

NEWBIE
(UNIVERSITY STUDENTS CLASS AND EVENT MANAGEMENT APP)



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

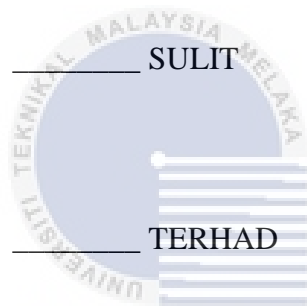
JUDUL: NEWBIE (UNIVERSITY STUDENTS CLASS AND EVENT
MANAGEMENT APP)

SESI PENGAJIAN: 2016/2017

Saya HO HOCK WAH

mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** Sila tandakan (/)



SULIT

TERHAD

TIDAK TERHAD

(Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)

(Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)

اويؤرسيتي تيكنيكا مليسيا ملاك
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

(TANDATANGAN PENULIS)

Alamat tetap: 375H, Jln Dahlia 1

Taman Bunga Raya

75450 Bukit Beruang

Tarikh: 20/8/2017

(TANDATANGAN PENYELIA)

Nama Penyelia

Tarikh: _____

CATATAN: * Tesis dimaksudkan sebagai Laporan Akhir Projek Sarjana Muda (PSM) ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.

NEWBIE
(UNIVERSITY STUDENTS CLASS AND EVENT MANAGEMENT APP)



This report is submitted in partial fulfilment of the requirements for the Bachelor of
Computer Science (Software Development)

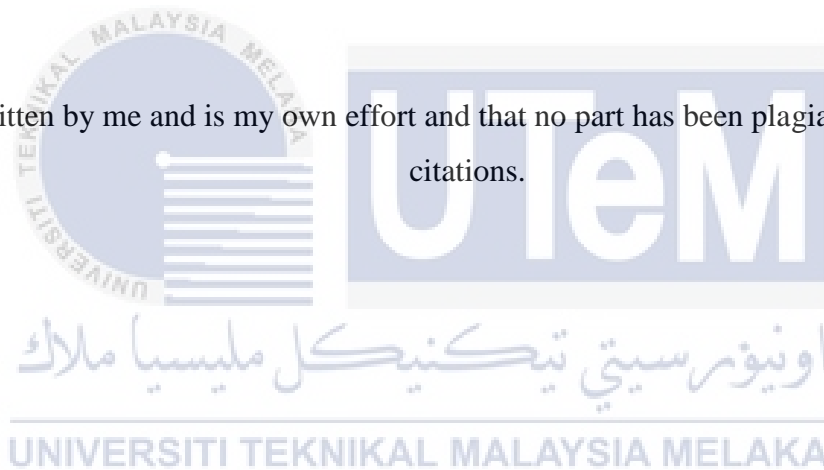
FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2017

DECLARATION

I hereby declare that this project report entitled
NEWBIE
(UNIVERSITY STUDENTS CLASS AND EVENT MANAGEMENT APP)

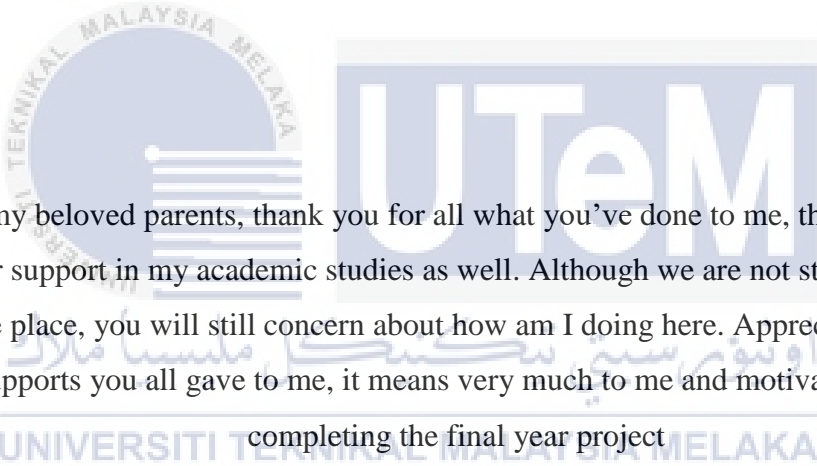
is written by me and is my own effort and that no part has been plagiarized without citations.



