FIT2002 IT Project Management

Assignment One

Project LoopTask

LoopTask

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Working Agreement [1]

FIT2002 – Working Agreement (Team Charter)

Team number	**0510**
Team members	**Yu Tan, Lehan Ke, Tien Dat Hoang, Nicholas Wongso**
Team objectives	Better communication with teammates, better allocation of work and tasks, help each other out when facing difficulties in assignments.
Team characteristics	Yu Tan: Strength: Think out of the box, deep thinking, and uplift the group's spirit. Weakness: Poorer communication. Lehan Ke: Strength: Good at communication, being able and willing to allocate work properly for each teammate. Weakness: Lack of professional knowledge, not good at writing documents and being not patient enough. Tien Dat Hoang: Strength: Easy to put to work as long as there are instructions, willing to learn on the way to fill up any missing knowledge, and communicate clearly. Weakness: Nicholas Wongso: Strength: Able to communicate well, Willing to take different view points when working, and be able to work efficiently Weakness: Overcomplicating simple problems
Core values	Perseverance, Quality, Communication
Group norms and code of conduct	We can work together both in person and online, we will make daily communications in our online group chat and hold weekly in person meetings.
Participation and collaboration approach	The most effective method: share working documents on Google Drive and communicate through group chat on social platforms such as Instagram. We won't make phone calls as we choose to either communicate in group chat or have in-person meetings. Every member in our team has editor authority in Google Drive and we are free to provide feedback or even make modifications to the other team members' work if we have better ideas.
Communications	We prefer communication through online platforms and only when there are issues with other's work. We will ensure the greatest transparency level as we share common documents for everyone to work with.
Problem solving	When there are problems emerging, we will point out the issues within the context and speak to each other politely to ensure a peace environment. We will open our minds to tolerate each other's problems and solve the problems together.
Conflict management	We treat conflicts as a chance of improvement, if we have conflicts like different thoughts about doing the assignment, we could work out a better solution by communication. If we have conflicts about other issues it could still help us to know our team members better which improves our collaboration.

Signatures	Lehan Ke Yu Tan Dat Hoang Nicholas Wongso

Project Charter [2]

Title	LoopTasks
Description	LoopTasks aims to enhance life efficiency for individuals, families, groups and organisations. With the support of AI, the project provides voice reminders, shared calendars, habit tracking and adaptive scheduling across platforms and devices.
Objectives	Arrange daily tasks to streamline routine
Start date	10 Sep 2025
Finish date	9 Sep 2026
Project budget	300,000 in total -145,000 for main function development -20,000 for Design and Prototyping -45,000 for Testing -4,000 for Finalizing -51,000 for contingency (17%)
Manager's name with contact details	Name: Lehan Ke Email: lkee0009@student.monash.edu
Project Success Criteria	-Deliver the final version of project with all functional requirements met within deadline and budget -Launch the project application across different platforms (Windows, IOS, Android, macOS, Linux) -Meet relevant regulations in region (Australia) -Non-functional requirements such as usability, ease of use and security should be considered well and included in the delivered final version -Continuous stakeholder engagement, particularly LifeLoop.
Development approach	hybrid
Stakeholders and roles	LifeLoop - Client Group 0510 - Developer Employees - Beneficiary Parents - Beneficiary

RTM [3]

Requirements Traceability Matrix					
Project Name:	LoopTasks				
Project Manager Name:	Lehan Ke				
Project Description:	LoopTasks aims to enhance life efficiency for individuals, families, groups and organisations. With the support of AI, the project provides voice reminders, shared calendars, habit tracking and adaptive scheduling across platforms and devices. (Referred to project statement)				
ID	**Requirements (Functional or Non-Functional)**	**Assumption(s) and/or Customer Need(s)**	**Category**	**Source**	**Status (Open/Draft)**
R01	Voice Reminder	Users should receive voice reminders come from their own schedule without frequently clicking into the app to track their schedules	Functional	Client	Approved
R02	Shared Calendar	Different users should be able to access and use a shared calendar for ease of planning activities to be work together	Functional	Client	Approved
R03	Habit tracking	The system should be able to learn the user's habits and recommend habits with the help of AI	Functional	Technical Team	In review
R04	Adaptive Scheduling	The system should be able to recommend to shift schedules, based on the newly added activities to suit users' mood or behaviour and for better time arrangement	Functional	Technical Team	Pending
R05	Security	Users may enter tasks or events that involves their privacy	Non-Functional	IT Regulations	Approved
R06	Cross platform	Users may access the platform as well as their own data through different platforms (webpage, mobile app, PC)	Non-Functional	Technical Team	Pending
R07	Usability	Heavy user-interaction based application.	Non-Functional	Client's expectation	Approved

Scope Statement [4]

Project Title: LoopTasks

Person	Members' name	Student ID	Position
1	Lehan Ke	34648925	Project manager
2	Yuping Tan	35315601	QA engineer
3	Nicholas Wongso	34445838	Software Developer
4	Dat Hoang	33410690	Cybersecurity Specialist

Section 1: Scope Management

1.1 Project Scope Statement

LoopTasks is a scheduling application developed for LifeLoop, in order to make beneficial changes to their clients and users' life while providing a platform to integrate LifeLoop's products into a more seamless experience. With AI enabled, LoopTasks can provide voice reminders, shared calendars, adaptive scheduling and habit tracking for its users to make their life easier.

