UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING

INDUSTRIAL TRAINING REPORT

By

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BACHELOR OF COMPUTER SCIENCE (GRAPHIC AND MULTIMEDIA SOFTWARE)

TRAINING PLACE :　　　　iCYCLE Malaysia

TRAINING PERIOD :　　　　2 SEPTEMBER 2020 – 19 FEBRUARY 2020

COMPANY SUPERVISOR:　　ALEX OZIOMA NWAOGWUGWU

FACULTY SUPERVISOR :　　DR SARINA BINTI SULAIMAN

REPORT DATE :　　　　　　11/02/2021

ACKNOWLEDGEMENT

In the name of Allah. All praise to Allah. Sholawat to Prohet Muhammad S.A.W. While completing this thesis, I have gone through a lot of experience, and a lot of knowledge have been acquired from the beginning of placement phase until now. A lot of people with contributions and helps which I have seek from. I really appreciate all the concern and care given towards me. Dr. Nur Zuraifah Syazrah binti Othman, my thesis supervisor for not giving up on giving hope to me and the guidance on completing this thesis.

Also not forgotten, my fellow friends, course mates, and everyone who took part in my journey in UTM, and my life. Thank you.

ABSTRACT

Industrial training is a program for students to undergo working experience in real industry. This allows students to visualize and have themselves feel sneak peak of working in their desired fields in the future after graduation. This program also has chances to enhance students in various skills whether it is the skill required for the field, or just crucial soft skills such as communicating and managing tasks. This report elaborates on my internships in iCYCLE Malaysia that was carried out in about 24 weeks from September 2nd of 2020 to February 19th of 2021. This internship was done with no big problem even though there is Pandemic Covid19 happening. The internship was done under the supervision of Mr. Alex Ozioma. iCYCLE Malaysia is a company which mission is to reduce waste issue in landfill through IT Solution. One of the systems produced was Phinonic VMS, and iOWT app. Users can use this iOWT to get rewards through recycling. VMS is a back-office solution to manage all data involved including other features. VMS was my main involvement in this internship. This report will explain all details of my internship starting from learning all required knowledge such as Angular, Bitbucket, how to use VMS etc., to accessing the VMS code myself to do testing and some maintenance. New feature was also planned to be developed which was user management page and I was involved in the design phase.

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CHAPTER 1

INTRODUCTION

1.1   Introduction

iCYCLE Malaysia SDN BHD is a business arm consisting of 30 full time staffs under Terra Phoenix Holding Company. Terra Phoenix is the IP owner where the mission is to provide real-time solutions that will enhance the sustainability of humankind. Meanwhile, iCYCLE is committed to reduce waste to landfill through use of smart technology. The vision of iCYCLE is to be the leading solution provider to manage waste responsibility.

iCYCLE has produced some products (IT solutions). It includes KITAR3cycle, iOWT and Tree Hugger. Some of iCYCLE activities are carrying out programs like awareness talk, recycling competition day and lots of other other exciting activities. This is to spread awareness to society about waste problem and iCYCLE might contribute to reducing waste to landfill problems through the solutions provided such as iOWT apps.