STUDENT :  _____ Date: 20/8/17
(HO HOCK WAH)

STUDENT : _____ Date: _____
(MRS. ROSMIZA WAHIDA ABDULLAH)

DEDICATION

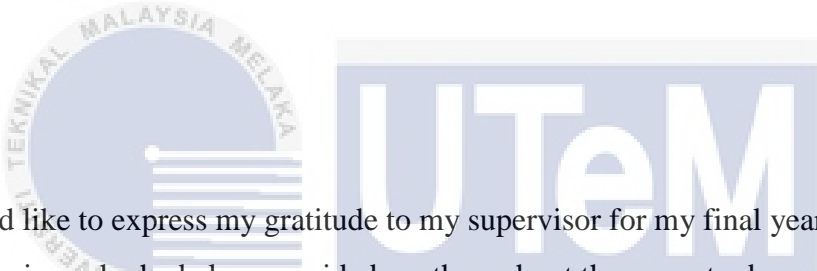


To my beloved parents, thank you for all what you've done to me, thank you for your support in my academic studies as well. Although we are not staying at the same place, you will still concern about how am I doing here. Appreciate that the supports you all gave to me, it means very much to me and motivates me in

completing the final year project

I would like to thank to all my friends also especially to my course mate who gave me a hand when I'm stuck at some point at the final year project. Glad to have them in this journey.

ACKNOWLEDGEMENTS



I would like to express my gratitude to my supervisor for my final year project, Mrs. Rosmiza, who had always guided me throughout the semester by semester. She provides a lot useful advice and idea whenever the progress is stuck at some point somehow. She even is my supervisor for my Workshop 1 therefore we'd been through a long way till here. Even though there is always a delay in progress but she still willing to give chance to do better next time. Thank you very much for all your help. Appreciate it.

ABSTRACT

Newbie is an Android mobile app that is designed to address the event management of university students. The event mentioned here including the class timetable, social activity, homework submission and basically anything the user wants to be reminded of. From observation, it is found out that certain students have the issue remembering the wrong date and time or even forgot about the upcoming event, because they use an inefficient approach to remember and manage their timetable and upcoming events. Next, it's the students' involvement in social activity is not satisfying, possible cause is they are not aware of the events or activities which are being held nearby them. The advertisement of the events is not effective and broad enough. Hence, this mobile app is designed to address these problems by managing and reminding the students' academic timetable and also the events of their interest. The app will suggest the newly created event or activities for the students based on their interested type of events or activities. The promotion of these events or activities can be reached more broadly since smartphone has been widely used and available to most of the students nowadays. This project significance can be seen as improved student productivity by reduced mental matters that distract their focusing skill and increased social opportunity offered to the students.

ABSTRAK

Newbie adalah aplikasi mudah alih Android yang direka untuk menangani pengurusan acara pelajar universiti. Acara yang disebutkan di sini termasuk jadual kelas, aktiviti sosial, penyerahan kerja rumah dan secara ringkasnya apa-apa perkara yang pengguna ingin diingatkan. Dari segi pemerhatian, didapati pelajar-pelajar menghadapi masalah dalam ingat tarikh dan masa yang salah untuk acara yang akan datang dan brekemungkinan untuk terlupa pasal acara tersebut. Ini disebabkan mereka menggunakan kaedah yang tidak cekap untuk mengingat balik peristiwa-peristiwa yang akan datang. Selanjutnya, penglibatan pelajar dalam aktiviti sosial adalah tidak memuaskan, berkemungkinan mereka tidak menyedari adanya acara-acara yang akan datang. Pengiklanan acara-acara tidak cukup berkesan dan luas. Oleh itu, aplikasi mudah alih ini telah direka untuk menangani masalah ini secara menguruskan dan mengingatkan jadual akademik pelajar serta aktiviti yang mereka minat. Aplikasi ini akan mencadangkan acara atau aktiviti yang baru diadakan berdasarkan jenis kategori acara yang mereka minat kepada pengguna. Promosi acara ini dapat dicapai dengan lebih luas memandangkan penggunaan telefon pintar pada hari ini adalah sudah sangat biasa. Kepentingan projek ini boleh dilihat sebagai peningkatan produktiviti pelajar dengan mengurangkan masalah yang kurang penting yang akan mengganggu tumpuan pelajar tersebut. Peningkatan peluang social di kalangan pelajar university juga adalah salah satu sebab.

