Staffordshire
UNIVERSITY

Final Year Project Handbook

(Updated – 10102019)

School of Computing & Technology

Preface

Amongst the most difficult aspects for a degree is undertaking a project and submitting a report for assessment. The requirements and expectations for these are some of the most difficult parts to describe within the documentation of degree level Programmes, not least because students undertake individual projects which are tailored to their individual study programmes, work experience and opportunities, and academic interests.

The guide is intended primarily to support students studying degrees at Asia Pacific University of Technology and Innovation.

The advice presented in this guide is helpful to students undertaking a degree qualification, which requires a project as part of their Programme. Such students should consult the relevant programme specific aspects to ensure that they have the necessary focus for their work.

Above all remember: If in doubt, consult your Supervisor / Project manager

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PART I
All about Projects

1 Introduction

So far so good - you are now at the stage in your Programme to think about the start of your project. You may well be asking yourself at this stage, "Why are projects so important in a Degree Programme?" and more importantly to you, "What will I get out of completing a project?" One of the most challenging aspects for an undergraduate degree is undertaking the Final Year Project (FYP). Each student must complete his / her FYP where he / she is expected to apply the knowledge and skills gained through modules that were covered as well as new knowledge and skills which were discovered and developed during the duration of the project. The project must involve the investigation, analysis, development and testing of a solution for a real-world problem in a managed approach within the given time frame. It is necessary for the student to demonstrate academic ability (i.e. critical analysis some of the models and theories) and practical skills (for example design, fianancial analysis and programming) with an equal emphasis.

This is a major piece of work that is the equivalent of three modules and is worth 9 credits at Level 3. Therefore, it is expected that student will spend about 360 hours working on the project over the two semesters. The first semester will consist of two project related modules namely the Investigations module and part of the Project module. Contact hours for both the modules in the first semester and 2nd semester would comprise of scheduled briefings with your project supervisors and supervisory meetings with an appointed project supervisor.

All the projects by students from the School of Computing and Technology programmes should contain a large enough element of software demonstrating that the student can produce a deliverable appropriate for the award / programme the student is in. It must be stressed that the project deliverables must be of the student's own work. Any attempt to copy another's work, or to represent another's work, as being your own will be dealt with severely under APU's regulations regarding plagiarism.

All the relevant materials, such as Draft Project Proposal Form (PPF), Project Specification Form (PSF), Project Assessment Forms, documentation guidelines and slides used in briefings – is made available on **https://webspace.apiit.edu.my/**

FYPBANK https://fypbank.apiit.edu.my/ has **484** FYP proposals**.** It shall be used by all final year project students to submit their PPF and PSFs online. It shall also be to select right project proposal submitted by supervisors and to maintain an online diary which can be viewd by supervisors and second markers in order to monitor the student's progress.

1.1 Why are projects so important in a Degree Programme?

Throughout the programme you have been developing an understanding of the relationship of the taught modules to one another. You have also been synthesising aspects of technology and related topics in the context of your specific Programme requirements.

The module lecturers have encouraged you to apply this knowledge to practical situations. You should by now be able to analyse various scenarios, draw conclusions and formulate solutions, so demonstrating that you can apply your recently acquired knowledge and theory to real situations.

The project gives you the opportunity to extend and unify your understanding of a selected topic and so demonstrate that you can indeed apply knowledge and techniques learned on the Programme at a sophisticated level.

1.2 What will I get out of completing the project?

So far we have organised your learning for you - though it might not have seemed so at the time because you have been required to do a considerable amount of work on your own: Syllabuses however, have been laid down, text books specified, practical sessions designed, and examinations set.

Now you have to take the responsibility for managing your own learning and for producing a project report. You will be expected to initiate discussion and ask for help. You must manage yourself so it is no use sitting around waiting for somebody to tell you what to do next, or worse, complaining that nobody is telling you what to do.

So in answer to the question "What will I get out of completing a project?", you will become more specialist in the area you chose to investigate and be able to apply experiential learning, problem solving, analytical and decision making skills to real situations. More importantly, you will learn to manage yourself, to accept responsibility for determining what you are required to do, as well as carrying it out.

You will have implemented some aspect of your Personal Development Plan. You will also be able to demonstrate a significant report or artifact to a potential employer so as to sell yourself effectively for the job you want.

Thus in conclusion the project is the vehicle that will promote your capacity to take initiatives and develop independence of thought in a supportive framework - qualities universally identified as being essential to industrial and commercial needs.