1.2 Deliverables & Acceptance Criteria

1. Calendar template

   Expected completion date: 10/04/2026

Functional requirements:

1. Tasks can be inserted into a certain timeslot and removed.
2. Tasks can be directly moved around the calendar
3. Calendar syncing with the international calendar and time.

Non-Functional requirements;

1. Moving tasks around the calendar should be smooth.
2. Users can choose a theme for the calendar with delicate design.

2. Voice reminder module

Expected completion date: 20/05/2026

Functional requirements:

1. Users should be able to receive 1 voice reminder 10 minutes prior to the start of a specific task, which is set as default. Users can configure the reminder themselves for each task.
2. Voice reminders can be turned off if not wanted

Non-functional requirements:

1. Users are allowed to choose different voices (man, woman) and different languages (English, French, Chinese, Punjabi….)
2. Voice reminder’s speaking speed should neither be too fast or too slow

3. Shared calendar function

Expected completion date: 31/05/2026

Functional requirements:

1. Users can send a request to other users to share a calendar, others can give permission or reject the request.
2. Users can leave the shared calendar at any time, the host of the shared calendar is able to shut down the calendar. Calendar’s host can choose to stop sharing the calendar or remove the other users.
3. Users can modify the calendar’s schedule with the permission given by the calendar's host.

Non-Functional Requirements:

1. Each user can customize the decoration of the shared calendar, but only visible to themselves.
2. Changes made can be instantly visible to every user.

4. Habit tracking module (AI powered)

Expected completion date: 31/7/2026

Functional Requirements:

1. AI will be enabled 2 weeks after the users start their first action on the platform, as AI needs to collect data for learning the user's habits.
2. 70% users’ data should be used as the training sample, the rest 30% should be used as a testing sample in order to enhance the accuracy of the AI model.
3. Ask the users to rate the AI model once a week, the acceptance criteria is 95% satisfaction.

Non-Functional Requirements:

1. Only work under users’ consent on their data being collected and used.
2. Recommend activities based on users’ habits on an appropriate timeline.

5. Adaptive scheduling module (AI powered)

Expected completion date: 10/08/2026
Functional Requirements:
1. AI will be enabled after 2 weeks, the same as the Habit tracking module.
2. AI should develop schedules for users according to their requirements and habits using users' previous schedules.

Non-Functional Requirements:
1. The AI-generated schedule should be different from the user's manually-made schedule, and changes to the AI generated schedule are allowed.
2. The schedules generated should be reliable and realistic.

1.2 Exclusions

- Production of hardware
- Development of AI solely for this product
- Integration with other companies' products
- Maintenance and updates after completion
- Support for operating systems that are not listed

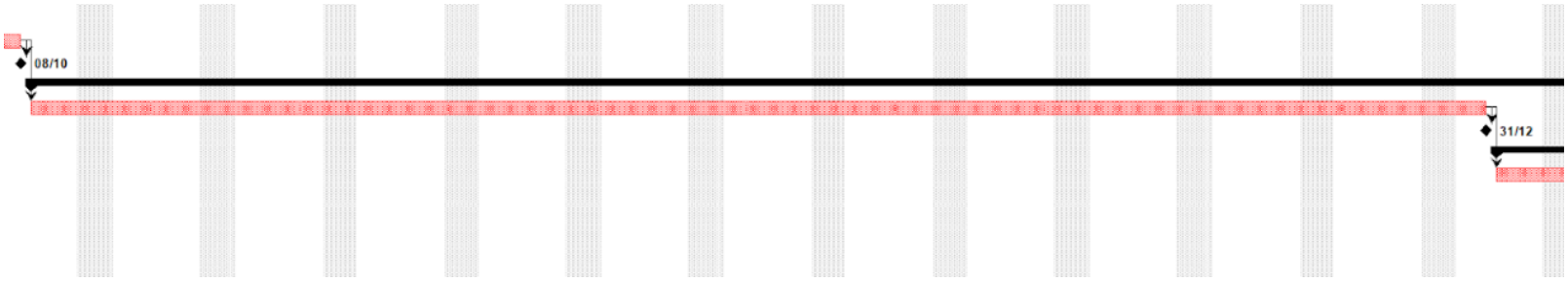
1.3 Constraints & Assumptions

Constraints:
1. Project budget is limited to $300,000
2. Project timeline is limited to 18 months
3. The system must follow relevant regulations according to different districts
4. AI should only participate in Habit tracking module and Adaptive scheduling module.

Assumptions:
1. Users have internet access.
2. Users actively develop schedules and calendars for themselves so that the AI has enough training samples.
3. All the stakeholders will approve or reject any changes within 5 days since the change is announced.

1.4 Annotated Work Breakdown Structure (WBS) & Gantt Chart

Below are the gantt chart and WBS showing the critical path originating from 'build-up database' activity and its milestone.