TABLE OF CONTENTS

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
ABSTRAK	v
TABLE OF CONTENTS	vi-viii
LIST OF TABLES	ix-x
LIST OF FIGURES	xi-xii
CHAPTER I	1
INTRODUCTION	1
1.1 Introduction.....	1
1.2 Problem Statement.....	2
1.3 Objective.....	2
1.4 Project Scope	2
1.5 Project Significance	3
1.6 Expected Output	4
1.7 Conclusion	4
CHAPTER II	5
LITERATURE REVIEW AND PROJECT METHODOLOGY	5
2.1 Introduction.....	5
2.2 Facts and Finding.....	5
2.2.1 Domain.....	5
2.2.2 Existing system	10
2.2.3 Technique.....	13
2.3 Project Methodology.....	14
2.4 Project Requirements	17
2.4.1 Software Requirement	17

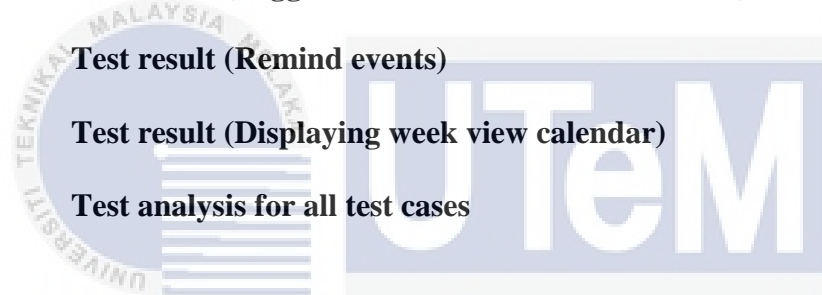
2.4.2 Hardware Requirement	17
2.5 Project Schedule & Milestone	18
2.5.1 Gantt chart.....	18
2.6 Conclusion	19
CHAPTER III	20
ANALYSIS	20
3.1 Introduction.....	20
3.2 Problem Analysis.....	20
3.3 Requirement Analysis.....	21
3.3.1 Data Requirement	21
3.3.2 Functional Requirement.....	21
3.3.3 Nonfunctional requirement	23
3.4 Conclusion	23
CHAPTER IV	24
DESIGN	24
4.1 Introduction.....	24
4.2.1 System Architecture.....	24
4.2.3 Database Design	34
4.3 Detailed Design.....	38
4.3.1 Software Design.....	38
4.3.2 Sequence Diagram	39
4.3.3 Physical Database Design.....	45
4.4 Conclusion	46
CHAPTER V	47
IMPLEMENTATION	47
5.1 Introduction.....	47
5.2 Software Development Environment setup	47
5.3 Software Configuration Management	49
5.3.1. Configuration environment setup.....	49
5.3.2. Version Control Procedure	52
5.4. Implementation Status	53
5.5. Conclusion	54

