



MILESTONE 5

SOLUTION SEEKERS



**DECEMBER 8,
2023**

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OUR TEAM

“SOLUTIONS BY EVERY BYTE”

BRADLEY PIKE
CONTACT REPRESENTATIVE
LEAD

Bradley Pike serves as our main point of contact between the client and our team. He is responsible for coordinating meetings, as well as building a strong client relationship.



WANATDA PHENGPHONEKEO
DOCUMENTATION LEAD

Wanatda Phengphonekeo handles documentation. She is responsible for project reports, project updates, UX design, as well as the documentation between the client.

OUR TEAM

"SOLUTIONS BY EVERY BYTE"

NATE LAPOINTE TEAM LEAD

Nate Lapointe guides the team by ensuring that all members are on track with the client's goals. He is also first to resolve any team conflict.



IRAH LORETO HARDWARE SPECIALIST

Irah Lorteo specializes in hardware related tasks. He focuses on the technical side of the system, ensuring everything runs smoothly.

ROBEE LOU DIAZ PROGRAMMING SPECIALIST

Robee Lou Diaz is responsible for the development of our system. He specializes in programming and coding. Robee guarantees our project concept comes to life.



ABOUT OUR CLIENT

Stephen Graham is a long time instructor at the Lethbridge College.

He teaches multiple courses in the Computer Information Technology program.

More specifically, he specializes in managing practicum programs for his students in the CIT 2271 - Field Work course.

Stephen's Business involves connecting students with employers for co-op work experiences, managing agreement forms, timesheets, and self evaluations.

Our team, Solution Seekers, are students of the Lethbridge College and are assigned to closely work with Stephen to develop a practicum tracking system tailored to his business needs.

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- ✉️ Stephen.Graham@lethbridgecollege.ca
- 📞 403-320-3200 ext. 5794



FEASIBILITY ANALYSIS

We will be analyzing the 3 different types of feasibility.

- Technical
- Organizational
- Economic

Technical feasibility focuses on these main points:

- Can we realistically build our client this system?
- Do we have the available resources required?
- Does our team have the technical skills and knowledge to develop this system?
- Will the proposed system be fully developed?

Organizational feasibility focuses on these main points:

- With organizational feasibility, we want to target these 3 aspects: making sure our proposed system fits well into the college, that people will want to use it, and that the college will be able to manage and support the system.

Economic feasibility focuses on these main points:

- Economic feasibility is figuring out if our project makes financial sense.
- How much will it cost to develop?
- What are the expected costs for hardware and software?
- What are the tangible benefits of the system



TECHNICAL FEASIBILITY

Compatibility with ITS Guidelines.

ITS is the Information Technology Services. Since our client wants to be able to host the proposed system on Lethbridge College servers, we have to go through ITS guidelines.

They have specified we develop the system using:

- Microsoft SQL: database management
- C#: programming language
- Windows Server OS: operating system

We also need to:

- Follow industry-standard programming practices. Meaning writing clean and secure code.
- Approved Off-the-Shelf-Solutions. Meaning, we must use pre-existing software solutions from Microsoft.

Data Storage

Because we know our storage capacity is 256GB, we also need to take into account data backup and retrieval for our system.

TECHNICAL FEASIBILITY

Resource Requirement (Hosting)

ITS requires for our system to be hosted in a Windows virtual server with the 2 following resources:

- 2 CPU cores, 4-8GB RAM, and
- 256GB storage capacity

Security Measures

The ITS department will protect our proposed system and be accessible only to those within the Lethbridge College to help:

- Reduce security risks.
- Data protection.
- Privacy regulations.

But because this is a student developed system, the ITS department will strive to eliminate any security risks possible.

TECHNICAL FEASIBILITY

User Interface and Experience

Design a user-friendly interface to ensure that users are able to navigate the system easily. We plan to do this by:

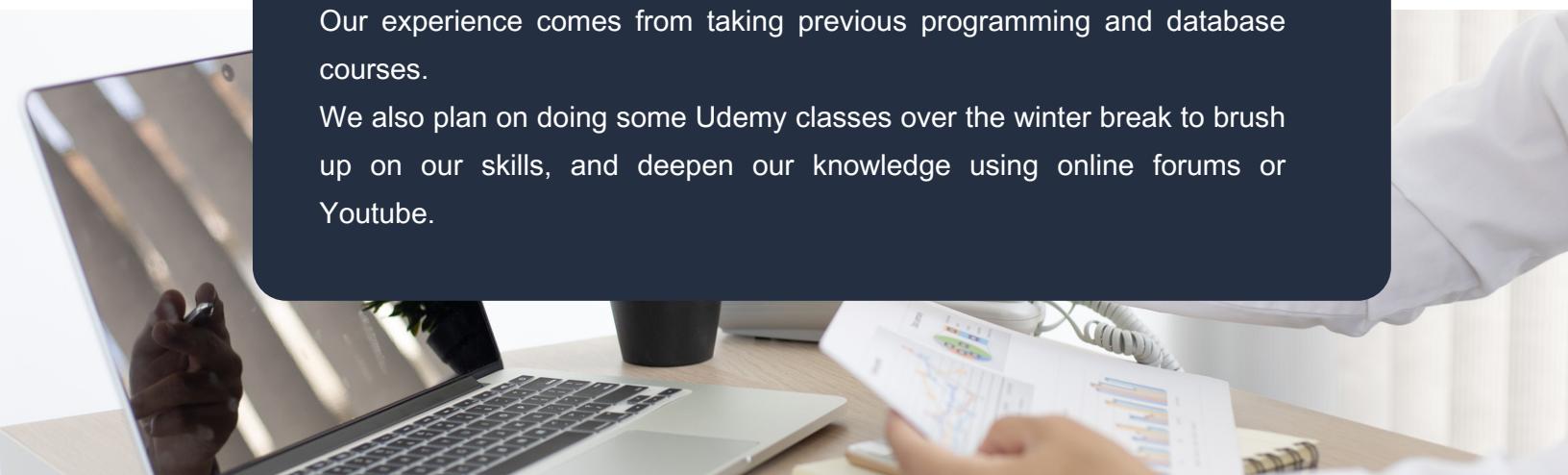
- User Testing
- Feedback
- Training and Documentation

Technical Skills

As a team, we feel that we have the necessary skills to follow the required technology that ITS has laid out for us. (Microsoft SQL, C#, Windows Server OS)

Our experience comes from taking previous programming and database courses.

We also plan on doing some Udemy classes over the winter break to brush up on our skills, and deepen our knowledge using online forums or Youtube.



TECHNICAL FEASIBILITY

Development Time

We only have until April 2024 to have the proposed system fully developed. We need to make sure we follow our project's schedule to ensure we finish it on time.

- We use our Milestone documents to help with tracking.
- Existing GANTT Chart

Maintenance and Support

Plan how we are going to provide any ongoing maintenance and support within our team's reach, things like:

- Common Troubleshooting Problems
- Addressing User Concerns

TECHNICAL FEASIBILITY

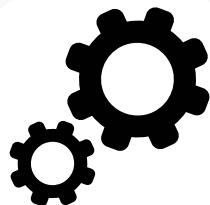
Long Term Sustainability

Once the semester ends in April, the proposed system will not have ongoing support. We need to consider the long term maintenance of it.

- Possibility of leaving the contact information of the team members who are open to giving advice or answer questions.
- Potential for hiring.
- Create a detailed document outlining the FAQ'S or technical guide of the system.



ORGANIZATIONAL FEASIBILITY



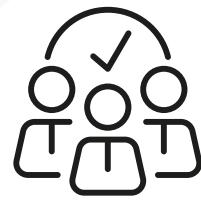
Management Strategies

What will we do to help manage the transition from the current process to the new system?

Training Sessions: Teaching the new users how to use the new system.

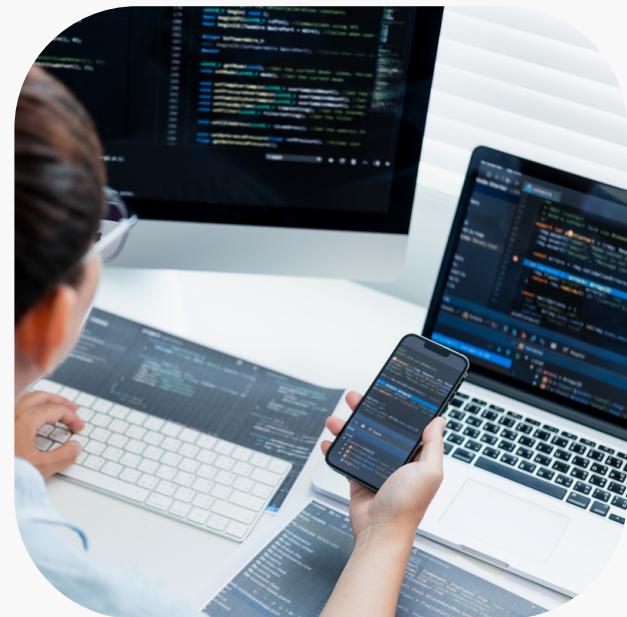
Involving our client in the development process to gather their input.