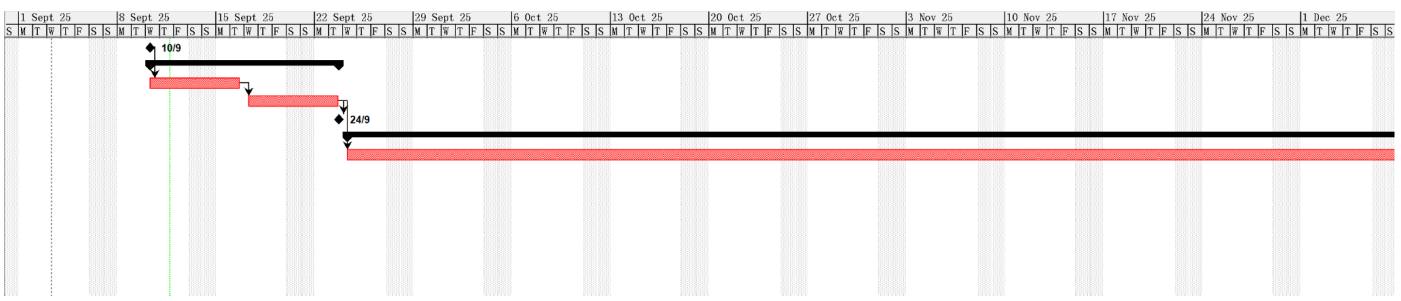
6	**2 Production Phase**	227 days?	**08/10/2025, 8:00 am**	**20/08/2026, 5:00 pm**
7	2.1 Build-up Database	60 days?	08/10/2025, 8:00 am	30/12/2025, 5:00 pm
8	M2: Database complete	0 days	30/12/2025, 5:00 pm	30/12/2025, 5:00 pm

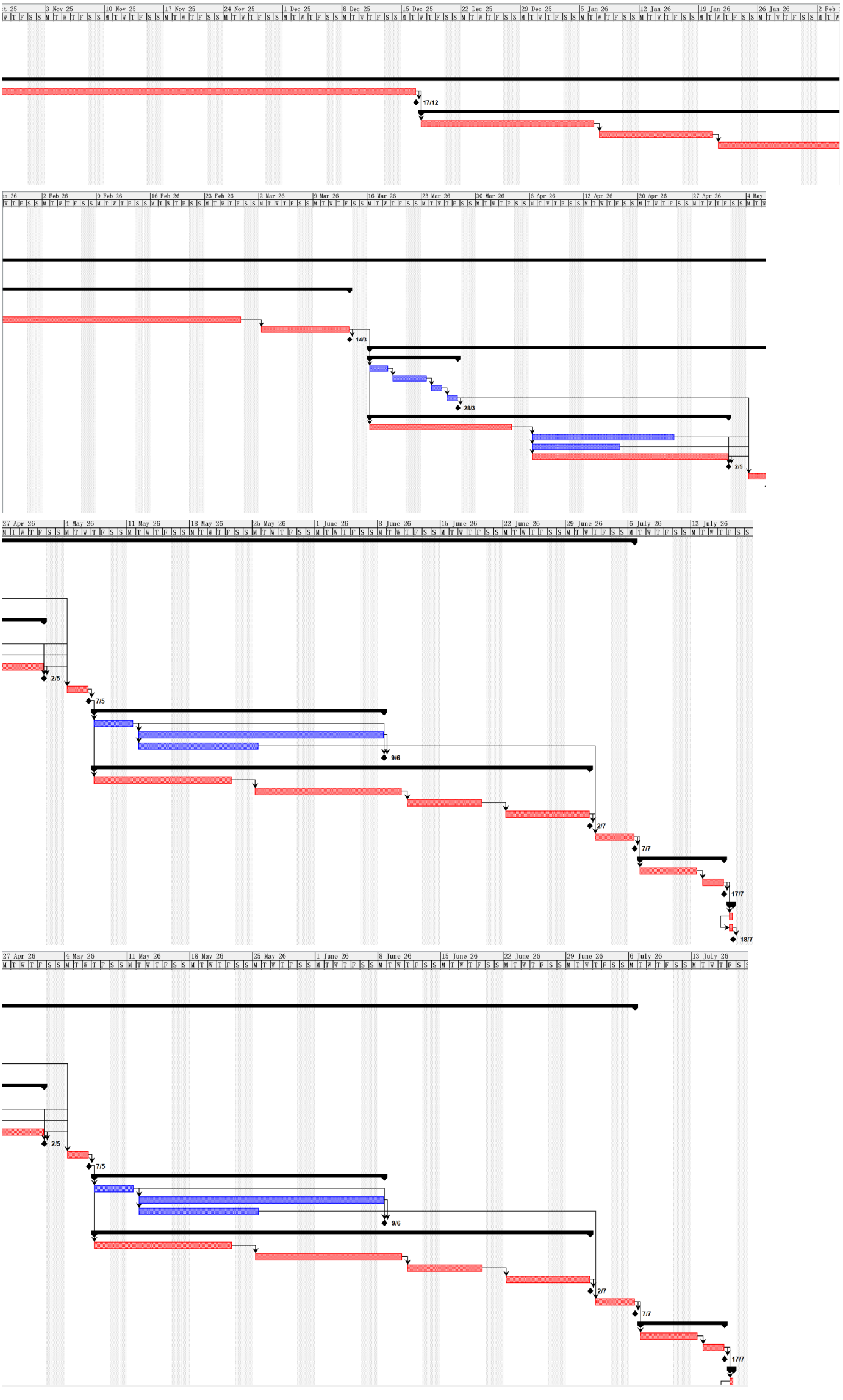
WBS And Gantt Chart

WBS[5]:

	Name	Duration	Start	Finish	Predecessors	Fixed Cost
1	0 Begin project	0 days	10/9/25, 8:00 am	10/9/25, 8:00 am		$0.00
2	**1 Desgin and Prototyping Phase**	10 days?	**10/9/25, 8:00 am**	**23/9/25, 5:00 pm**		$20000.00
3	1.1 System architecture diagram including mobile and v	5 days	10/9/25, 8:00 am	16/9/25, 5:00 pm	1	$10000.00
4	1.2 UI/UX design wireframes and visual mockups	5 days	17/9/25, 8:00 am	23/9/25, 5:00 pm	3	$10000.00
5	M1: Design approved	0 days?	23/9/25, 5:00 pm	23/9/25, 5:00 pm	4	$0.00
6	**2 Production Phase**	204 days?	**24/9/25, 8:00 am**	**6/7/26, 5:00 pm**		$154000.00
7	2.1 Build-up Database	60 days?	24/9/25, 8:00 am	16/12/25, 5:00 pm	4	$5000.00
8	M2: Database complete	0 days	16/12/25, 5:00 pm	16/12/25, 5:00 pm	7	$0.00
9	**2.2 Create calendar template**	63 days?	**17/12/25, 8:00 am**	**13/3/26, 5:00 pm**		$50000.00
10	2.3.1 Work on UI/UX	15 days?	17/12/25, 8:00 am	6/1/26, 5:00 pm	7	$15000.00
11	2.3.2 Synchronise with standard calendar format	10 days?	7/1/26, 8:00 am	20/1/26, 5:00 pm	10	$7000.00
12	2.3.3 Develop calendar basic functionalities	28 days?	21/1/26, 8:00 am	27/2/26, 5:00 pm	11	$22000.00
13	2.3.4 Created calendar mock-up	10 days?	2/3/26, 8:00 am	13/3/26, 5:00 pm	12	$6000.00
14	M3: Complete calendar template	0 days	13/3/26, 5:00 pm	13/3/26, 5:00 pm	13	$0.00
15	**2.3 Develop functionalities**	81 days?	**16/3/26, 8:00 am**	**6/7/26, 5:00 pm**		$99000.00
16	**2.3.1 Create voice reminder module**	10 days?	**16/3/26, 8:00 am**	**27/3/26, 5:00 pm**		$15000.00
17	2.4.1.1 Collect voice resources	3 days?	16/3/26, 8:00 am	18/3/26, 5:00 pm	13	$4000.00
18	2.4.1.2 Integrate voices to the system	3 days?	19/3/26, 8:00 am	23/3/26, 5:00 pm	17	$5000.00
19	2.4.1.3 Implement multi-language and voice selecti	2 days?	24/3/26, 8:00 am	25/3/26, 5:00 pm	18	$3000.00
20	2.4.1.4 Optimize reminder quality	2 days?	26/3/26, 8:00 am	27/3/26, 5:00 pm	19	$3000.00
21	M4: Voice reminder module complete	0 days	27/3/26, 5:00 pm	27/3/26, 5:00 pm	20	$0.00
22	**2.3.2 Create shared calendar function**	35 days?	**16/3/26, 8:00 am**	**1/5/26, 5:00 pm**		$31000.00
23	2.4.2.1 Implement calender sharing requests	15 days?	16/3/26, 8:00 am	3/4/26, 5:00 pm	13	$7000.00
24	2.4.2.2 Manage memberships and permissions	15 days?	6/4/26, 8:00 am	24/4/26, 5:00 pm	23	$8000.00
25	2.4.2.3 Personalized decoration	10 days?	6/4/26, 8:00 am	17/4/26, 5:00 pm	23	$3000.00
26	2.4.2.4 Synchronise changes in real time	20 days?	6/4/26, 8:00 am	1/5/26, 5:00 pm	23	$13000.00
27	M5: Shared calendar function complete	0 days	1/5/26, 5:00 pm	1/5/26, 5:00 pm	24;25;26	$0.00
28	2.3.3 Unit testing for first two functionalities	3 days	4/5/26, 8:00 am	6/5/26, 5:00 pm	20;24;25;26	$2500.00
29	M6: Completed first two functionalities	0 days	6/5/26, 5:00 pm	6/5/26, 5:00 pm	28	$0.00
30	**2.3.4 Create Habit Tracking Module**	23 days?	**7/5/26, 8:00 am**	**8/6/26, 5:00 pm**		$20000.00
31	2.3.4.1 Import AI module into the system	3 days	7/5/26, 8:00 am	11/5/26, 5:00 pm	29	$5000.00
32	2.3.4.2 Develop two internal modules for testing a	20 days?	12/5/26, 8:00 am	8/6/26, 5:00 pm	31	$7000.00
33	2.3.4.3 Create users feedback collecting feature	10 days?	12/5/26, 8:00 am	25/5/26, 5:00 pm	31	$8000.00
34	M7: Habit Tracking Module Complete	0 days	8/6/26, 5:00 pm	8/6/26, 5:00 pm	31;32;33	$0.00
35	**2.3.5 Create Adaptive Scheduling Module**	40 days?	**7/5/26, 8:00 am**	**1/7/26, 5:00 pm**		$28000.00
36	2.3.5.1 AI Activation and Data Collection	12 days?	7/5/26, 8:00 am	22/5/26, 5:00 pm	29	$7000.00
37	2.3.5.2 AI Schedule Generation (95% Accuracy)	13 days?	25/5/26, 8:00 am	10/6/26, 5:00 pm	36	$8000.00
38	2.3.5.3 Distinct AI-Generated Schedule	7 days?	11/6/26, 8:00 am	19/6/26, 5:00 pm	37	$6000.00
39	2.3.5.4 Allow Manual Adjustments	8 days?	22/6/26, 8:00 am	1/7/26, 5:00 pm	38	$7000.00
40	M8: Adaptive Scheduling Module Complete	0 days	1/7/26, 5:00 pm	1/7/26, 5:00 pm	39	$0.00
41	2.3.6 Unit testing for last two functionalities	3 days	2/7/26, 8:00 am	6/7/26, 5:00 pm	33;39	$2500.00
42	M9: Developed all functionalities	0 days	6/7/26, 5:00 pm	6/7/26, 5:00 pm	41	$0.00
43	**3 Testing Phase**	8 days	**7/7/26, 8:00 am**	**16/7/26, 5:00 pm**		$12000.00
44	3.1 Undergo integration testing	5 days	7/7/26, 8:00 am	13/7/26, 5:00 pm	41	$6000.00
45	3.2 Undergo user acceptance testing	3 days	14/7/26, 8:00 am	16/7/26, 5:00 pm	44	$6000.00
46	M10: Finished system testing	0 days	16/7/26, 5:00 pm	16/7/26, 5:00 pm	45	$0.00
47	**4 Finalising Phase**	1 day?	**17/7/26, 8:00 am**	**17/7/26, 5:00 pm**		$4000.00
48	4.1 Stakeholder sign-off for final approval	1 day?	17/7/26, 8:00 am	17/7/26, 5:00 pm	45	$2000.00
49	4.2 Archive project files	1 day?	17/7/26, 8:00 am	17/7/26, 5:00 pm	48SS	$2000.00
50	M11: Project finished and ready to be released	0 days	17/7/26, 5:00 pm	17/7/26, 5:00 pm	49	$0.00