CHAPTER VI	55
TESTING	55
6.1. Introduction.....	55
6.2. Test Plan	55
6.2.1. Test Organization.....	55
6.2.2. Test Environment.....	56
6.2.3. Test Schedule.....	56
6.3. Test Strategy	57
6.3.1. Classes of tests.....	57
6.4. Test Design	58
6.4.1. Test Description.....	58
6.4.2. Test Data.....	70
6.5. Test Results and Analysis.....	83
6.6. Conclusion.....	90
CHAPTER VII	91
CONCLUSION	91
7.1. Observation on Weaknesses and Strengths.....	91
7.2. Propositions for Improvement	92
7.3. Project Contribution.....	93
7.4. Conclusion.....	93
REFERENCES	94
BIBLIOGRAPHY	95

LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Existing system comparison	12
3.1	Functional Requirement	22
3.2	Nonfunctional requirement	23
4.1	Data Dictionary (Timeslot)	35
4.2	Data Dictionary (Student)	35
4.3	Data Dictionary (Subject)	36
4.4	Data Dictionary (Event)	36
4.5	Data Dictionary (Class)	37
5.1	Software needed to setup development environment	48
5.2	Implementation status for each use case	54
6.1	Test Organization	55
6.2	Test Schedule	56
6.3	Test Description (Login, Logout, Register)	61
6.4	Test Description (Add academic calendar to timetable)	53
6.5	Test Description (Create events)	65
6.6	Test Description (Suggest events based on user interest)	66
6.7	Test Description (Remind events)	68
6.8	Test Description (Displaying week view calendar)	69

6.9	Test Data (Login, Logout, Register)	72
6.10	Test Data (Add academic calendar to timetable)	75
6.11	Test Data (Create events)	77
6.12	Test Data (Suggest events based on user interest)	79
6.13	Test Data (Remind events)	81
6.14	Test Data (Displaying week view calendar)	82
6.15	Test result (Login, Logout, Register)	84
6.16	Test result (Add academic calendar to timetable)	85
6.17	Test result (Create events)	86
6.18	Test result (Suggest events based on user interest)	87
6.19	Test result (Remind events)	88
6.20	Test result (Displaying week view calendar)	89
6.21	Test analysis for all test cases	90



اونيورسيتي تيكنيكل مليسيا ملاك

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	My Study Life app dashboard and calendar	10
2.2	School Agenda	11
2.3	Agile Development Process	14
2.4	Gantt Chart	18
3.1	Use Case Diagram	21
4.1	System Architecture	24
4.2	Login and Register Interface	25
4.3	Home page of the app after user login	26
4.4	Edit profile settings	27
4.5	Event details page	28
4.6	Week View Calendar	29
4.7	Create New Event page	30
4.8	Updating event	31
4.9	Add New Class page / Add New Subject page	32
4.10	Edit Class Details	33
4.11	Entity Relationship Diagram for Newbie	34
4.12	Code snippet to add events into Android WeekView	38
4.13	Sequence diagram for login, logout and register	39

4.14	Sequence diagram for add academic calendar to the timetable	40
4.15	Sequence diagram for create events	41
4.16	Sequence diagram for suggest related events based on user's interest	42
4.17	Sequence diagram for remind of the events	43
4.18	Sequence diagram for displaying week view calendar	44
5.1	FileZilla connecting ftp.newbie.16mb.com	49
5.2	Code snippet of dependencies needed to compile this project	50
5.3	Upload project to GitHub	52



CHAPTER I

INTRODUCTION

1.1 Introduction

Moving from secondary school life and university life will make a person learn how to do daily task independently and learn how to cooperate with others in a group assignment and more importantly learn how to manage their time effectively. Since university life is not only about the lecture, assignment and exams, it is considered a place for student to learn and practice the survival skills needed in the society, self-improving of every individual soft skill is crucial. Thanks to the innovation of technology, students nowadays don't have to do that all alone, they may seek for the help of technology to ease their efforts. As for the issues discovered, there is the existence of lack of efficiency as the poster can't ensure every person in the university will notice it and read it whereas if through Facebook group it also requires the sharing of friend's post or self-subscription on the event page. Sharing event through Facebook page is not efficient enough since the Facebook has a much larger scope and don't have a specific domain, like the students still need to search to check whether there's any upcoming activities held by their university. Sharing of university events requires a platform to broadcast all upcoming events information to all students with the scope narrowed down to within the University only, in another word, filter all university events from other miscellaneous events unlike Facebook which displays all miscellaneous events too. Social life among students also plays an important part of the university life, where they may meet their best friends, soulmate, or even business partner in future. They should establish a healthy social life as well instead of rotting in the hostel alone. Most of the time the active social life of students only limited to faculty or even course unless they join any sports or events and get to know friends from another faculty. Breaking the boundaries among faculties will helps to build a stronger university students community that can take care of each other whenever needed. Hence a platform is needed to connect students among faculties and strengthen the relationships among students. Both the platform needed mentioned above has the similar scope which is the students within the same university, therefore we can combine both and then address the issues by requires the students use same the all-in-