Open Communication. Discuss updates or progress with the system. And address any concerns directly with our client.



Staffing

We have determined that the current college staff can manage the system with the provided training.



ORGANIZATIONAL FEASIBILITY



Alignment with Teachers and Students - Design

Will the proposed system align with the way teachers and students are used to working?

Yes, because for our client it will be more efficient for him to manage the practicum program. And for our students, it will be easily accessible and mobile friendly.

The design is supposed to mirror our client's current work system, but it will still have familiarities like: approving timesheet hours.

And for our students, the system will be designed with technological familiarities like: logging into a web page, submitting a pdf file.



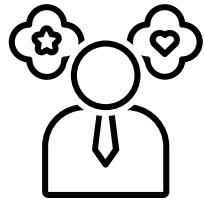
Impact of the Proposed System

Current system is manually managed, the proposed system is digital.

Easier, enhanced communication between the students, teachers, and employers. (Automated alerts)

Better data management: Report generation.

Better tracking and monitoring for the administrators to oversee the practicum progress of the students.



Is the system desired?

In short, yes. The system is customized to the needs of our client and is being developed with the thought in mind of students and employers.

We are also keeping in mind that teachers and students are used to working online. So we want to make sure this is something they can easily adopt.

To ensure user engagement, we will be gathering feedback from our client and potential users of the system to hear their opinions.

CONCLUSION

Although there are requirements that have been set by ITS, these limitations are something that we as a team have considered before even starting the project.

We knew going into this that it was going to be challenging having to balance our client's needs as well as the rules set by ITS.

We have an optimistic approach and are super excited to get into development, while also bringing a successful system to our client!

ECONOMIC FEASIBILITY

Development Costs

Because it's a student project, the development costs are the time and effort put in from the team.

- Software and hardware is covered by the college resources.

Operational Costs

Since the system will be hosted on college servers, maintenance and support will be handled by the college.

Tangible Benefits

- Automates tasks such as the timesheet submissions and job post listings.
- Reduces manual errors.
- Increases efficiency.

Intangible Benefits

- Improved user satisfaction
- Ability to track and monitor the practicum progress accurately. (more organized)
- Contributing to a new innovation.

Return on Investments (ROI)

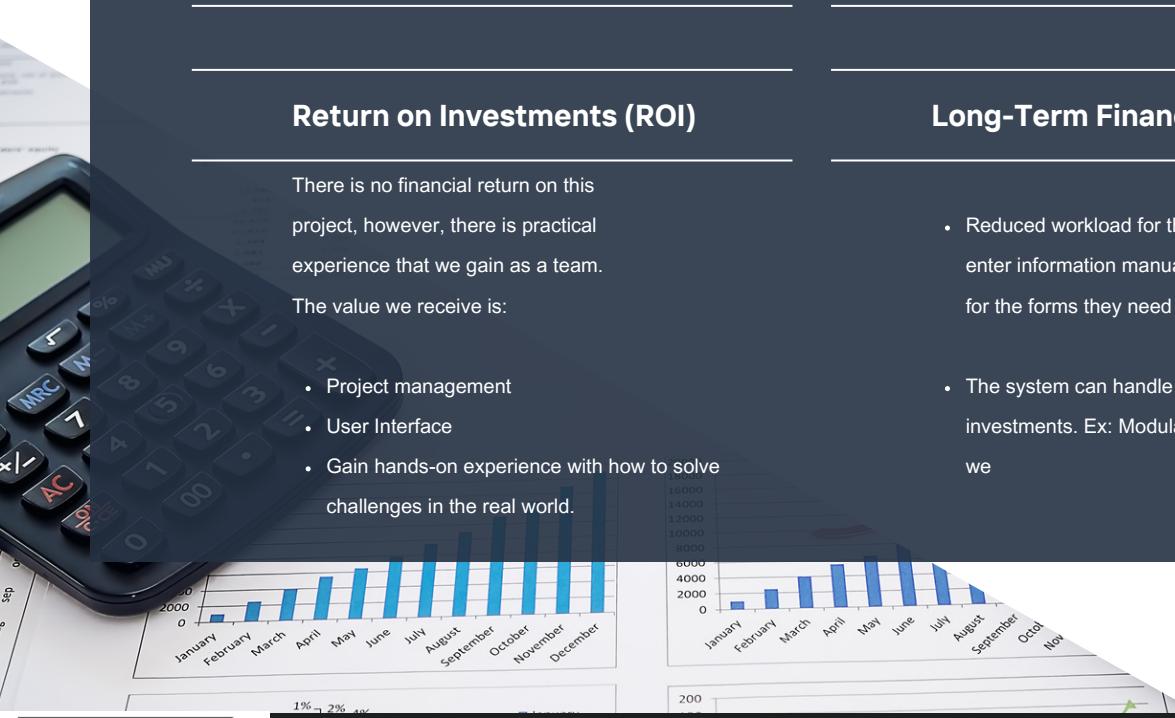
There is no financial return on this project, however, there is practical experience that we gain as a team.

The value we receive is:

- Project management
- User Interface
- Gain hands-on experience with how to solve challenges in the real world.

Long-Term Financial Impact

- Reduced workload for the admin. Less tedious to enter information manually. Better storage system for the forms they need to keep track of.
- The system can handle future growth without any investments. Ex: Modular design, the technology we



ECONOMIC FEASIBILITY

Hosting Costs:

- For the IIS Web Certificate, an approximate cost is \$500 a year.
- For the SQL Server, it's licensed per core, the cost is about \$500 per core.

Development Tools and Licensing:

The project will use .netcore version 6 & MVC (model view controller), and all libraries used must be Microsoft authenticated/licensed.

Technical Specifications:

- The hosting solution will be a Windows virtual server with resources including 2 CPU cores, 4-8GB RAM, and 256GB storage capacity.
- The application will use HTTPS port 443 or 8080 HTTP. Since the application is accessible outside the college's network, HTTPS is recommended.

Long-Term Hosting and Security:

- The project may not be hosted by the college after the semester ends due to security concerns and to protect the college's reputation.
- Ensure the database is structured with expansion and future-proofing in mind to prevent future struggles and data loss.

Potential Long-Term Opportunities:

- A potential offer for a summer job or practicum for upgrading the system to an enterprise solution was suggested.
- If the project doesn't go as planned, there's a possibility to rebuild it using an enterprise solution.

SUMMARY RECOMMENDATION

Build-vs-Buy Comparison for CIT Practicum Project: A Recommendation for Solution Seekers.

In evaluating the options for our CIT practicum project, Solution Seekers have conducted a thorough analysis of building a custom solution in-house using MS Access versus adopting off-the-shelf software. Here's a comprehensive comparison and a final recommendation.

1. BUILD OPTION: CUSTOM IN-HOUSE DEVELOPMENT USING MS ACCESS

Advantages:

- Tailored Solution: Customization to fit the specific needs of our project.
- Integration with MS Access: Seamless integration with the chosen database program.
- Ownership and Control: Complete control over design, features, and future enhancements.

Challenges:

- Development Time: Longer development time compared to off-the-shelf solutions.
- Resource Intensive: Requires skilled developers and potentially more resources.
- Maintenance and Updates: In-house responsibility for ongoing maintenance.

SUMMARY RECOMMENDATION

2. BUY OPTION: OFF-THE-SHELF SOFTWARE

Recommendation: Salesforce Platform

Advantages:

- Quick Implementation: Configurable to our needs, reducing development time.
- Scalability: Easily scale as our project grows or requirements change.
- Community and Support: Access to a large user community and ample online resources.
- Cloud-Based: Accessible from anywhere, providing flexibility for users.

Challenges:

- Learning Curve: Users may need time to familiarize themselves with Salesforce.
- Subscription Cost: While there's a cost, it may be more cost-effective than custom development.

SUMMARY RECOMMENDATION

3. IMPLEMENTATION DETAILS

- Operating System: Windows (as specified in the requirements).
- In-House or Outsourcing: It's recommended to keep critical development in-house for control and understanding.
- Outsourcing hardware and software may be considered for non-critical components.

CONCLUSION:

After careful consideration, Solution Seekers recommend adopting the Salesforce platform as the off-the-shelf solution for our CIT practicum project. This choice balances customization, scalability, and ease of implementation, aligning well with our specified project requirements. Additionally, we recommend keeping critical development in-house while considering outsourcing for non-critical components. This approach ensures control and understanding of our system while optimising resource utilisation.

PRACTICUM MANAGEMENT
& TRACKING

WEIGHTED ALTERNATIVE MATRIX

	Weight	Custom	Score	Outsourced	Score	Off the Shelf	Score
Time Frame	10	1	10	3	30	4	40
Skills	25	3	75	5	125	4	100
Technology	20	5	100	5	100	3	60
Cost	25	5	125	1	25	3	75
Organizational	20	5	100	5	100	3	60
Total	100		410		380		335

Outsource companies like ScienceSoft can create the software customized based on the requirements in 1-2 months because of their skills and expertise with almost every technology. They can build the system using the preferred platform Microsoft utilizing C#, MS SQL, and .NET. The disadvantage is high pricing cost which estimates \$90-110 per hour. Assigning a dedicated person will also be crucial during development and training of the software.