Gantt chart[6]:

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Cost Model & Baseline

Catergory	Item/Role	WSB Activities	Total hours	Rates/hr	Subtotal
Labour	Project Manager	0; 1; oversight of 2; 3; 4	138	$103	$14,214
	Business Analyst	1.1; 1.2; validation in 2.1	140	$83	$11,620
	Quality Assurance Lead	2.3.3; 2.3.6; 3.1-3.2	145	$69	$10,005
	Cloud Engineer	1.1; 2.1; integration; 3.1	146	$128	$18,688
	Full-Stack Developer	2.2; 2.3.x; 2.3.4-2.3.6	152	$90	$13,680
	AI Engineer	2.3.4.1-2.3.5.4	150	$91	$13,650
	UI Designer	1.2; 2.3.1; 2.3.4.3	148	$112	$16,576
	Cybersecurity Specialist	1.1; 2.1; 2.3.2; 3.1	148	$113	$16,724
	Application Support Officer	4.1-4.2 (handover)	145	$100	$14,500
	Support Engineer	3.2; 4.1-4.2	145	$94	$13,630
	Labour (sum)				$143,287
Materials	Application Servers (units/cost)	---			$5,000
	Security Appliance	---			$3,000
	IoT Devices (20 units x $500)	---			$10,000
	Cloud Productivity Tools (licenses)	---			$5,000
	Design Software Licenses	---			$3,000
	Cybersecurity Platform	---			$7,000
	Network Cables / Drives / Peripherals	---			$7,000
	Materials (sum)				$40,000
Services & Vendors	Cloud Hosting (12 months)	---			$24,000
	Managed Services	---			$6,000
	Testing Providers	---			$6,000
	Installation / Setup / Configuration	---			$7,000
	Licensing (vendor licenses)	---			$7,000
	Services & Vendors (sum)				$50,000
Training & Support	Staff Training (2 x 1-day workshops)	---			$4,000
	Maintenance (0.1 FTE est.)	---			$9,213
	User Guides (tech writer)	---			$2,500
	Training & Support (sum)				$15,713
Base Project Cost (Labour + Materials + Services + Training)		---			$249,000
Contingency (17% of 300k)		---			$51,000
Grand Total (Base + Contingency)		---			$300,000

1. Methodology Applied

The cost model was developed using a **hybrid** estimation approach:

- **Bottom-up estimation**[7] was used to estimate the labour cost, from the Work Breakdown Structure (WBS) tasks we estimated the hours required and from that estimated the labour cost.

- **Analogous estimation**[8] was used to compare hourly rates against the Clicks IT recruitment [9]

- **Parametric estimation**[10] was used for hardware and services (e.g., cost per IoT device × quantity, cloud hosting rate × 12 months).

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2. Labour Cost Assumptions

- Work hours were estimated from WBS deliverables (e.g., 138 hours for Project Manager; 152 hours for Full-Stack Developer).
- Specialists such as AI Engineer (150 hrs) and Cybersecurity Specialist (148 hrs) were given higher rates reflecting market demand for skilled workers.
- Rates ranging from $69/hr (Quality Assurance Lead) to $103/hr (Project Manager/Cloud Engineer) which are consistent with industry contractor ranges.
- Most of the time, work is done by developers, designers, and engineers on the project tasks.
- Roles like PM, QA Lead, and BA spend less hands-on time but oversee and validate the work.
- For that reason, the hours are small relative to the project duration, they get involved when necessary and don't do continuous work.

Total Labour Cost = $143,287.