one university mobile app that includes the timetable reminder, event planner and forum.

1.2 Problem Statement

- Students using inefficient approach to managing their timetable and upcoming events
- Student easily miss out the important events actual date and time
- The events held among students are not well advertised

1.3 Objective

- To manage the student's timetable and schedule with more organized manner
- To notify the user whenever a new event of their interest is created
- To suggest upcoming events to the students of their interest

1.4 Project Scope

The project scopes are divided into two categories:

- Users

The main targeted user for the project is the university students, users that possess an Android smartphone.

- Functionality

- Organize class timetable and events

The app providing its task of organizing timetable of every course which the students enrolled, which primary for the university courses, and synchronize the app. The app then present only the relevant data at the correct time.

- Create and suggest events

Allowing university students to create and promote their events over the app by sending notifications to all users who installed the same application.

1.5 Project Significance

This project is targeting to improve the students' university life in both aspects, which are the academics and the social activities. They can be achieved by increasing the student's productivity by making changes from the foundation, which in this case it means making sure of the trivial matter will not be able to distract the students' attention when doing some task. They are well prepared with the reminder provided by the mobile app so they require almost zero effort in planning their daily task and schedules. Eventually their focusing skill can be improved and make significant improvement in their productivities.

Then the other core functionality of the mobile app which is the event management that worked by suggesting related events to the students based on the interest, which they defined personally in the mobile app. By getting to know more about the upcoming events in the school among their university friends, they create themselves more opportunity in the community. They get to know more friends from different faculty or even different university, they got the chances to do so as long they had already aware of the event. Using push notification through phone can dramatically realizing better advertisement effect rather than only pasting poster on the board, considering most students are having the mobile smartphones and installed this mobile app.

Last but not least, this project is breaking the limits of timetable management app into a more interesting app that integrate with the event management system in app, fulfilling the needs of the university students on the journey to better university life.

1.6 Expected Output

It is to expect that the app will deliver the user with all the up-to-date information whenever the user turn on the app. The related events stored under the server and synchronize with the mobile app with respect to the current date and time, hence there will never be past events be displaying on the list of events which is unnecessary.

The app will support a week view calendar that displays the date and time of an overview of the current day's schedule, like what are the curriculum classes on that day, events that enrolled previously from the events list, and the to-do-tasks. Different kinds of events can be differentiated by highlighting them with different color, this is to make the user interface looks cleaner and more interesting to read through.

1.7 Conclusion

Through the analysis of the current problem of the university student faced, it is believed that this app is able to increase the quality of study life through a much more organized structure of upcoming event and spend lesser time in doing trivial things. This can mimic the act of those millionaires or even billionaires' lifestyle like Steve Jobs who used to wear the similar clothing most of the time, the lesser things they think, the more focused they can be in a particular task.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

The chapter here will discuss about the literature review and project methodology that will be implemented throughout this project. Then there is the review for the analysis of current existing system and the technique used.

2.2 Facts and Finding

Here is the review of the domain, current system comparison and the technique used for this project.