2 What is a project?

In this section we discuss the nature of the project experience you will be undergoing. It is important to put the project in perspective - you are not studying for a Masters degree or a Ph.D. - yet!! There are considerable differences in the skills and training associated with your project report and a Masters or PhD thesis. Consider the production of your report as a training exercise in research work. You are undertaking an investigation, though not on the scale required for a Masters degree or a Ph.D.

By the time you have successfully completed your project you will be able to show that you

- have produced something that your peers will be interested in.
- have demonstrated a command of what is happening in your chosen area.
- have discovered where you can contribute to your chosen area of study.
- will have shown knowledge and understanding of the techniques that are currently being used in your area and have considered their limitations.
- can communicate your results effectively.

This list indicates that in order to successfully complete your project, you have to acquire a wide range of skills. You have to be able to carve out a topic of study, to master the techniques required and put them to appropriate use, and communicate your findings.

Your supervisor will, support you throughout your project. One thing is clear; you cannot achieve a good grade in your IR / FYP if you do not know what the standards are. There will be opportunity through both formal and informal discussions with your supervisor and by reading other projects to discover the standards you ought to aim for. Also ensure you attend all the FYP briefing sessions with your Project manager.

The most visible and long lasting product of your project will be the report. A copy of this is usually kept so that other students can reference it, possibly long after you have graduated. It is very important, therefore, that this is up to standard as far as both the presentation and content are concerned. We can give advice on the presentation in this guide. The appropriateness of content will partly come from discussions with your supervisor.

2.1 What types of projects are there?

Your project can take several forms. For example, it could be: -

- a written survey and analysis of a particular problem area with the

deliverable being a business plan which you will have to evaluate or may be a set of guidelines for software development in a new area etc.

Or

- 'practical problem-solving' - for example involving the development of a software package, or formulating a solution to a real world business problem e.g. a marketing strategy.

These may seem to be vastly different, but they have very important similarities. Your project is really a scientific experiment, although you will very rarely think of it as such. The most important outcome from this experiment is what you have learned (and reported in your report). There may be other products from the work, for example, a software package – it may a mobile apps / desktop application / web-based system.

The **process** by which you carry out the 'experiment' is also exceedingly important, and should be reported within the report. This gives confidence to any reader that you have approached the problem in a systematic way, and that they may have some confidence in your findings.

2.2 Are there any restrictions on the area of the project?

Your project must fit the characteristics of your particular programme. The following provides examples of the topic areas that may be suitable for projects on different Programmes. You may select one of the right project proposals from the *FYPBANK* *https://fypbank.apiit.edu.my/*. If in doubt, discuss your ideas with lecturers / supervisors / Project Manager.

The project should address an appropriately challenging problem in applying various types of technology. The project could be concerned with the use and application of the appropriate technologies in providing solutions to the type of problems arising in an industry by utilising suitable technologies especially for control, automation, robotics, artificial intelligence, and etc.

Project Description and Suggested Titles

BSc (Hons) in Software Engineering

Main Theme:

Software Engineering projects are developmental projects undertaken in a structured organized approach leading to the development of a computer application which includes not only the development of software and hardware systems, but

also of process models, methods and algorithms. It may well include evaluation, requirements documentation, designs, analyses and fully documented test results, along with user manuals or guides.

Description:

Emphasis is placed on the development and evaluation of a piece of software following a particular process models that generate interim evaluator documentation. An analysis (e.g. of user requirements) and a formal design is expected, with a sophisticated implementation evaluated against a balance of technical and functional criteria.

Sample Projects:

- Project Management Resource Optimization System
- Human Resources Monitoring System
- Document Creator and Management System
- Home Security Surveillance System

You may select one of the right project proposals from the FYPBANK.

BSc (Hons) in IT with Specialism in Network Computing

Main Theme:

Production of a system, tool or application that is well documented able to solve real world network problems available in any Information Technology industry.

Description:

Developing the project in one of the following domains: network monitoring, network analysis, network management, network auditing, and network issues.

Sample Projects:

- Network monitoring system communication
- Data centralization system over network
- An Application of Shortest Path First Algorithm (SPF) in Intelligent Vacation Recommender
- A network application of ambulance routing
- Network lab management system
- Personal entertainment network system

- Network auditing management system
- Network load distribution and balancing system
- WAP Reservation System
- Wireless Network Theft Monitoring System
- Network Server Monitoring System in Local Area Networks
- Network Performance Analysis System
- Analysis of Dynamic Network Routing Protocols
- Remote Server Control by desktop through Internet
- Wireless Integrated System for Efficient Restaurant
- Online network device controller
- Network stopwatch
- Automatic IP allocation detection for institution labs
- Finding the Quickest Time Route using the Dijkstra's Algorithm

You may select one of the right project proposals from the FYPBANK.