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3. Material, Services, and Vendor Costs

- **IoT Devices ($10,000)** = 20 units × $500 each.
- **Application Server ($5,000)** and **Security Appliance ($3,000)** based on vendor pricing.
- **Cloud Hosting ($24,000)** = projected 12-month load with scalability buffer.
- **Vendor services ($50,000)** include setup, testing, licensing, and managed services.

Total Materials = $40,000; Services & Vendors = $50,000.

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4. Training and Operational Costs

- **Training ($4,000)** = 2 × 1-day workshops × 10 staff × $200/day.
- **Maintenance ($9,213)** = bug fixes, patching, and minor improvements.
- **User Guides ($2,500)** for documentation.

Total Training & Support = $15,713.

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5. Contingency Justification

The **Risk Register** identifies six major risks (R01–R06):

- **R01:** Staff delays due to limited capacity.
- **R02:** Technical issues (AI functionality, integration).

- **R03:** Low user adoption.
- **R04:** Stakeholder-driven scope changes.
- **R05:** Cybersecurity incidents.
- **R06:** Positive risk of higher than expected demand.

Risk register explanation:

- R01 (timeline delays) = additional contractor costs.
- R02 (AI issues) = extra developer/tester workload.
- R04 (scope change) = ~$20,000 reserve.
- R05 (cybersecurity) = audit/legal costs.

Aggregated exposure from these risks is ≈ **$39,500**, equal to ~15% of base project costs.

- A **15% buffer** (~$38k) is insufficient to handle high-impact risks.
- A **17% buffer** (~$51k) would exceed the client's $300,000 budget cap.
- Therefore, a **17% contingency ($51,000)** was decided:
  - Provides sufficient coverage
  - Stays compliant with budget constraints,
  - Aligns with the reserve allocations documented in the Risk Management Plan.

Contingency = $51,000 (17%).

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6. Grand Total

- **Base Project Cost = $249,000**
- **Contingency (17%) = $51,000**
- **Grand Total = $300,000** (within the $300,000 client cap)

Cost Baseline

Assumptions for Monthly Allocation

1. Direct Dev Labour ($143,287)

    - Spread over production phase tasks (Sep 2025 – Jul 2026). With a 2 month buffer for any hurdles on the way.

    - Peaks in months with high development activity: Dec 2025 – Mar 2026 and May – Jul 2026.

2. Support/Materials/Services/Training ($105,713)

    - Covers oversight labour, materials, services, training.

    - Distributed appropriately across months with high production and testing activity.

3. Contingency ($51,000)

    - Set aside at the end for risk management.

4. **Monthly Total =** Dev Labour + Support/Materials/Services/Training

    - Cumulative spend totals **$249,000** before contingency funds.

Month	Dev Labour (AUD)	Support/Materials/ Services/Training (AUD)	Monthly Total (AUD)	Cumulative Spend (AUD)	% Base Budget
Sep 2025	8500	3500	12000	12000	4.82%
Oct 2025	11500	4500	16000	28000	11.24%
Nov 2025	9000	5000	14000	42000	16.87%
Dec 2025	20000	8500	28500	70500	28.31%
Jan 2026	18000	8500	26500	97000	38.96%
Feb 2026	16000	8500	24500	121500	48.80%
Mar 2026	19500	9000	28500	150000	60.24%
Apr 2026	10500	7000	17500	167500	67.27%
May 2026	13500	8500	22000	189500	76.11%
Jun 2026	13500	10000	23500	213000	85.54%
Jul 2026	13287	12213	25500	238500	95.78%
Subtotal	143287	105713	249000	249000	100%
Contingency	0	51000	51000	300000	—

5. Highlights

1. **Direct development labour** peaks Dec 2025 – Mar 2026 → due to heavy production tasks.
2. **Oversight/validation labour** is spread across all months → involves PM/BA/QA support.
3. **Materials & Services** placed in months they are required.
4. **Training & Support** concentrated in Jun–Jul 2026 → system handover.
5. **Contingency** shown at the end for planning purposes.

6. Project Cost Monitoring and Control [11]

Project costs will be monitored and controlled using milestone-based tracking, monthly reviews, and variance analysis.

Costs will be checked at each major milestone (design approval, database completion, etc) to ensure it aligns with the planned budget.

Every month, cost reviews will compare actual costs against planned allocations, allowing the project team to detect budget overruns early.

If there are differences between actual and planned costs, it will be analyzed through variance analysis, that way we can reallocate resources, adjust schedules, or manage non essential expenses to prevent budget overruns.

This will ensure that the project remains on track financially and that the total does not exceed the approved budget.

Risk Management Plan [12] [13]