2.2.1 Domain

2.2.1.1 Student stress

There is reportedly increasing of student stress and its effect on students has gone viral lately. The best example for it is that the increasing number of students committed suicide, it's happening even during the school time, in a lot of cases the students involved is still wearing the school uniform which then believes to be suffered of enormous stress and unable to resolve it hence picked the most extreme "solution" to it. But this is actually wrong, the society like this is sick, sacrificing their lives will not stop the pain, it will be then transferred to their parents and their loved ones. So where are those stresses they are facing? The stressors may come in different category, it can be interpersonal, intrapersonal, academic and environmental. (Shannon E., 2008). On top of all stresses reported by college students, change in sleeping habits claims to be the most common stress suffered by most students and it is under category intrapersonal. Whereas under academic category, the increased workload of class given claims the crown and obtained lower grade than expected comes the second. Nowadays the education system demands the students to master a large amount of skills within a short period of time, there are students who pay a lot of time and effort in their academic but still unable to get their desired grade. Living under the social

which emphasizing on the academic grade, it is reasonable for them to feel upset for that. As this situation persists, stress is produced and accumulated from time to time among students, it is just like a rolling snowball as it will keep on growing bigger as it rolls. It is important to find a way to resolve the stress before it is too late.

2.2.1.2 Time management

When facing a huge amount of upcoming workload, their first reaction to it is complaining they do not have the enough time assigned to do all these tasks. But in fact, every hour every minute every second given to everyone is exactly the same, hence it is hard to claim the above statement to be true, it is once said by H. Jackson Brown Jr., *“Don’t say you don’t have enough time. You have exactly the same number of hours per day that were given to Helen Keller, Pasteur, Michelangelo, Mother Teresa, Leonardo da Vinci, Thomas Jefferson, and Albert Einstein.”* But at the same time, it is also important to note that time is limited, there are only 24 hours per day, and in other words it means that we are all being offered 24 hours per day equally, so there’s nothing to be complain about, better invest the time of arguing into doing something more meaningful and beneficial. What they need to be concerned about is the way of organizing the time given with appropriate and important task, the time management. Most people only heard about it is important to have a proper time management, very less of them will know why it is important to have proper time management. There will be few key points to it, firstly, we can complete task with lesser effort. When the time is under our control, we can know which tasks has the higher priority to complete first and require us to put more attention to it deciding the appropriate working time for it, vice versa to the lower priority tasks. Eventually you will find yourself an organized timetable for the day, work when it’s needed and rest appropriately also, go to exercise when necessary, the day will seem to be ‘fly-by’. At the same time, we are improving our focusing skill also, with improved focusing comes with improved efficiency and productivity because we’re always in pace with the schedule. And it leads to the second key point, improved decision making skill. Through organizing personal timetable constantly, this trains us to decide what are we supposed to do at certain period of time and as we get used to this habits, it will calm us down in most situation. There are times when we need to make decision under the pressure of time and workload, we will more likely to skipping every option and jump

into a random conclusion, this can be seen as having poor decision making skill. When the effective time management come as our habits, we blend ourselves with the time and feeling under control, then we able to think carefully and consider every option that is available before making the final conclusion, it reduces the chances of making wrong decisions. This is a crucial matter as it notes the obvious change of mentality into a calmer and more mature one. And it brings to the third key point, become successful in career. To be successful, ones must be able to take control of things rather than following the flow of others, he/she makes a lot of decisions, complete a lot of tasks, and stands out as personnel that gets everything under control. For persons that stands out from the crowd of people that follow the pace of others, they get noticed, and that's the point when they start to success. Next key point is, leave ourselves free times, everyone need to take rest and relax, even animals and machine, overworking will eat us up eventually. When we work more efficiently, we get more time to spare, the time can be used to learn new things, and help with the new products currently developing in the company, learn more about the work and the company too, and eventually it increases the chances to give a positive impression to the C-Suite of the company. Practicing time management will helps reduce stress, think if we don't even have the control of our own time, we are unable to control even the small matter of daily life, not to mention the big ones. With all these things that stack up together, we will end up feeling pressured and panicked, chasing with the time that is not going to come back, it is hard to tell when we will be able to finish the tasks is ahead. Knowing having tons of works that is undone, we start to feel and blame the time is not enough, our body gets worn out and demanding rest, this is the point we feel stressed, stressed of can't get anything to be done and no spare time for personal issue. We can't perform well and things are getting more and more delayed, it is bad for health at the same time. In the end we'll stuck in this loop forever until we figured out how to manage the time. It is resolvable through time chunking, estimating the time needed for the work and more importantly, starts to work earlier. We'll get more spare time and even when there is additional task comes in suddenly it is still under control because everything is estimated and organized well and it is sure to meet the deadline. Last but not least, self-disciplinary. Having well planning on time allows us to keep tracks on almost everything, leave no room for procrastination, this is a skill that act as the foundation to impact other areas of life, motivating self and achieve more goals in life.