1.2 Organization Chart

iCYCLE Malaysia operates together as a team which is divided into several departments. Figure 1.1 refers to the organization chart. Figure 1.2 to Figure 1.6 is the department organization from management, *admin and human resource*, finance, product development, and technical respectively.
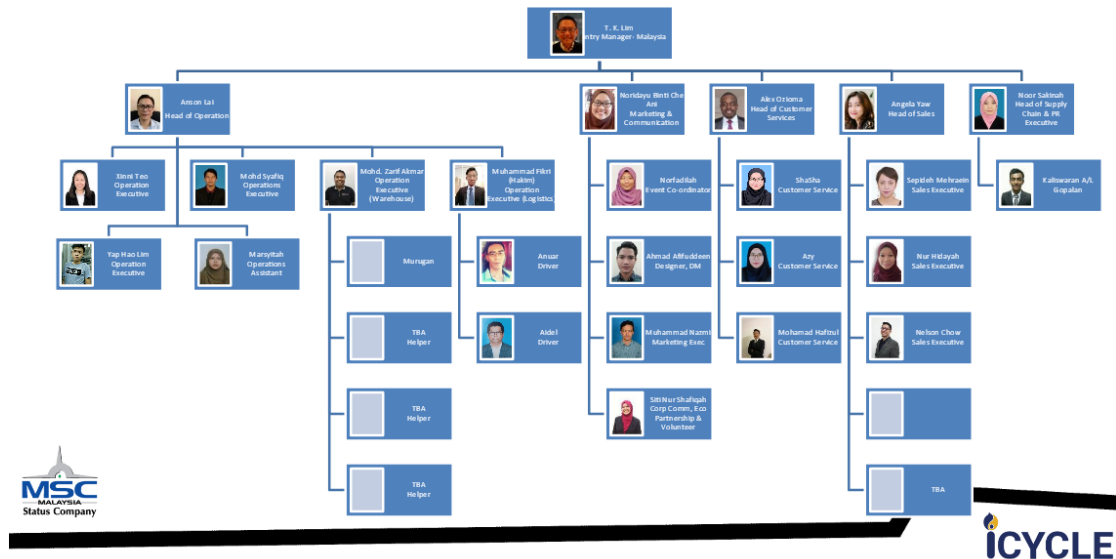
Figure 1.1   Organization chart
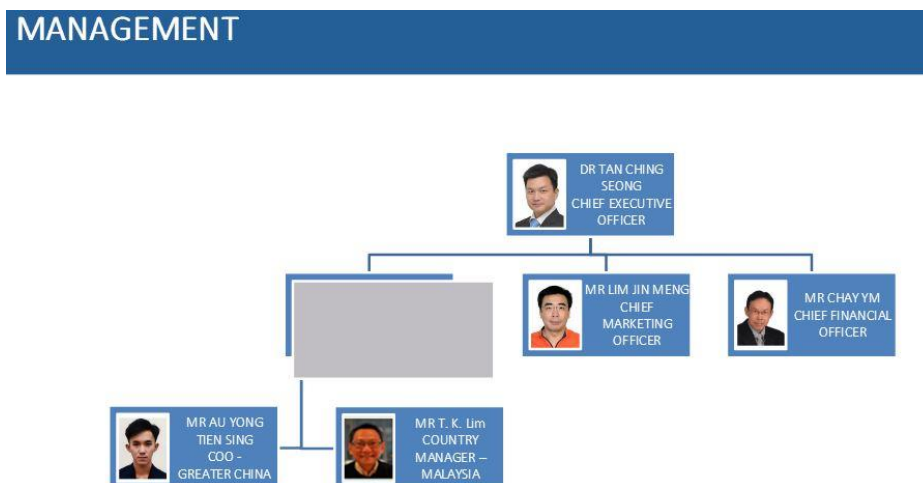
Figure 1.2   Management Department