Based on our analysis, off the shelf solutions like Canvas and iSpring is another option because of our user's familiarity with the software, mainly Instructors and students. Technology is already available, and pricing is reasonable at around CAD\$3 a month per user. It is a good solution, however, it might not be the perfect fit considering the features and functionality of the system. Requirements include timestamp recording to monitor student's work hours. Customizing an employer's dashboard can be a challenge because it has specific capabilities that may not be present with the current system.

WEIGHTED ALTERNATIVE MATRIX

In Conclusion

Taking into account these two alternatives, our recommendation is to:

- Build the software in-house/custom.

It will require a longer time frame, nevertheless, this is considered as the best option due to the following advantages.

- No cost since technology is hosted in the College and software will be created by students
- Design will be made to prioritize the user experience and features that are tailor fit to system requirements.

BUDGET

This documentation presents a comprehensive plan for the implementation of the new system, including all associated costs, licensing considerations, hosting options, backup strategies, security measures, and a three-year cost projection.

Licensing:

- IIS Web Certificate: Approximately \$500 per year.

Costs:

- Sponsored by Lethbridge College (free for the team).
- Hosting covered by Lethbridge College on a Windows virtual server.
- IIS Web Certificate: Approximately \$500 per year.
- SQL Server: Estimated \$500 per core.

Materials Costs:

- Example: \$15,000 (for hardware) + \$5,000 (for networking equipment) = \$20,000.

Warranties:

- Check hardware vendors for warranties.
- Verify if software licenses include warranty periods or support agreements.

CONSULTING FEES

Estimated Hours:

Students: ~300 Hours

Professional: ~175 Hours

Pricing:

Basic website & database rate: \$130/hour.

Total cost: \$70,500

Hosting Costs:

Covered by Lethbridge College.

If charged, licensing fees would be \$500 per year per core (Including 2 cores for a total of \$1,000).

BUDGET

Hosting Comparison:

Azure Virtual Machines:

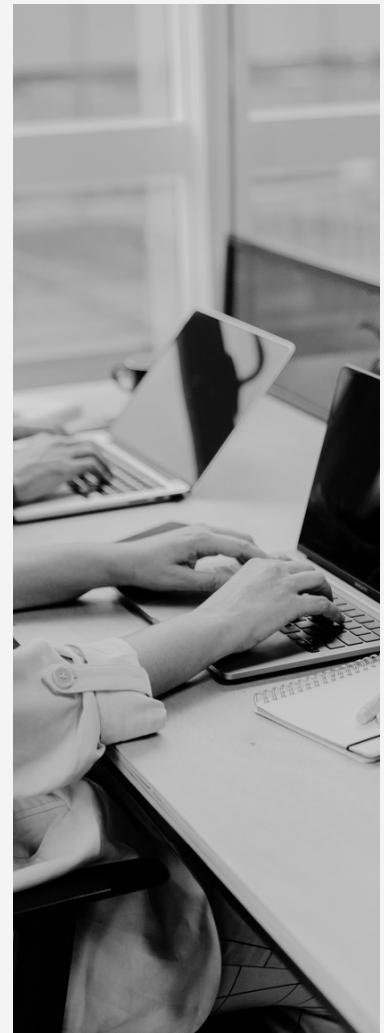
- VM Pricing: Example - B2s VM at \$0.033 per hour.
- Blob Storage: Example - \$0.0184 per GB per month.
- Backup: Example - \$0.07 per GB per month.
- Security Features: Azure Security Center, Active Directory, Key Vault.

AWS EC2 Instances:

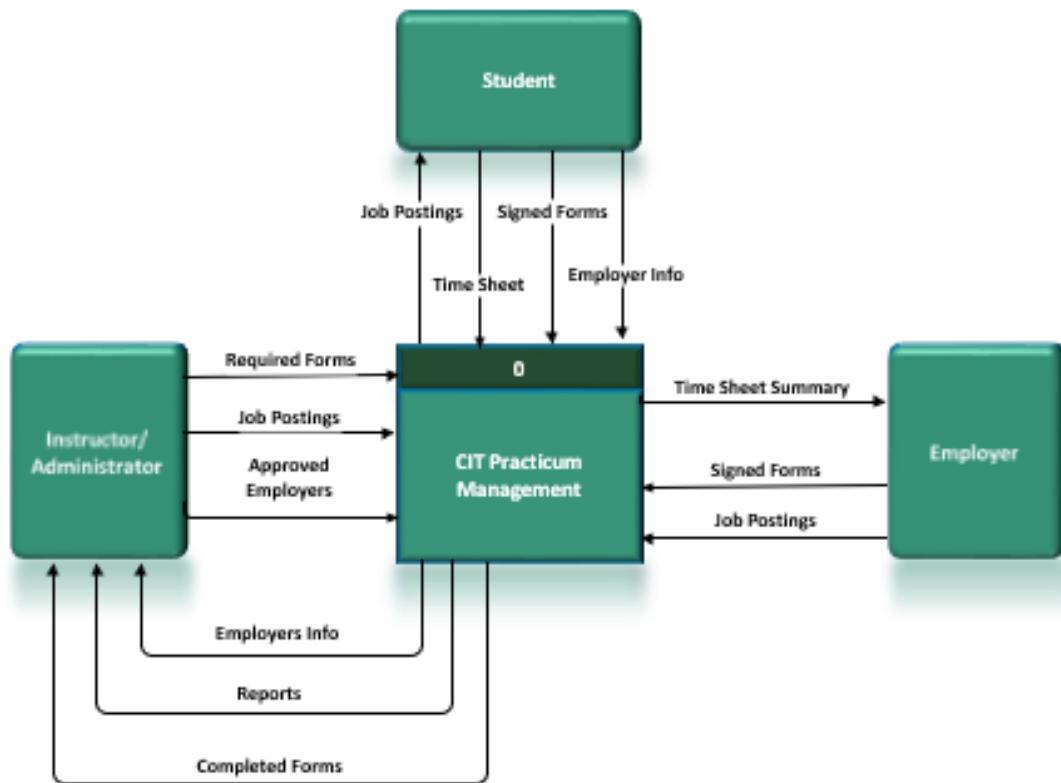
- Instance Pricing: Variable based on type, region, and usage model.
- Storage (S3, EBS, Glacier): Variable costs.
- AWS Backup: Variable costs for backup and storage class.
- Security Measures: IAM, KMS, WAF, VPC.

Backup Options:

- Safe Copy.
- Frequency: Daily.
- Type: Incremental.
- Archiving: Explore options for long-term data storage.



PROPOSED SYSTEM



Central Process:

CIT Practicum Management: The central process for managing all practicum management operations.

Entities:

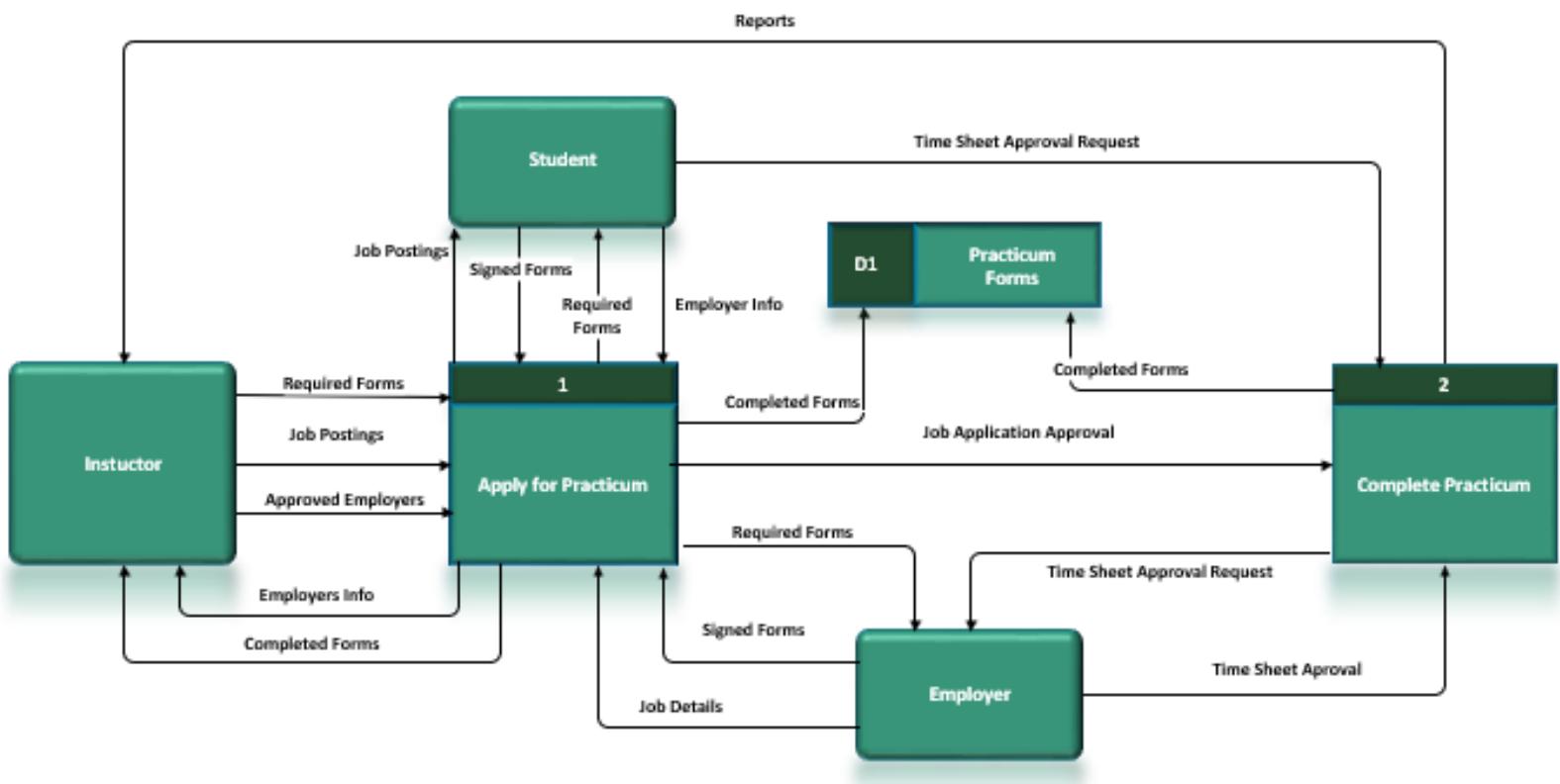
Instructor/Administrator: They oversee the practicum tracking and management.