Risk ID	Rank	Risk Description	Risk Source	Potential Impact	Impact Level	Probability Level	Priority Level	Risk Response	Owner
A unique identifier	Based on priority level	Give a brief summary of the risk	The source of the risk	What will happen if the risk is not eliminated	Rate 1-5	Rate 1-5	Impact level * Probability level (Maximum 25)	The counter methods of risks in order to lower or eliminate the risks	Who is responsible for it
R01	1	Project duration exceeds deadline. This can happen when a small team of staff have to handle multiple parts of the whole project due to uncertain circumstances, for example when the members in other teams are facing technical issues. Staff may not be working on the parts that they are familiar with, which can lead to a significant project delay.	Timeline risk (external)	The project may not be delivered within the original timeline of 15 months, and if low staff availability leads to timeline delay, the quality of project could be impacted because staff may work on parts they are not familiar with.	4	4	16	To avoid timeline delay issues,develop the project in small parts with small teams, do not put all the staff into work, and leave a group of staff as backup force. To avoid project quality issues, implement cross-training for staff members to avoid relying on key members too much.	Project Manager
R02	2	Project facing technical issues and some functions not working as expected. For example: the AI doesn't generate an accurate and suitable schedule for its user, or the calendar data cannot be shared. These issues can have strong impacts on our project after it's been developed and published.	Technical risk (internal)	The project may not work as expected and will have multiple bugs after being published, frequent maintenance will happen. Because of that the project's budget will arise, and the rates from users will be lower than expected	4	3	12	Testing should be taken seriously before the project is published, and also the project can have a group of test users before facing the public environment.	Lead Developer
R03	3	Low user adoption because of certain problems such as the application being difficult to use or low brand awareness.	Client & first-time user risk (external)	The profit made by this project might be limited, and the system can only receive limited data	3	3	9	Advertisements are important to enhance the project's popularity. Also the UI/UX design of the project	Market Coordinator

				provided by users, leading to insufficient training and testing samples for the system's AI model.				should be attractive, especially for first-time users.	
R04	4	Clients may change their requirements, timeline and budget, so the project plan needs to change with the clients' actions.	Stakeholder risk (external)	Stakeholders may make sudden changes to the project, thus some developed functions may have to be adopted, and a new development timeline schedule must be settled as soon as possible in order to prevent project delay.	2	4	8	Divide the project requirements into: core requirements and sub-requirements (according to priority). Core requirements are less likely to be changed by stakeholders and can be developed before developing sub-requirements. Also leave some time (aim to finish in 12 months and leave 1 month for safety) and budget (leave $51000 for safety).	Project Manager
R05	5	Cybersecurity issues. Since users need to store their personal data into the project's database, if protections are low and out-of-date, sensitive data may be easy to expose to cyberattacks.	Technical risk (external)	Users' sensitive data, such as birthday, card number, email address may be exposed and can be attacked illegally.	5	1	5	Apart from the project's development schedule, add protection modules to report safety issues such as logging in from an unusual location and enable biological recognition such as Face-ID	Security Developer
R06	6	The AI enabled modules are the project's unique point, as AI can learn continuously, it may behave better than expected and be highly praised.	Technical risk (internal)	The project will be more and more attractive to potential users, and there will be a large number of people using this application, which is more than expected.	2	2	4	More cost, time, and labour are needed to improve and expand the system to resolve larger scalability and demand issues.	Project Manager

Probability-Impact Matrix

Probability	Impact	1	2	3	4	5
1		1	2	3	4	5 (R05)
2		2	4 (R06)	6	8	10
3		3	6	9 (R03)	12 (R02)	15
4		4	8 (R04)	12	16 (R01)	20
5		5	10	15	20	25

Probability:

1 = Rare (<10%)
2 = Unlikely (10–30%)
3 = Possible (31–60%)
4 = Likely (61–80%)
5 = Almost Certain (>80%)

Impact:

1 = Negligible
2 = Low
3 = Moderate
4 = High
5 = Critical

Green: Low priority (1-5)
Yellow: Medium priority (6-10)
Orange: High priority (11-24)
Red: Critical priority (25)

R01: High priority (16)
Timeline delay and quality loss can lead to significant dissatisfaction from clients and users

R02: High priority (12)
Project bugs can lead to unexpected results (such as lost user data)

R03: Medium priority (9)
Since UI/UX design is important but not connected with main functionalities

R04: Medium priority (8)
Clients are not likely to change their core requirements, and sub-requirements can be handled in a short period of time

R05: Low priority (5)
Cybersecurity should be a relatively small module and the chance of happening is rare

R06: Low priority (4)
Since it is about making improvements, the risk can be handled through further maintenance rather than being handled through development

Time and Cost Analysis Report

Time
R01: Staff training workshops: additional 1 month for training cross-area skills
R02: Testing (with both developers and test users involved): additional 2 weeks for testing before the project being published
R03: UI&UX design: additional 1 week
R04: Unexpected requirement changes: leave 2 weeks in case
R05: Additional cybersecurity module: additional 1 week
R06: System improvement: additional 1 week

Total additional time spent on risk: 2 months 3 weeks

Cost
R01: training workshop: $5000
R02: testing process: $10000
R03: designing: $5000
R05: security module: $5000
R06: system improvement: $3000

Total additional cost spent on risk: $23000

Reflection

Group Reflection

During this project we worked on an AI-powered task management app called LoopTask for our client LifeLoop designed for families and individuals to streamline daily routines. We have had a long period of time developing a project structure including reports, charts, tables and presentations.

For work distribution we decided to split up the tasks to be done individually due to schedules conflicts to work effectively, additionally we hold different opinions on balancing workloads and scheduling regular meetings.

This led to quality issues of the first few parts of the project, such as inconsistent naming, values and more. And since we have different timetables it’s been hard for us to actually work together in person.

We were rushing to complete the project prior to the deadline since we spent a significant amount of time modifying deliverables for each other, and even combining duplicated content because of improper workload allocation.

Therefore, we can only reserve or remark on certain parts that are related to other people’s work and discuss with them. Luckily we managed to finish our project in time with high quality after we gradually got used to working with each other.