ADMIN & HUMAN RESOURCES
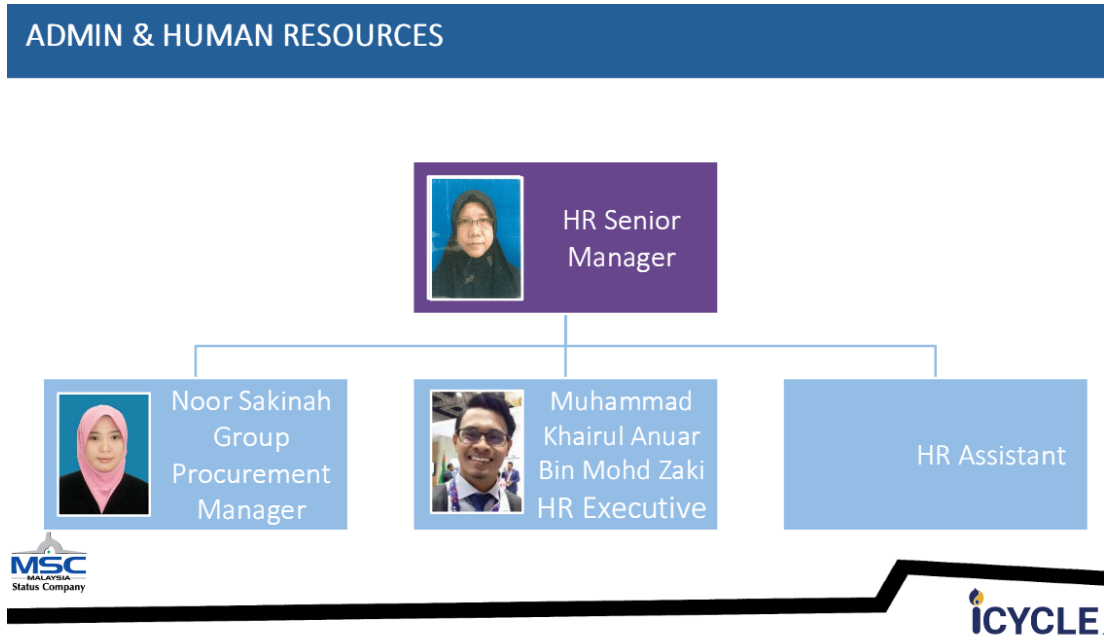
Figure 1.3   Admin and Human Resource department
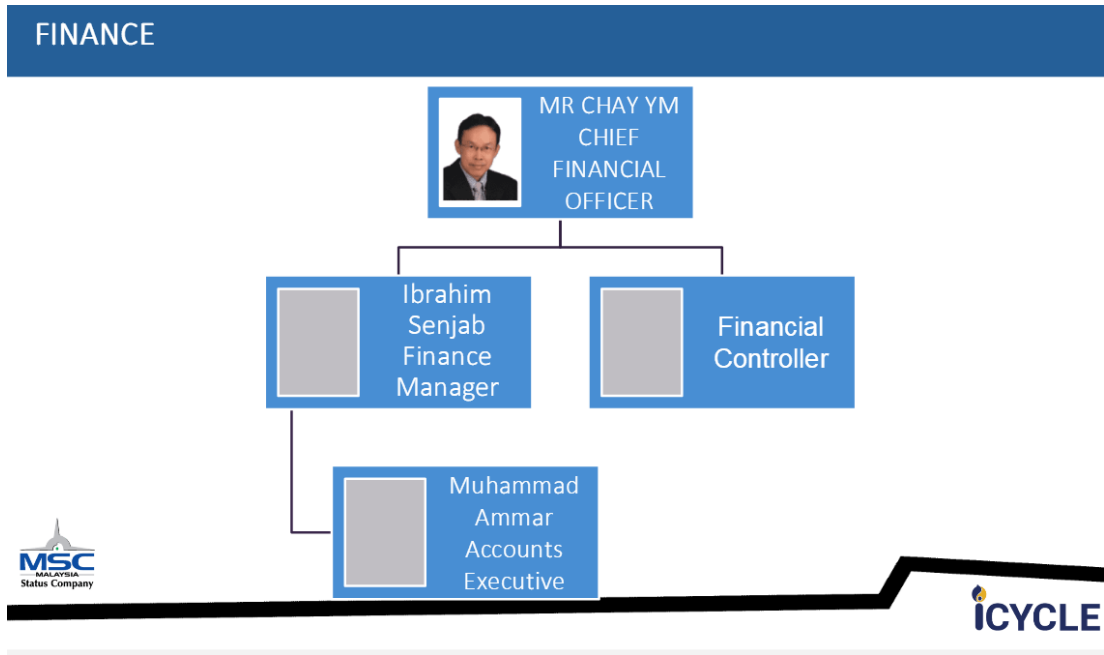
FINANCE