Students: Students participating in the practicum.

Employers: Companies or individuals offering job placements for the practicum.

The "CIT Practicum Management" acts as the central process for managing the practicum program. It monitors job postings from employers, tracks students' hours through time sheets, processes forms, and handles all employer information.

The entities - Student, Instructor/Administrator, and Employer, are there to interact with the central process and exchange information about job postings, time sheets, and forms to the system.



Central Processes:

Apply for Practicum: Manages all aspects of applications (forms, job postings, signed forms, job details) for the practicum.

Complete Practicum: Final experience of the practicum. Includes time sheets approvals, job application approval, and reports.

Entities:

Instructor/Administrator: They oversee the practicum tracking and management.

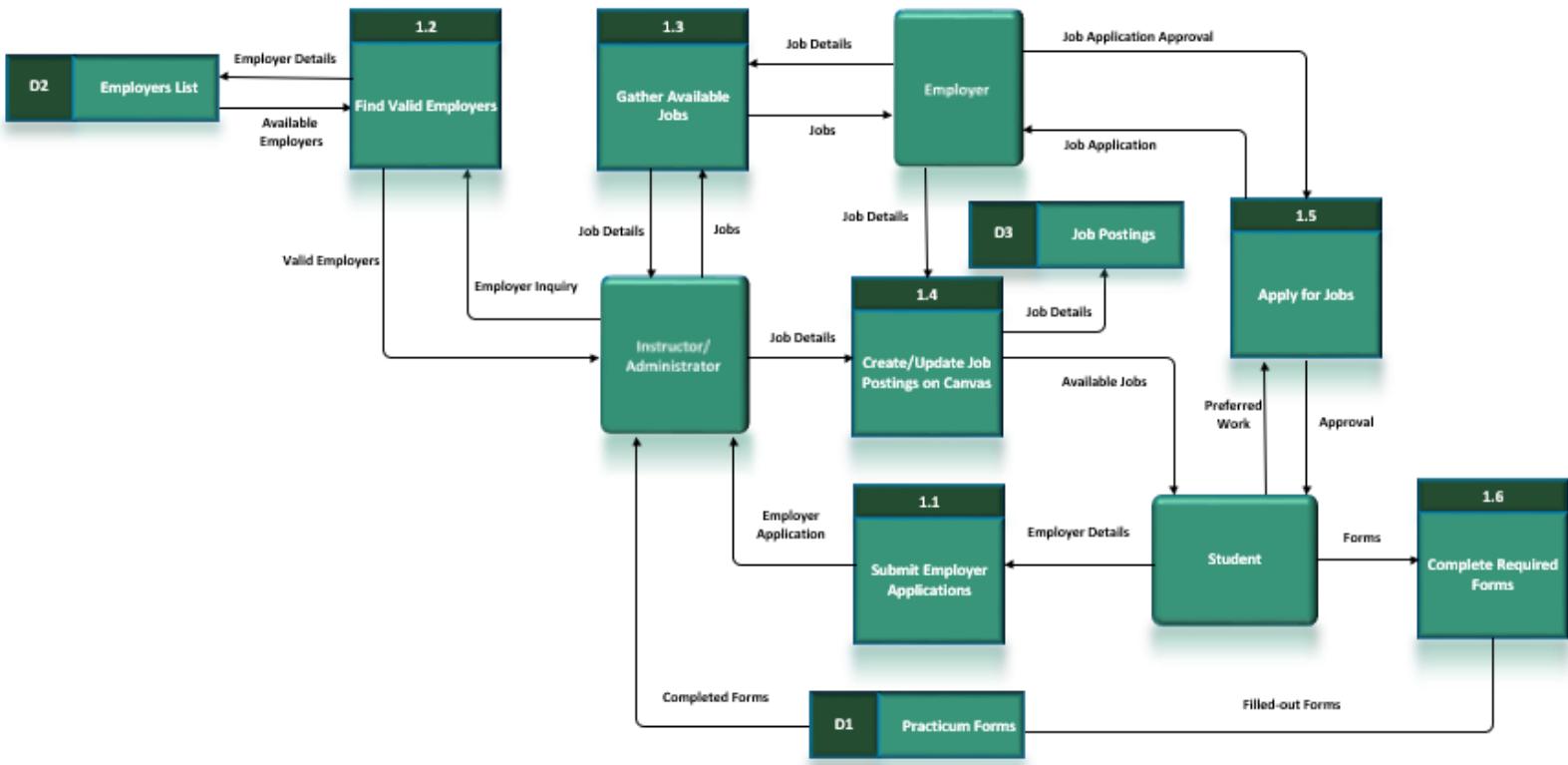
Students: Students participating in the practicum.

Employers: Companies or individuals offering job placements for the practicum.

The practicum experience is represented by the "Apply for Practicum" and "Complete Practicum" processes. Students interact with these processes to apply for, and complete their practicum.

The Instructor is there to provide students with the required forms and documentation. Employers will offer practicum positions, verify students' work hours, and are apart of the employer approval process.

All documentation related to the practicum is stored in the Practicum Forms data store.



Central Processes:

- * **1.1 Submit Employer Applications:** This process involves employers submitting applications to the Instructor/Administrator.
- * **1.2 Find Valid Employers:** This involves the process of verifying valid employers.
- * **1.3 Gather Available Jobs:** This represents all available jobs from valid employers.
- * **1.4 Create/Update Job Postings on Canvas:** This is where the Instructor/Administrator updates the job details.
- * **1.5 Apply for Jobs:** Students apply for available jobs.
- * **1.6 Complete Required Forms:** After selecting a job, students need to complete required forms.

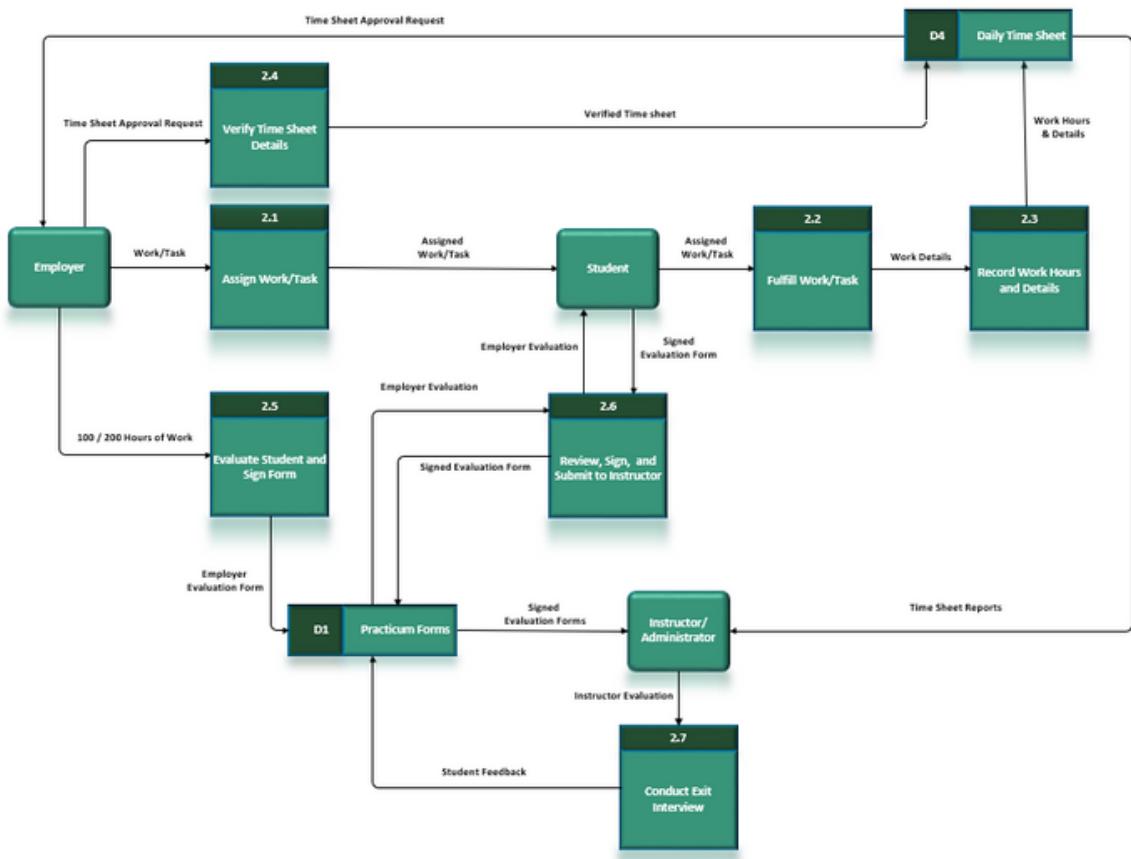
Entities:

Instructor/Administrator: They oversee the practicum tracking and management.

Students: Students participating in the practicum.

Employers: Companies or individuals offering job placements for the practicum.

This process starts with employers submitting applications to the Instructor/Administrator. These potential employers are then validated, and the valid ones will then provide information on available job roles. These job details are updated Canvas for students to view. From here, students apply to their preferred job. Once selected, students need to fill out forms.



Central Processes:

2.1 Assign Work/Task: The employer will assign tasks to the student.

2.2 Fulfill Work/Task: The student completes the assigned tasks.

2.3 Record Work Hours and Details: The student records the hours of work performed.

2.4 Verify Time Sheet Details: The process where the employer verifies the time sheet hours from the student.

2.5 Evaluate Student and Sign Form: After a specific amount of hours (100/200 hours of work), the employer reviews the student's performance and signs the evaluation form.

2.6 Review, Sign, and Submit to Instructor: The student reviews the signed evaluation form and sends it to the Instructor/Administrator.

2.7 Conduct Exit Interview: The Instructor/Administrator conducts an exit interview and gathers feedback from the student.

Entities:

Instructor/Administrator: They oversee the practicum tracking and management.

Students: Students participating in the practicum.

Employers: Companies or individuals offering job placements for the practicum.

The process begins with the employer assigning tasks to the student. The student will then record their work hours once tasks are completed. These recorded hours are then sent to the employer for verification. Once a certain number of hours are completed (100 or 200 hours), the employer will sign the form and provide feedback based on the student's performance. This signed form is reviewed by the student and forwarded to the Instructor/Administrator. At any point, the Instructor can conduct an exit interview with the student, gaining practicum responses.

All recorded responses are stored in a daily time sheet, and evaluation forms are stored in the practicum forms data store.

MILESTONE 6

JANUARY 08, 2024 - JANUARY 24, 2024

TEAM MEETING

01/08/24
2 Hours
All Members

CLIENT MEETING

01/09/24
1 Hour
All Members

ERD (OR CLASS DIAGRAM)

01/15/24
5 Hours
Robee

Create an ERD or a class diagram of the system and identify key attributes and primary relations. This should be aligned with previous ERD's.

DATA DICTIONARY

11/27/23
3 Hours
Wanatda

Ensure the data dictionary aligns with the ERD (or class diagram).

DATA BACKUP

01/15/24
3 Hours
Irah

Consider backup options. What should be done? How often should backup be done? Who is trained for the procedure?

DATA ARCHIVING

01/15/24
3 Hours
Bradley & Nate

Answer the following questions: Is archiving important for our project? Explain the reasoning. How far back should information be maintained? Where should the material be stored? Consider these questions when doing the deliverable

MILESTONE 6

JANUARY 08, 2024 - JANUARY 24, 2024

LESSONS LEARNED

01/16/23
30 Minutes
All Members

Everyone must update their lessons learned.

TEAM REVIEW

01/16/24
2 Hours
All Members

PRESENTATION

01/18/24 -
01/20/24
Wanatda

MILESTONE 7

JANUARY 29, 2024 - FEBRUARY 07, 2024

TEAM MEETING

01/29/24
2 Hours
All Members

CLIENT MEETING

01/30/24
1 Hour
All Members

USER INTERFACE DESIGN

02/05/24
1 Hour Self-explanatory. Showcase the UX Design of the system.
Bradley

PROCESS DESIGN

02/05/24
4 Hours
Robee

PROCESS DESIGN

02/05/24
2 Hours Create structured charts describing the system. Include a modular, top-down design. Ensure all diagrams are properly formatted and descriptive.
Wanatda

PHYSICAL ARCHITECTURE

02/05/24
3 Hours Identify the hardware and software of the new system. Manual vs automated. Include supporting software that is used. Logical diagram of the architecture is useful*
Nate & Irah

MILESTONE 7

JANUARY 29, 2024 - FEBRUARY 07, 2024

LESSONS LEARNED

02/05/24
30 Minutes
All Members

Everyone must update their lessons learned.

PRESENTATION

02/06/24 -
02/08/24
Wanatda

All slides will have the milestone 7 deliverables. Graphs, clip art, bullet points. Slides will be easy to follow for the audience.

TEAM REVIEW

02/05/24
1 Hour
All Members

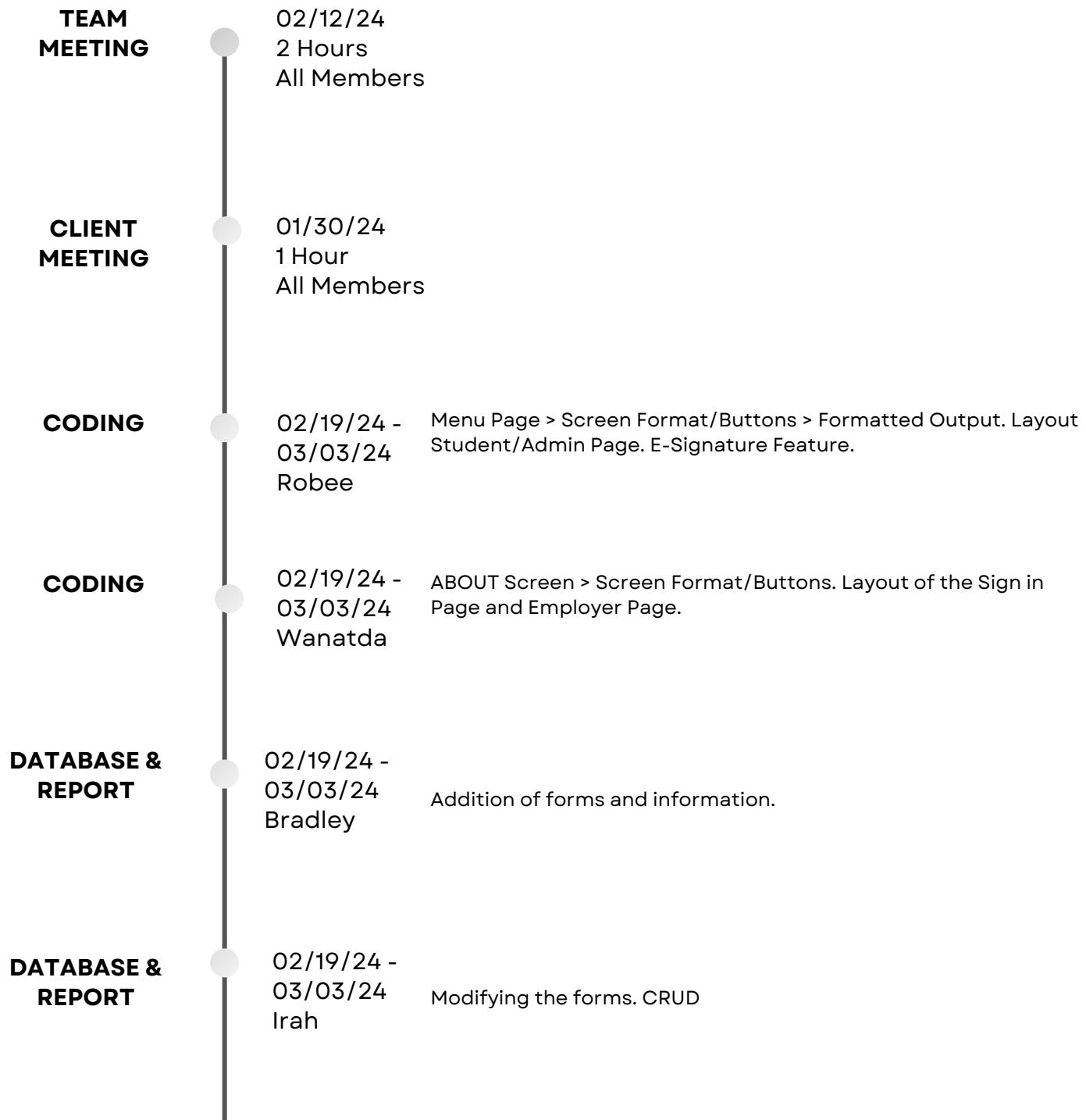
TEAM REVIEW

02/07/24
2 Hours
All Members



MILESTONE 8

FEBRUARY 12, 2024 - MARCH 11, 2024



MILESTONE 8

FEBRUARY 12, 2024 - MARCH 11, 2024

CLIENT MEETING

02/21/24
1 Hour
All Members

TESTING

02/23/24
Robee
Provide proof of testing (sample material), test the software on our client's computer.

