		Finish-only			

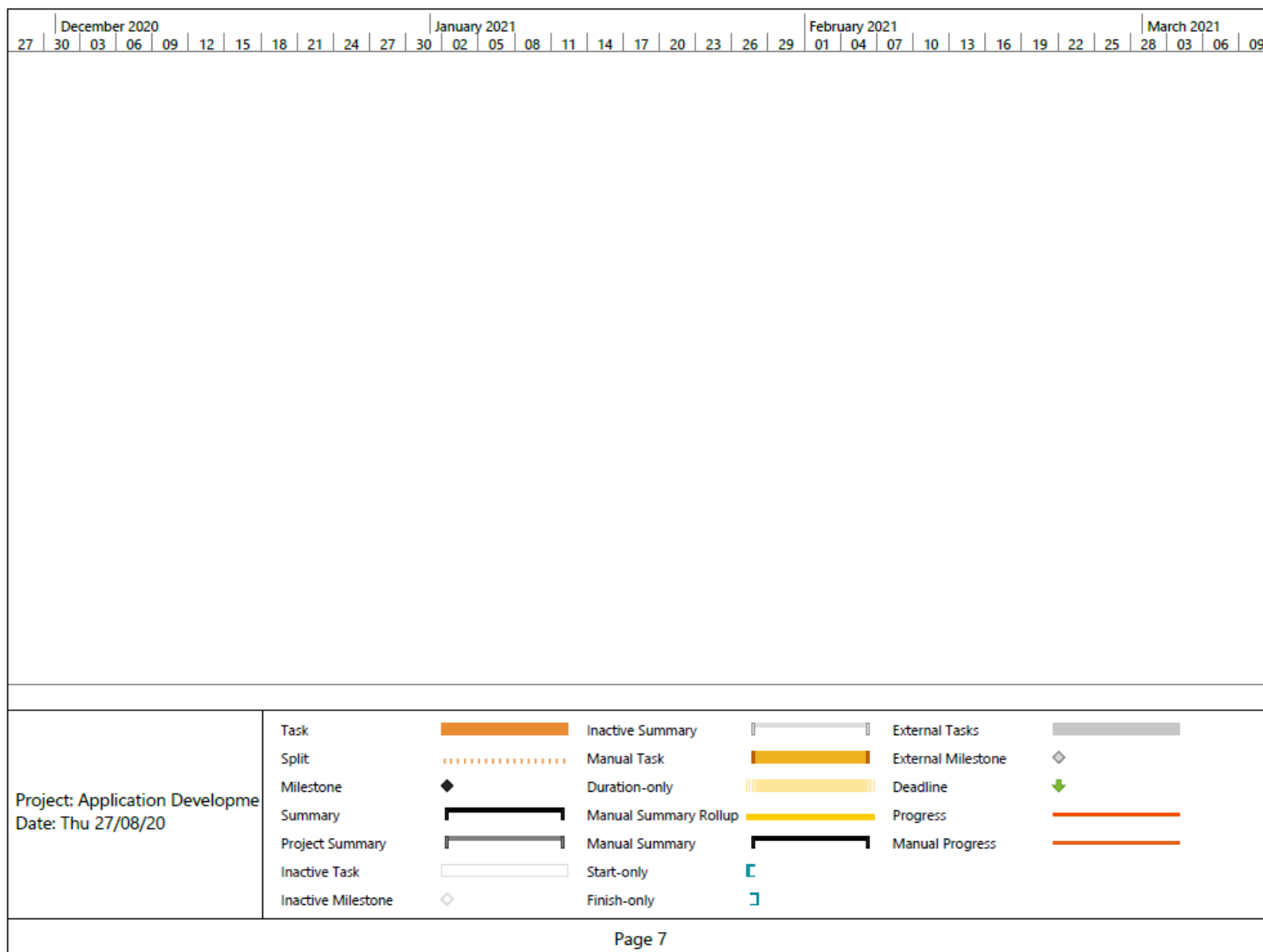
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ID	Task Mode	Task Name	Duration	Start	Finish	August 2020																					
						24	27	30	02	05	08	11	14	17													
46		Create Testing Documentation	15 days	Thu 01/10/20	Wed 21/10/20																						
47		Support and Training	39 days	Thu 01/10/20	Wed 25/11/20																						
48		Create User Documentation	15 days	Thu 01/10/20	Wed 21/10/20																						
49		Software Training Demo	21 days	Fri 23/10/20	Fri 20/11/20																						
50		Training Complete	0 days	Wed 25/11/20	Wed 25/11/20																						
51		Project Monitoring and Controlling	45 days?	Fri 21/08/20	Thu 22/10/20																						
52		Update Documents	35 days	Fri 04/09/20	Thu 22/10/20																						
53		Project Plan Update 1	20 days	Fri 04/09/20	Thu 01/10/20																						
54		Requirements Specification Update 1	20 days	Fri 04/09/20	Thu 01/10/20																						
55		Project Plan Update 2	15 days	Fri 02/10/20	Thu 22/10/20																						
56		Requirements Specification Update 2	15 days	Fri 02/10/20	Thu 22/10/20																						
57		Analysis Documentation Update	15 days	Fri 02/10/20	Thu 22/10/20																						
58		Design Documentation Update	15 days	Fri 02/10/20	Thu 22/10/20																						
59		Testing Documentation Update	15 days	Fri 02/10/20	Thu 22/10/20																						
60		Project Closing	24 days	Fri 23/10/20	Thu 26/11/20																						
61		Project Report	10 days	Fri 23/10/20	Thu 05/11/20																						
62		Project Handover Complete	0 days	Thu 26/11/20	Thu 26/11/20																						
Project: Application Development Date: Thu 27/08/20		Task		Inactive Summary		External Tasks																					
		Split		Manual Task		External Milestone																					
		Milestone		Duration-only		Deadline																					
		Summary		Manual Summary Rollup		Progress																					
		Project Summary		Manual Summary		Manual Progress																					
		Inactive Task		Start-only																							
		Inactive Milestone		Finish-only																							
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