2.2.1.3 Work smarter, not harder

People tends to stuck in a mindset that they have to work non-stop and stayed busy in order to be productive, the people who always checking on emails, calls, outstation, running an errand thought it is the way of to be more successful. This belief often leads to meaningless effort paid for their whole life, belief of their time could not be wasted and spend their time on trivial tasks. For those who want to get out from this thought and start to work smarter, first of all, the most important task needed to be completed first, spend most of the effort in the progress of working on the essential task, whenever the task is completed, the day can be considered a success already. If there's any spare time, it can be either used for next crucial task or just settle down and take some rest. Another important point to work smart is that learn to say 'no'. Say no to the things that we think we are unable to handle or stop to accept task when we already have a lot of upcoming tasks that is undone. Evaluate our own capability and be honest about it, not to push ourselves too hard till the point we'll suffer and feel stressed out. Work will come non-stop and sometimes we need to find a time to take rest and then continues to move on. Get enough sleep, a lot of people sacrifice their sleep thinking can boost their productivity to the max but that's not actually the case. Sacrificing the sleep will lower the focusing skill and the decision-making ability. If we don't get rest well, we'll feel tired easily and lose concentration when we're performing the task. It is recommended to have 7-8 hours of sleep for their body and minds to function properly. We'll never get the things done as good as the times when in good health. Having improved in both physically and mentally, we should devote our entire focus in the tasks on hand, anything that will distract the attention shall be kept away like the smartphones, social websites, and the main concern in mind should be the tasks that is to be completed. Allow no other things to be exists in our vision and immerse ourselves in it. What gets things better is that if we start our work earlier, it is a simple hack to get things done faster and less stressful, it sounds easy but actually many of us tends to procrastinate it. Be dedicated to the objectives and get over the procrastination mindset. At the same time, setting a time limit in which a task should be completed, pushing ourselves to finish it before the time limit ends, sometimes it is better to work under a slightly pressured environment, we won't realize the hidden capability of us until we push it out. There's a lot unimportant details in a task that will draw our back if we insisted to crack all of it before proceeding to the next work. Stop being

perfectionist at this point, move on and solve the essential parts of the project first, it is never too late to look back for the details when the project is about to finished. After we completed a task, we should rest awhile before start up another task, because if we keep on rushing from task to task, we may not be able to stay focused and still lock ourselves in previous project and then mix up both tasks, having the inability to identify between two different tasks and make wrong decisions. At this point we should get a break like go for a walk, take some fresh air and perform some mind-clearing exercise, leave some time gap between tasks, find ourselves some break time to remind ourselves there's no need to keep rushing on something to reduce anxiety. Another tip, love the job, enjoy the job, we'll only feel entertained and motivated to move on to the job if we find the enjoyment beneath it. It is pointless to work task by task just for the goal of completing tasks, we aren't robots that designed to keep on work and work non-stop. Then, whenever we get the tasks that are somehow related, work on them together, rather than work on them with whatever order we want to. Because the related work requires similar thinking skill, the brain will be fully utilized to work on a specific type of task, different task requires different types of thinking so it's best for us to focus on one group of related task at a time and committed to it. Be consistent on the task and don't flake it with some trivial matter.