TEAM REVIEW

02/26/24
2 Hours
All Members

TESTING

03/04/24 -
03/05/25
All Members
Pairing up with another team to complete a final test on our software.

LESSONS LEARNED

03/02/24
30 Minutes
All Members
Everyone must update their lessons learned.

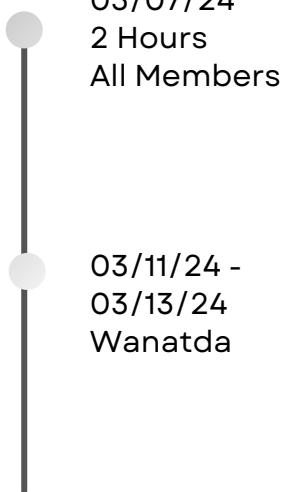
CLIENT MEETING

03/04/24
1 Hour
All Members

MILESTONE 8

FEBRUARY 12, 2024 - MARCH 11, 2024

TEAM MEETING



PRESENTATION

03/11/24 -
03/13/24 Create the presentation of all the deliverables.
Wanatda

MILESTONE 9

MARCH 14, 2024 - MARCH 25, 2024

TRAINING PLAN	03/14/24 3 Hours Irah	Document stating the training required for the client. Determine the best method to train, schedule for training, and any issues that may arise during the training sessions, etc.
TRAINING MATERIAL	03/14/24 4 Hours Wanatda	Build a binder for the client with a table of contents labelling instructions and documentation standards. Include training modules.
TEAM MEETING	03/18/24 2 Hours All Members	
TRAINING ANOTHER TEAM	03/19/24 2 Hours Bradley & Robee	Self Explanatory. Pair up with another team to review our training methods, prepare feedback forms.
TRAINING ANOTHER TEAM	03/19/24 2 Hours Nate	1-2 Page Paper highlighting our team's thoughts and any feedback that may have been given to us during the training.
LESSONS LEARNED	03/19/24 30 Minutes All Members	Everyone must update their lessons learned.

MILESTONE 9

MARCH 14, 2024 - MARCH 25, 2024

PRESENTATION

03/20/24 -
03/22/24
Wanatda

Create the presentation of all the deliverables.

TEAM REVIEW

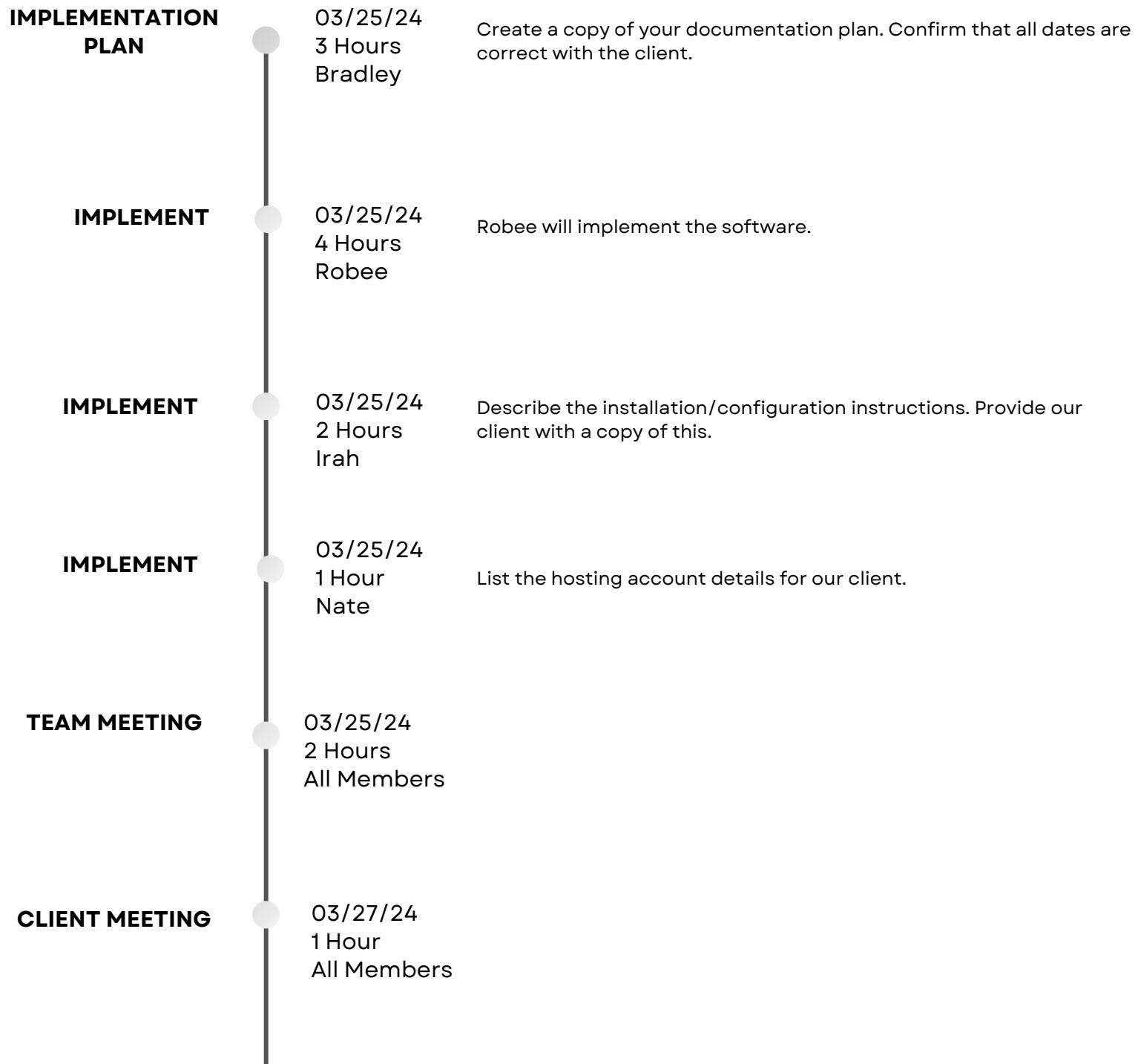
03/20/24
2 Hours
All Members

TEAM MEETING

03/25/24
2 Hours
All Members

MILESTONE 10

MARCH 25, 2024 - APRIL 08, 2024



MILESTONE 10

MARCH 25, 2024 - APRIL 08, 2024

TRAINING

	03/29/24 30 Minutes Bradley & Robee	Train the client on the software.
TRAINING	03/29/24 3 Hours Wanatda	Write a 1-2 page paper discussing how the training went. Explain the process that was followed.
LESSONS LEARNED	03/29/24 30 Minutes All Members	Everyone must update their lessons learned.
PRESENTATION	03/31/24 - 04/02/24 Wanatda	Create the presentation of all the deliverables.
TEAM MEETING	04/04/24 2 Hours All Members	
TEAM REVIEW	04/07/24 2 Hours All Members	