One strategy that helped us succeed was shifting communication to online apps such as Teams/Discord/WhatsApp. This allowed us to share updates without needing to meet in person, which reduced misunderstandings and made collaboration more efficient.

We also allocated tasks based on strengths and weaknesses which resulted in faster and higher quality results, check ups were also done frequently to keep up to date with each other so that everyone is on the same page.

This experience of developing a project structure in a small team could be highly beneficial for our future career since we are going to work with diversified people in the IT industry. We learned how to work productively and efficiently with a group of teammates in which every member holds a different characteristic instead of working alone.

Every member has their own strengths and weaknesses that we can make the best of to make up for others, through this experience we now have a clear understanding that a team charter before starting a project should be crucial, which helps us to get familiar with each other's characteristics and abilities.

In the future when we participate in a working environment, regular meetings and working agreements should not be ignored, since they are the best way to get familiar with teammates.

Individual Reflection

Lehan Ke (34648925)

I identify my characteristics as a communicator and this teamwork experience approved my self identification. I set up the group chat and have been actively posting messages and replying to every teammate, but it has been clear that I lack actual professional skills and always need help when writing documents. For the first 2 weeks of the project I did minimal work since I was busy dealing with my external factors, but continuous communication with all team members helped me to get back quickly and participated in delivering the project in time with high quality.

Along with the project, I have been lacking professional knowledge of this unit at first since unexpected circumstances, but as the project pushes forward, I gradually picked up the unit's knowledge and contributed to our group work. Next time I should continue participating from the start of this project instead of starting halfway.

I wish our team could be communicating more actively next time and everyone should be able to choose their own parts instead of one team member being responsible for task allocating.

Overall I think we did quite well in this project and I hope there could be further improvements in our next teamwork.

Team evaluation: A
Self evaluation: B+

Yu Tan (35315601)

This group was formed in the first week applied session class and I joined the group in random selection. When the assignment is released, everybody seems relaxed as no one mentions anything about the assignment. Then, I knew it was the time for me to stand out to help arrange schedules and assign tasks to everyone. However, I tried to be more flexible by not giving a due date for them so I can let them arrange their time. Initially, everyone was quite cooperating. As I was assigning tasks to everyone halfway through the assignment, I found out that one of the teammates started to become less responsive. This had been a problem for us as he was delaying our progress. I tried to ask for reasons, and he only replied he had a quiz, and he needed to prepare for that. It's not reasonable as everyone else also had their tasks to do but they managed to complete their parts before the due date. I think I should change the way I behave and assign tasks as they might not manage their time well. In the future, I will provide them a due date, so they have no excuses and delay our progress. I will also behave stricter to ensure they submit their work on time. (Monash University,n.d.) Throughout the assignment, I think I have done my best to ensure the quality of the work by checking through everyone's parts after they finished and consistent working progress by doing tasks scheduling. Overall, I think we did quite well.

Grade
Lehan Ke: A
Yu Ping Tan: A

Tien Dat Hoang: A
Nicholas Wongso: B
Overall Team performance: B+

Tien Dat Hoang (33410690)

Early on this project I did not perform as great as I had expected, due to conflict of schedules and work allocation my contributions were often more late than preferred causing stress and uncertainty for my team. So after this setback, I became more engaged and consistent in communicating with the team. I also began volunteering to take on additional tasks and used other member's work as references to produce further deliverables.

At first I was frustrated at myself for my poor time management and guilty for putting unwanted pressure on my group members. Learning from this, after that hurdle I felt more positive as I contributed significantly more and regained the trust of my teammates.

Despite the early challenges caused due to my poor performance, my contributions afterwards were valuable and of good quality. My teammates seemed to acknowledge my improvement, which showed me that I somewhat redeemed my earlier shortcomings.

Something I wished I would have done differently was instead of waiting to be allocated tasks which limited my impact and contribution. I should have been more proactive and be the one to initiate instead.

While I grew into a more reliable and active team member, I still see room for improvement in initiative and leadership. In future projects, I will take more responsibility from the start by proposing task allocations and taking a more leading role.

Self-evaluation: I would give myself a **B+**, as I overcame a slow start and contributed consistently with good quality work but won't stay satisfied with my current performance and strive to improve.

Team evaluation: I would give my team an **A**, as despite early coordination issues, we put in notable effort and delivered a strong final outcome.

Nicholas Wongso (34445838)

Working on this project, I faced a few problems since I also had other assignments that I was also doing, resulting in not having enough time to work on this project. I also had few communication issues since me and my teammates just knew each other making it a bit challenging to talk to each other. After we had a few discussions about giving each other tasks to work on, I realized that good communication helps me to communicate effectively and I can also help each other when we encounter difficulties. I also learned that good timing management also helped me to do the tasks efficiently and improve the quality of my work. Looking back, I would have communicated better with my teammates and tried to communicate more especially with the problems I faced when working on my tasks. Another thing that I wished I had done more is managing my time better enabling me to improve my work quality. From this group work, I learned that teamwork requires compromise but also creates opportunities to improve ourselves personally and professionally. Next time, I want to talk to my teammates and manage my time better to improve the quality of my work and contribute more to the team.
Self-evaluation: I would give myself a **B+**, as I learned to communicate with my teammates and good time management but I also realized that I still have lots of room for improvements

Team evaluation: Overall, I would give our team an **A**, since we faced the difficulties together and are able to provide good results

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