Figure 1.4   Finance departmant

PRODUCT DEVELOPMENT

Ahmed Abdul
Program Director

Ali Hewiagh
MobileiCYCLE
Malaysia –
Developer – Team
Lead

Ziyad Sfaxi
Program Manager

ou Bakar Sherif
Front-End
Developer

JooJo Dontoh
Back-End Developer

Hasan Faris

Suheib Sherif
Back-End Developer

TBA

MSC
MALAYSIA
Status Company

iCYCLE
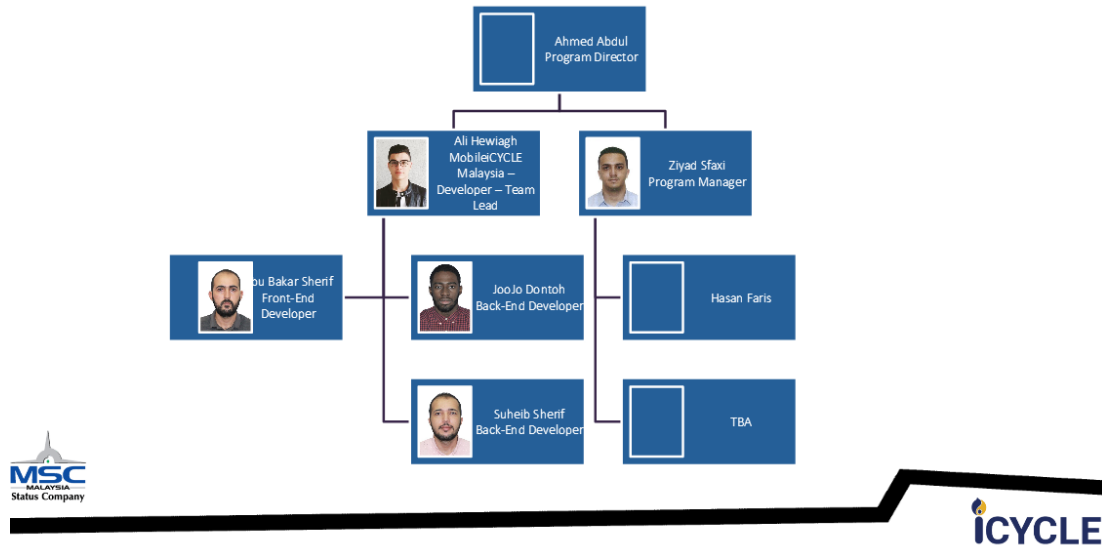
Figure 1.5   Product development department

CHIEF TECHNICAL
OFFICER

Siti Norshafiqah
CTO EXECUTIVE

Alex
MIS

CTO
ssistant/Intern

Sedia

Yeo Shu
Intern
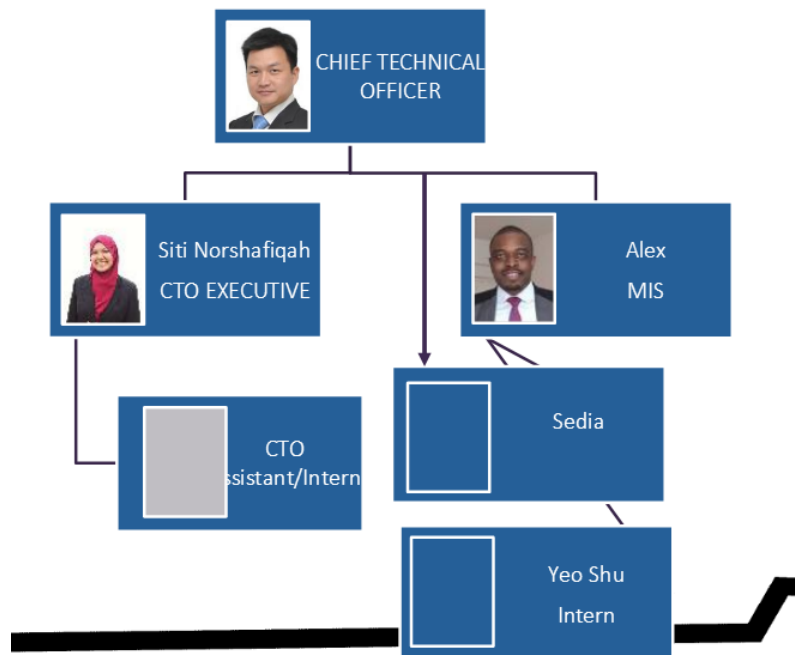
Figure 1.6   Technical

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1.3 Product Development Department (IT)

Product development department is the department which the practical training takes place. This is the department where the team in charge of the solution produced or to-be-produced as example, iOWT and Phinonic VMS. This team ensures that the products meet at least most of the satisfaction and requirements requested by users including clients and staffs. New solutions, new features of solutions, testing of solutions, and maintenance are included under this team's scope.

1.4 Training Program Planned by the Organization

The program starts with training from each department existing in iCYCLE. Then we it continues with familiarizing ourselves with Angular Framework, RxJs, Bitbucket etc. We then must understand the process of development and relevant SOP. We were then training on testing where we must do research about testing. It is then proceeded with learning the environment used for the iCYCLE system e.g., Bitbucket, Git, Angular, RxJs and Angular Material. After all the training, learning, and setting up environments on local computer, it is planned that we proceed with standardizing and fixing problems in VMS system. We then continue with system testing and development for new upcoming feature in VMS. Appendix A may be referred to view the Gantt Chart of the plan.