13/10/23

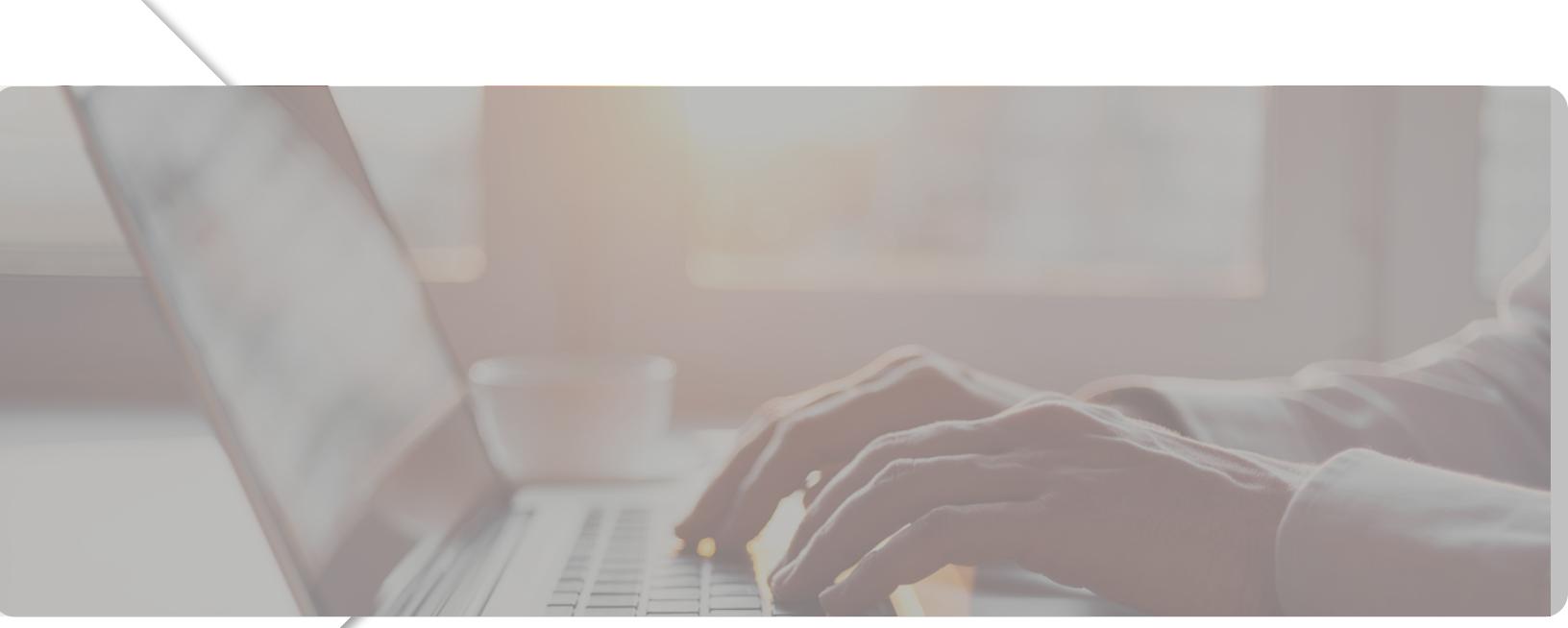
SOLUTION SEEKERS

LESSONS LEARNED

SOLUTION SEEKERS 

P R E P A R E D B Y

Wanatda Phengphonekeo, Robee Lou Dia
Bradley Pike, Nate Lapointe, Irah Loreto



INTRODUCTION

CANVA

For our documentation we have chosen to use Canva to record all of our Lessons Learned.

Each member will be sent a shared link, from there they will be able to contribute to the document.

Every team member is encouraged to participate.

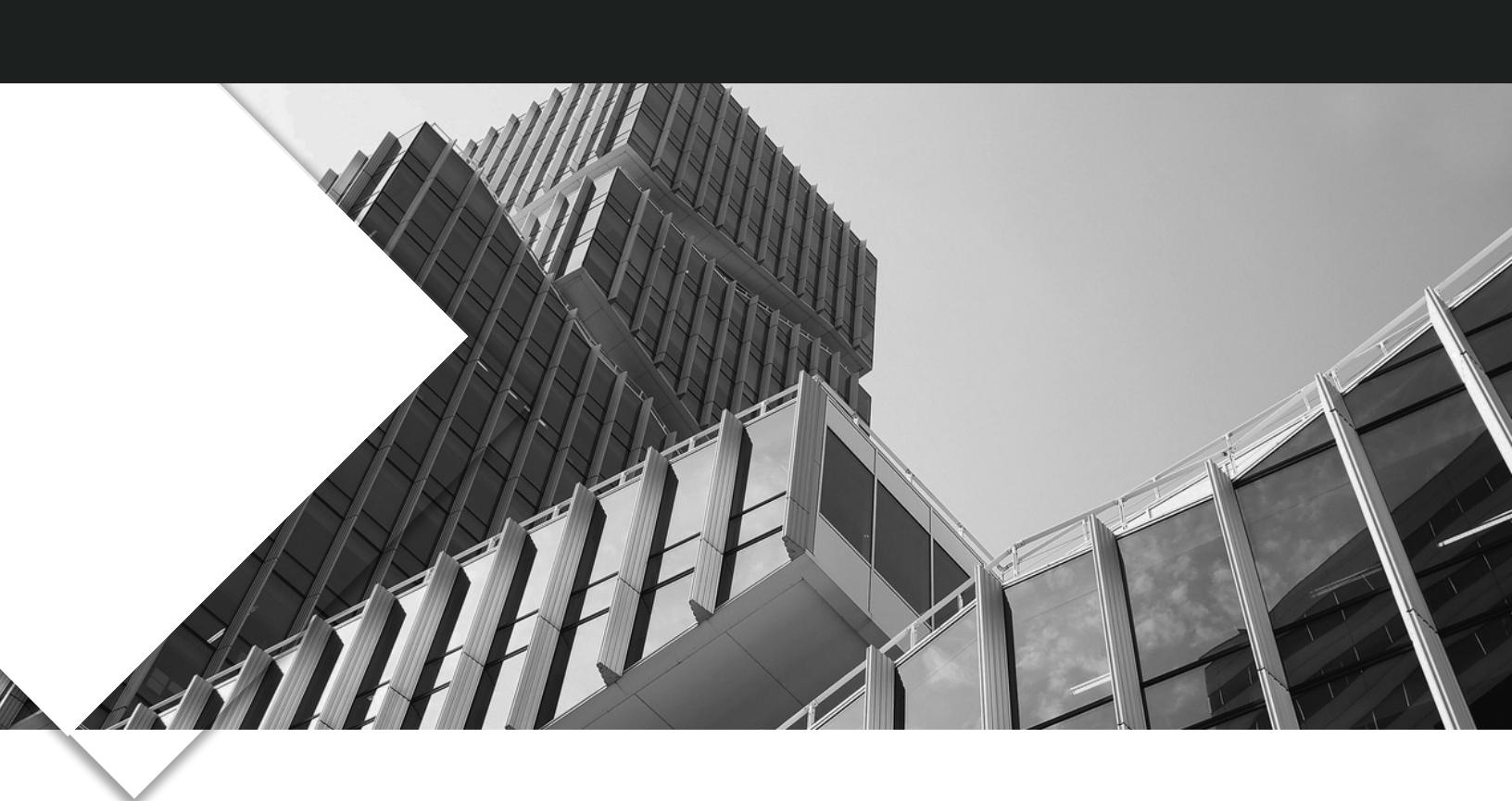


WELCOME

At Solution Seekers, we invite you to view our Lessons Learned document. This document is a reflection of our team's experiences throughout the semester.

Lessons Learned will allow us to identify what went well, and what challenges we faced throughout our project. Ideally we want to avoid repeating mistakes, identify successful practices, as well as improve our overall team work skills.

We realize it's important to collectively learn from our successes and mistakes to ensure a healthy teamwork environment, and serve as a self reflection.



TEAM MEMBERS

2023

STAFF



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Hardware Specialist

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KEY TAKEAWAYS

**For reference, below is a brief and visual description of what the Lessons Learned document will consist of.*



DATE

Each member must enter the date starting in order from DD/MM/YY



ENTERED BY

Enter the name of the group member submitting their Lesson.



MILESTONE

Indicate the Milestone number that the Lesson centres around.



LESSON

Include a brief description of the lesson that was learned in that specific Milestone

SOLUTION SEEKERS

KEY TAKEAWAYS

LESSON TYPE



Imply whether the lesson was an academic, personal, or technical issue. Be sure to keep it short and concise when deciding on the lesson type.

IMPACT



Discuss the impact of the Lesson that was submitted. What was the impact on your team? How has it impacted your personal experience? Feel free to elaborate.



RECOMMENDATION / COMMENTS

Record any key areas that may need to be improved on. Express any growth or achievements. Or perhaps suggest any changes that need to be addressed.

Date DDMMYYYY	Entered By:	Miles tone	Lesson	Lesson Type	Impact	Recommendation / Comments
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*Template for reference



AVOID REPEATED EXPERIENCES

When a team member describes their experience, here are a few topics to consider to help avoid repetition. Each lesson should be a unique experience of itself.

- Communication
- Time Management
- Client Needs
- Quality Assurance
- Decision-Making
- Adaptability

IMPROVE TEAM PERFORMANCE

As a team, we are committed to incorporating all experiences into our project. This is an ongoing learning experience, and we plan to improve our team performance using methods such as:

- Additional Training: Spending the time to improve any skills in areas that our team needs.
- Time Management: Understanding the importance of deadlines and work contribution.
- Problem-Solving: Addressing concerns in our project early on in order to resolve solutions quickly.
- Effective Communication: Each member showing up and participating with frequent check-ins.



CONCLUSION

Each Milestone will have all team members contributing to the Lessons Learned document.

It's important to follow the template layout for proper procedure. Everyone's experience must be unique, and not a repeat of previous lessons.

Milestones will have new experiences that members may not be familiar with. These could be learning new software, coding languages, or working with unfamiliar charts and graphs.

Altogether we plan to review our lessons and share solutions on issues that need improvement, or achievements that deserve recognition.

We welcome you to follow along on our Lessons Learned journey!



LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
07/12/2023	Wanatda	5	I know we lightly dived into feasibility in Milestone 1, but Milestone 5 felt pretty comprehensive. There was lots of information that needed to be considered when coming up with the details. I feel like I have a good enough understanding of feasibly than what I did beforehand. But with our project being a college one, it was difficult to navigate what our organizational & economic feasibility consists of.	Academic	Deeper understanding of the system in terms of getting our hosting situated and learning about our software and hardware, security, and long term sustainability with the project.	
8/12/2023	Nate	5	In milestone 5 i learned a little more about build vs buy comparisons. Feasibility is also something i learnt a little more of, really breaking down our own project doing it for ourselves helped me understand a lot more.	Academic	Having an idea of feasibility and build vs buy gives me a better understanding on our own project.	
8/12/2023	Irah	5	In milestone 5 I have learned and improved my power point presentation skills a lot. I always used Canva, learned how to do power point animations and really learned how to use small features and mechanics. In regards of work load I've really learned to spread work delegations more suited for my load of productivity.	Academic	I learned a more of how our system will work and what features, programs we will use on our project in order to work. Learned about what scope we will be working in as its mostly going to be ran internally and used internally after we manage to finish the project. Basically understanding the build of our project and things that will be implemented in order for it to work and be used for futures endeavours.	
8/12/2023	Robee	5	I learned a lot with comparing the differences of acquiring the system. Researching about off-the-shelf and outsourcing options, how to calculate which one is the best based on values and Weighted Alternative Matrix. Finally, creating recommendation based on these findings to propose the best solution.	Academic	It is definitely a must-know in developing system request. Reminded me that there are other options to build the system, based on time, resources and budget.	
08/12/2023	Bradley	5	In milestone 5 I was working on the budgeting part of the deliverable. Talking with ITS made me realize we missed some details like server costs and web certificate costs. Even things like licensing and consulting fees were costs I had to compare, which I have never done. Our project is limited to using Microsoft licensed software so that was something I had to work around.	Academic	I learned how challenging it can be when you have limitations to only use certain software and hardware. It felt like a real job situation having to deal with specific rules and limits. This project really impacted me and showed me how to manage these kinds of real-world challenges.	

LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
14/11/2023	Wanatda	4	Wednesday after class I talked to Tim about our ERD. Initially I had created one, and just wanted his input on it. But after talking with Tim, we worked together to improve the ERD for our system. We ended up restructuring the ERD completely, and in the end I had a better understanding of our improved ERD than I had going in. This was so helpful because throughout this Milestone I really struggled with this.	Academic	I feel like our improved ERD is more fluid. The diagram is 10x easier to explain to others, and you can follow it very smoothly. If I had not gone to Tim for advice on our ERD, I think it would have impacted our understanding of our client's ERD.	
20/11/2023	Nate	4	I learnt a lot more about the business' rules, looking at the ERD and figuring out the business' rules defiantly took time and hearing what Tim had to say about them after the presentation helped a lot	Academic	Made a lot more sense with the whole project figuring all that out, with time explaining everything as well gave me a better understanding of everything	
20/11/2023	Bradley	4	Since the last milestone I'm staying a lot more accountable for my own work and making sure I'm prepared for the presentations.	Accountability	I've made a major improvement on clarity and general understanding of the project	
20/11/2023	Irah	4	I learned more on how to become design things better on PowerPoints and become more creative. Learned about ERD more in depth's through my group members and others as well. I became more consistent in my work and have improved my skill as well to benefit the group projects.	Academic	Our new chart is way easier to explain now. Thanks to Tim's advice, it's much clearer, and you can understand it way better. Plus, this taught me that getting feedback from others is important. I'm also trying to get better at making PowerPoint slides so I can explain things even more clearly in the future. Improving my skills for sure and will have better results creating and designing for the group.	
20/11/2023	Robee	4	The most notable lesson that I had on this milestone is creating a Data Dictionary. I tried creating a database before but I learned that having a well-organized and planned Data Dictionary makes the task a lot easier. I also discovered on how to improve wordings for Business rules that will match the Entities involved.	Academic	This will serve as our cornerstone for creating the application and database since we have an idea of information that we need and the metadata and limitations for each attribute.	

LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milest one	Lesson	Lesson Type	Impact	Recommendation / Comments
27/10/2023	Wanatda	3	I learned how to make use cases! This was pretty simple to learn in class when we did examples, but when it came to actually integrating them into our project it took me awhile to figure out. Mostly because you have to go through every single step and determine "is it a feature? or is it a valid use case? what is considered pre/post condition?"	Academic	Understanding how to make Use Cases is really important for our team because I had to take into consideration stuff that I might not have accounted for. Not only for documentation sake, but also for when we start coding.	Spending the time to understand what the client wants before making a use case. Also ask for help.
29/10/2023	Robee	3	Review format of documents properly. Be more mindful on the details of deliverables. Communicate better with the team.	Personal	Missed out some specific formatting and properties of data flow diagram. Initiate team discussion for deliverables made for current milestone.	
30/10/2023	Bradley	3	Become more engaged with the project and get clarification when needed. I found myself less engaged due to a busy schedule however when I had free time I found myself focused on the wrong things. I found that creating the deliverables I didn't have a great understanding of the project and should've asked for clarification before the presentation.	Engagement	I found myself not being able to have as much perceived knowledge on the project as I stumbled on words and generally didn't have a great understanding of my portion of the presentation	Ask for help when needed
30/10/2023	Nate	3	During milestone 3 i learnt how taxing this whole process really is. There is a lot of work still ahead and i found having to remind myself to get my work done and to be on track with everything. Also learnt that asking questions to get out the right information and to do the work correct the first time.	Personal	The impact of having to remind myself to get my work done is big because that's time that i could have spent making the project better or brainstorming new ideas, things like that.	Understand the importance of everyday that we work on the project.
30/10/2023	Irah	3	I was in charge of working on the informal presentation. About a half our into it, my computer crashed and I forgot to save my progress. This really sucked because I had most of the slides done with animations and themes sorted out.	Technical	Lost a good portion of our groups presentation. Thankfully I was working on it a couple days before it was due, so I was able to recover most of it. All in all it just delayed me for a couple hours from completing it.	Always save your progress, or at least turn on the auto-save function.

LESSONS LEARNED

Date DD/MM/YYYY	Entered By:	Milestone	Lesson	Lesson Type	Impact	Recommendation / Comments
08/10/2023	Wanatda	2	During the 1st Milestone I felt very rushed into completing all the deliverables. But since going into this 2nd one, I've been slowly adapting to the pace of the milestones. I have been trying to get deliverables done as far in advance and I can, but surprisingly I have not been feeling rushed like I did in the 1st Milestone.	Personal Achievement	I realize it's all about time management, which is something I am not necessarily bad at, but when it comes to GROUP time management, I've found ways to manage it a little bit better so that I'm not stressed. It's different when it's a group project and you have to rely on others for their part, as well as deliver yours in a timely matter.	Adopting better time management skills. Staying on track of Milestone deadlines.
10/10/2023	Brad	2	Throughout milestone one I found it very valuable to schedule group meetings all the time and just get working. It doesn't matter how much time your group mates have, as long as the work is getting done and we all understand the material that's all that matters. Work just needs to get done and I'd much rather be ahead of other groups then waiting for everyone to be available.	Delegation & Meeting Length	Within our 4th meeting we did double the work completed in the 3 meetings prior. This was a result of delegating tasks and meeting for longer periods of time and having group members come and go.	
10/10/2023	Robee	2	For milestone 2, I learned how to use MS Project for managing tasks and deliverables. Additional effort was needed to read the documentation and search the web on how to navigate and use it properly. Before, I thought Agile is just Scrum and Kanban but understanding other Agile methodologies to decide which one to use for our project was essential.	Technical	I am optimistic that our team can make improved recommendations. Become more organized individually and as a team with our project management with these tools and knowledge at hand.	Read documentations. Spend time to learn how to navigate new tools.
10/10/2023	Nate	2	During milestone one i shortly realized that having a schedule and organized plan with everyone in the group was a must and it made it a lot easier to keep track of everything and know what everyone is working on and completed.	Technical	Having a clear schedule and plan helps the group work better together and get things done faster. It also makes sure everyone knows their job and does it well.	Have a calendar and a list for to dos and priorities list for tasks.
10/10/2023	Irah	2	Lesson learned for Milestone 2 on what I have learned is that scheduling my working times to finish projects and assignments is very important. Same goes for Milestone 1. There was some days cramming in work for 10 hours made it easier if I just spread it out and did some things at better times. As well I got to understand more in depth on what my group is good at and what I can contribute to continuing our work.	Technical & Planning	The importance of effective time management and spreading out work over time to reduce stress and improve productivity. Additionally, gaining a better understanding of individual strengths within the group has enhanced collaboration and project contributions.	

THANK YOU

December 8, 2023

Dear Mr. Stephen Graham,

On behalf of Solution Seekers, we thank you for choosing our team to represent you and your business needs.

We are so thrilled to embark on this 6 month long journey with you to transform this project into reality!

To acknowledge your understanding of the contents in this document, please sign below.

We look forward to working closely with you to ensure a successful project.

X

Stephen Graham