1.5 Conclusion

This chapter discussed the introduction, organization chart, IT department, and training program planned by the organization. The next chapter discusses on what was done throughout the internship in iCYCLE Malaysia Sdn. Bhd.

CHAPTER 2

SPECIFIC DETAILS ON TRAINING

2.1 Introduction

This chapter will be discussing in depth on what was done throughout the internship in iCYCLE Malaysia Sdn. Bhd. In general, what have been done during the internship was Angular framework learning, maintenance of VMS System and designing of new feature inside VMS.

2.2 Objectives of Training

The main objectives of this training are:

    i.   To understand the basic concept of Angular and RXJS.

    ii.   To understand and practice website design.

    iii.   To help improve and maintain the company's system.

2.3 Phinonic VMS

The system that was dealt with throughout the internship was Phinonic VMS. Phinonic VMS is an in-house developed back-office solution that allows data capture, recording, processing, reporting of recycling waste and the Carbon Footprint savings. The system allows user to view, manage and export data which some features can be accessed by certain user depending on their user type. Figure 2.1 shows a screenshot to the VMS system with the navigation menu opened showing some of the features in VMS system.
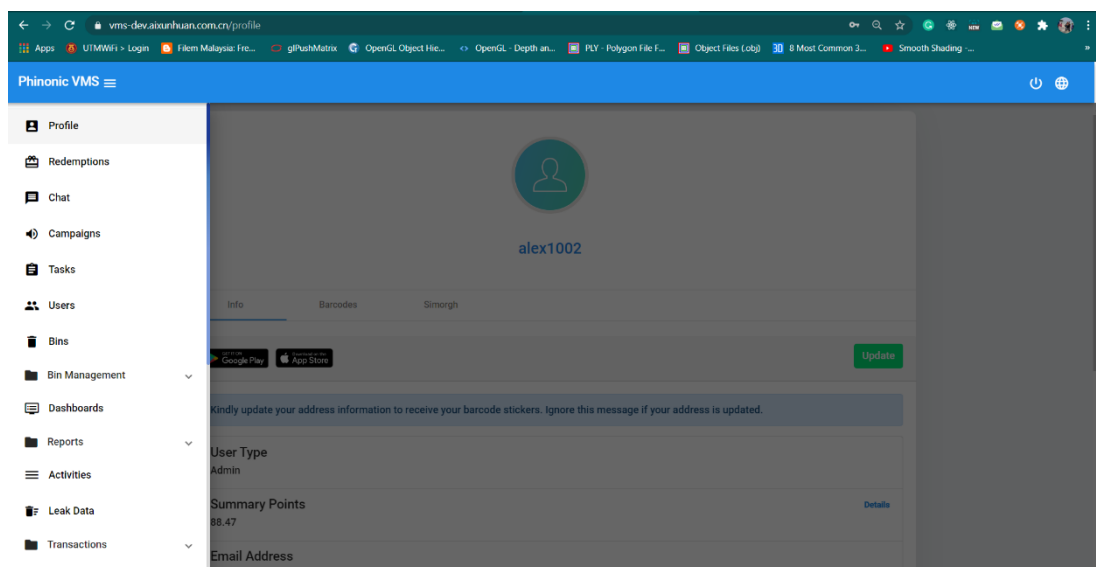
Figure 2.1   Phinonic VMS System

2.4 Work Done

VMS system is a very useful system which help the user managing data, users etc. Even though it is a complete system, it still requires some fixes and improvement. The type of work done during the internship in iCYCLE was maintenance and design. However, before proceeding with the maintenance and design, understanding of how the VMS work, Angular framework, RxJs etc needs to be gained as preparations.

2.4.1 Preparation

Firstly, training was undergone for each department existing in iCYCLE. This is to help us understand workflow in iCYCLE and how each department work together. We first undergo HR training by Mrs. Rashidah, then Marketing training by Mr. Afif, Customer Service training by Ms. Syasya, then finally, IT department training by Mr. Alex.

After trainings, the first knowledge that must be learnt and practiced before accessing the company system, is how to use Angular Framework. Angular makes use of HTML and TypeScript which is enable users to create single page application (SPA). TypeScript is a superset of JavaScript which means that there are more functionalities compared to only using JavaScript. After a month of learning Angular, we were asked to dig more about Reactive Extensions for JavaScript (RxJs). Surprisingly, Angular has already integrated where this means that we can install the library inside Angular Applications. We also learned Angular Material which is the UI component library which consist of UI component which can easily be used by Angular App Developer. This took about one more month to finish. While learning in the past two months, we also dealt with Customer Service tasks to ease us familiarize on how to use the VMS.

Then, went one step further was achieved by accessing the company's VMS system, through Bitbucket repository. The VMS code was cloned to our local desktop and the setup was done by installing all necessary libraries needed to make sure the code is abled to be ran using our local desktop. Once finished we were given task of creating new pages including CRUD operations to help us understand the structure or how VMS code was created through Angular. We were also taught about Postman software to ease us in testing from where a bug or error come, whether from front-end, or back-end.

2.4.2 Maintenance and Improvement

After two months of learning and trainings, IT tasks were assigned where the VMS needs to be standardized and translations needs to be fixed according to the requirements.

Requirements is as follows:

1) Spelling errors & capitalization on VMS needed to be fixed.

2) Translation needs to be updated and missing translation of VMS needs to be added in POeditor.

3) Decimal points (use two decimal points) and check if value exists before trying to display its value in decimal points.

4) Buttons that do the same functionality with the same names needs to be standardized.

While carrying all these tasks, there will be sometimes where Customer Service department will require some help and if allowed to help, we will help and at certain time we will encounter issues and problems and we will report this to the rest of IT team and sometimes told on what to do.

2.4.3 Design

One of the improvements of VMS which should be on VMS is dashboard to ease user in managing their needs. A dashboard design was requested by the supervisor which includes a user management page which consist of every user related operation page such as create new user, view user, edit user etc.

2.5   Hardware and Software Used for Task Execution

During the internship, a lot of software introduced and some of them are already known and previously used. All of the software is used on the currently used hardware which is laptop. Table 2.1 shows the used hardware specification and Table 2.2 shows the software used.

Table 2.1   Hardware Specification

Hardware	Specification
Processor	Intel Core i7-6700HQ 2.60 GHz
Random Access Memory (RAM)	12.0 GB
Graphics Processing Unit (GPU)	NVIDIA GeForce GTX 950M
System Type	64-bit operating system x64-based processor
External Input Hardware	Mouse

Table 2.2   Software used

Operating System	Windows 10 Home Single Language
Programming language	HTML, TypeScript
Website Development Framework	Angular

Text/Code Editor	Visual Studio Code
Localization Manager (translation manager)	POeditor
Bug Source Test	Postman
Web Designer	Adobe XD
Source Code Repository Hosting Service	Bitbucket
Communication Medium	WhatsApp, WeChat, DingTalk
Email Software	Microsoft Outlook

2.6   Given Time Period to Complete All Task

The learning and preparation task was given about two month which is in September and October. The one of the main tasks was done also for about two month which was the maintenance involving standardization and translation fixes. This task was done in November and is not continuous. This is because of the need to wait for other translator to finish translation their part (Chinese Language) and the time was filled with other task which was the design. However, the standardization continued in January due to new format request. The design, on the other hands took also about two to three weeks. There is also some light task which required us to assist customer service team and depending on the tasks, some required to be finished by 3 days and some are up to 1 week.

2.7   Knowledge from Computer Science and Information Technology Used for The Tasks Given

Most of the knowledge used are from the subject Web Programming, Application Development and Multimedia Web Programming. The knowledge from these three subjects really involved in the task given as my job scope is front-end web development. The learning process of new framework became easier due to the theory and practical basics learned in web programming and multimedia web programming. While Application development helped more in practical knowledge as real website was developed during the study.

2.8   Problems Faced During Task Execution and General Skills

There were no big problems encountered during task execution. Except for some unknown error that is found during the task execution. If there is no solution even after discussing and searching online among the two of us IT interns, our supervisor will be asked.

One of the general skills gained is to manage task or work given properly. Dividing the task and task prioritization is the learnt skills while working together in a team. Once encountered with a conflict or misunderstanding, dealing with it and coming up with a solution were the crucial skills. This conflict also increased the communication skill and English-speaking skill to overcome the conflicts.

2.9   Conclusion

This chapter discussed the objectives of training, what Phinonic VMS is, the type of work done, hardware and software used for task execution, given time to complete the task, knowledge used from Computer Science and Information Technology for task given, and the problem faced during task execution and general skill. The next chapter will discuss about what have been learned from various way, and my constructive comments of overall task performance during the internship in iCYCLE Malaysia Sdn. Bhd.

CHAPTER 3

OVERALL INFORMATION OF THE INDUSTRIAL TRAINING

3.1   Introduction

This chapter will be elaborating what have been learned from various way during the internship in iCYCLE Malaysia Sdn. Bhd., and my constructive comments of overall task performance.

3.2   What Have Been Learned

After serving for iCYCLE for about 6 months, a lot have been learned. Be it from supervisor, workers and even from the reference material used when conducting the task.

3.2.1   What Have Been Learned from Supervisor

Dedication and commitment are what the supervisor want, and that is the most important matter I learned during the internship. He does not want to hear "I can try it", what he wanted to hear was always "I can do it". Whenever he gives a task, always accept it and do it as well as possible. This was what I learned from my supervisor.

3.2.2   What Have Been Learned from Workers

Communication is key. To solve any problem or task involving another team or person, communication is very important. The correct wording, correct request etc. is very important to avoid misunderstanding etc. Whenever there are problems, I have to communicate efficiently.

3.2.3   What Have Been Learned from Reference material

Searching the correct information from the correct source is the key to finish task efficiently. The problem is not the actual problem. How we search the solution of the problem is the problems. I found that whenever the keyword is correct, I will always tend to find the solution.

Of course, a lot have been learnt regarding the theoretical and practical knowledge such as using Angular, Bitbucket, Adobe XD, Visual Studio Code, Git, POeditor etc.

3.3   Comments of Overall Task Performance

I could always do better on some of the task given. What was lack in me is the ability to inform quickly about something due to the doubt inside my feeling. I tend to think to much about the bad things that could happen if I asked something when in fact, my question is the solution to my problems. If I do correctly on this matter, my task would be completed in a faster time, even though the current task performance is very good, as stated by the Supervisor as it took very good time to complete task given. There is always room for improvement in life.

3.4   Conclusion

This chapter has explained about what have been learned from various way, and my constructive comments of overall task performance during the internship in iCYCLE Malaysia Sdn. Bhd. The next chapter will be discussing about

CHAPTER 4

CONCLUSION

4.1   Introduction

This chapter explains the overall achievement of the industrial Training, problem faced during task execution and how to solve, my opinion and suggestion on how to improve the training in the future, and reference.

4.2   Overall Achievement of the Industrial Training

The first achievement is of course getting the experience working in computer science industry and in the favorite scope which is web development. Using Angular, RxJs, Bitbucket for code repository hosting, Postman for testing, POeditor for language, Adobe XD in designing etc. – affording all these skills was a wonderful achievement obtained during the internship. Appendix B may be referred for these skills mentioned.

The second achievement is mastering the skills of good communication. This was the most important skill. A good communication is always an effective communication. Asking with great question and answering with great answer is always important. Besides, in iCYCLE most staffs are from different countries, hence communication is mostly done in English. This helps in increasing my English communication skill.

4.3   Problem Faced During Task Execution

Confusion in task given might sometimes be a huge problem while executing the task given. This has always occurred due to not asking it during the task explanation due to doubts in feeling or not focusing. The way to solve this problem is by straightly asking the task giver or ask the partner in the same task. If each partner is not sure, straightly ask the task giver. Every time delayed asking will cause more trouble and late task completion.

Another problem faced is when a task involves other person/s, and my part is completed. Sometimes, there will be no update from them of their progress. Hence the task will be hanging, and time could be wasted through waiting. The solution of this is to keep reminding to work on their part and we can start to work on other tasks for less time wastage.

4.4   Opinion and Suggestion of Improvement for Future Trainings

There is one suggestion which might be considered for future trainings. Meetings between students and faculty supervisor needs to be fixed at least once in a month. This is to ensure that student will be able to share their problems or issues during the internship in case they have any. This is needed as huge problems such as depression, bullies, harassment might happen, and they are scared and do not know what to do. By having this meeting, this matter might be solved. They might be able to find solution with the help of the faculty supervisors. This might also tighten the bond between students and supervisor.

4.5   Conclusion

iCYCLE staffs really took care of intern students. They ensure that their interns learn as much as they could in iCYCLE. No extra pressure was given, and the task assigned was always reasonable. Hence it was a great experience and everyone who is interested is gladly encouraged to join internship program here in iCYCLE Malaysia.

REFERENCES

iCYCLE® Global. (n.d.). ICYCLE Global. https://www.icycle-global.com/

Phinonic | VMS. (n.d.). Phinonic VMS. https://vms.aixunhuan.com.cn/

Gantt Chart

	2-Sep	22-Sep	12-Oct	1-Nov	21-Nov	11-Dec	31-Dec	20-Jan	9-Feb
Familiar with company and operations									
Understand process of developments and relevant SOP									
Training on Testing									
Training on enviroment used for the iCYCLE system eg Bitbucket, Git, Angular, RxJs, Angular Material,									
Perform real task in real systems using the knowledge gained through all the training									
1) Standardize existing feature in system									
2) testing system									
3) front end development of new feature in system									

					3) front end development of new feature in system	2) testing system	1) Standardize existing feature in system	Perform real task in real systems using the knowledge gained through all the training	Training on enviroment used for the iCYCLE system eg Bitbucket, Git, Angular, RxJs, Angular Material,	Training on Testing	Understand process of developments and relevant SOP	Familiar with company and operations
Start Date					1-Dec	1-Dec	1-Dec	1-Dec	30-Sep	14-Sep	9-Sep	2-Sep
Duration					80	80	80	80	61	14	4	9
End Date					19-Feb	19-Feb	19-Feb	19-Feb	30-Nov	28-Sep	13-Sep	6-Sep

Appendix B   Industrial Training Achievement

INDUSTRIAL TRAINING ACHIEVEMENTS

(This form must be filled by student and must be attached in the Industrial Training report)

Student's Name : Faris Farhan bin Mohamed

Organisation   : iCYCLE MALAYSIA SDN BHD

No.	Task (List all tasks have been completed)	Month of Task Achieved				
		Month 1	Month 2	Month 3	Month 4	Month 5
1	Company Training and Learn Angular Framework, Rxjs and Bitbucket	/				
2	Creat page and make use of backend API which has already been created.		/			
3	Learn Postman and use it to test page bugs.			/		
4	Clone VMS repository from company's Bitbucket repository and setup in local desktop.			/	/	
5	Come up with design for new features in VMS system using Adobe XD.				/	
6	Standardize VMS system as in requirement, fix translation errors and add missing translation using POeditor.					/

Deliverable/Training reflection (Outcomes that have been achieved)
- Developing web pages using Angular.   - Postman testing.   - Using Bitbucket as repository to manage System pages in a team.   - Designing web pages using Adobe XD.   - Using POeditor to help manage website translations.

Student Signature: _____   Date: 11//02/2021_____

Approval

Organisation's Supervisor: Faculty Supervisor :

....
(Signature)   (Signature)

Name: Ali Omran Ali Hewiagh   Name:
Date: 11/02/2021   Date:

1

Appendix C   Industrial Training Checklist

No.	Activities/Tasks	Tick (√)	Endorse by and date
1.	Report Duty To The Organization Approved by faculty	√	2/9/2020
2.	E-mail Report Duty Verification (BLI-1D) to faculty supervisor.	√	27/10/2020
3.	Upload Report Duty Verification (BLI-1D) in e-learning for course code SCS*4114.	√	11/2/2021
4.	Contact faculty supervisor to inform the job scope and organization information	√	27/10/2020
5.	Fill in organization supervisor information survey in ITS	√	08/01/2020
6.	*Update of Industrial Training site (address). Inform faculty supervisor and JKL, if any changes.*		
7.	Updating Industrial Training Logbook online – daily basis		
8.	Ensure that organization supervisor able to login to ITS successfully (Organization supervisor get ITS userid and password).	√	19/01/2021
9.	Faculty Supervisor Visit. Date:	√	03/02/2021
10.	Industrial Training Presentation.	√	03/02/2021
11.	Performance evaluation by organisation supervisor. Online or *submission BLI-2B during supervisor visit.*		
12.	Submission of Industrial Training Logbook.	√	11/02/2021
13.	Submission of Industrial Training Report with checklist and achievement form as Appendix.	√	11/02/2021
14.	Fill in Industrial Training Performance Evaluation by student (BLI-1E) in ITS.	√	11/02/2021
15.	End Industrial Training	√	19/02/2021

Note:
1. Italic activities are optional depending on student situation.

IIMPORTANT: This checklist must be put as attachment in the industrial training report.