BSc (Hons) in Technopreneurship

Main Theme:

Development of a technical solution to an entrepreneurship problem

Description:

Using appropriate technologies such as web development, mobile technology, social media, database management, data mining, or any other pertinent technologies learned throughout the bachelor degree programme, student will develop a prototype of the proposed solution in a simulated environment in an entrepreneurship perspective, which consist of areas such as business management, supply chain management, e-commerce, marketing, customer relationship management, and other areas suggested by students provided it is relevant to the specialism.

Sample Projects:

- E-Commerce System Enhancement for Keith EyeLab
- Fuel Inventory Monitoring System using SMS
- APIIT Library Mobile Customer Relationship Management System

You may select one of the right project proposals from the FYPBANK.

BSc (Hons) in Information Technology with specialism in Business Information Systems

Main Theme:

Development of a technical solution to a business management problem

Description:

Using appropriate technologies such as web development, mobile technology, social media, database management, data mining, or any other pertinent technologies learned throughout the bachelor degree programme, student will develop a prototype of the proposed solution in a simulated environment in a business management perspective, which consists of areas such as e-commerce, supply chain management, procurement, quality management, e-learning, and other areas suggested by students provided it is relevant to the specialism.

Sample Projects:

- KK Mart E-Commerce Portal and Delivery System
- HealthNet – A Wellbeing Online Community and Healthcare Business Portal
- Online E-Tuition

You may select one of the right project proposals from the FYPBANK.

2.3 Common 'dangers'

Before discussion of the project report and the process it is useful to be aware of some of the more common 'dangers' you will face in working on your project:-

- Initially you may tend to be over ambitious in the scope of your project - and your lecturers will recommend that you limit your study.
- You may focus too much on the product that you are producing, rather than the knowledge gained. This again can be very time-consuming.
- You may discover lots of interesting materials when researching in the library, but its relevance to the project might be very tenuous. Try not to be diverted from the main 'experiment'.
- You may be descriptive in your approach when the need is to analyse and explain your topic. Be rigorous.
- You may lose contact with your supervisor - you must be prepared to take the initiative and arrange to consult regularly with your supervisor.
- You may underestimate the importance of managing your own time and materials effectively.

3 Project Process

3.1 Final Year Project Phase I (Investigation):

In Phase One (Semester 1 of Year 3), an investigative research oriented approach is to be carried out on the proposed project topic. This phase includes the introduction with appropriate background, research problems and questions, aim and objectives of the proposed project, justification of the research, followed by literature review and methodology formulation and selection of appropriate modern tools and techniques. Also, the design has to be proposed using the knowledge/fundamental principles gained during the completion of the study (from year one to year three) with detailed design calculations/steps, and sketching/modeling. The literature review to be carried must be extensive and a minimum of 10 conference or journal papers published (not less than 5 years from now) must be reviewed. Finally sustainable development must be explained relating to the proposed project along with project management and moral professionalism and ethical consideration.

During the ORIENTATION week, the FYP briefing is done by the FYP Project Manager who explains the entire FYP process and the functionalites of FYPBANK. Then, the timeline for the Phase I and II completion are passed to you. You are given one week to submit your draft proposal to FYPBANK or to select a FYP title from the FYPBANK. Also allocation of supervisor and 2nd marker is done in the first week. During the SECOND week, a Supervisor Clinic is arranged during which you are expected to discuss with your supervisors to ensure the title and methodology are at appropriate standards with the level of difficulty and to ensure the aims and objectives are inclined with the title of the project. Also, the FYP Project manager briefs about the ethical issues and ethical forms to be filled by you, namely the disclaimer form, fast-track and full-track forms.

During the THIRD week, the FYP Project manager briefs on how to write the Project Specification Form (PSF) and during the fifth week, the investigation report preparation is briefed. During the FIFTH week, you are supposed to submit your ethics form to the admin after getting duly signed by your respective supervisor and submit your PSF online during the SIXTH week. The FYP Project manager briefs how to do literature review to you and about plagiarism during these weeks. A “Turintin” account will be created by your supervisor for you to check the plagiarism percentage and resubmit accordingly until the report submission date. Once the PSF is submitted to FYPBANK it is approved by the supervisor to ensure that the standards for an undergraduate project have been met. You are advised to have a mandatory meeting with their supervisors once in every month and to record the discussions in the log sheet and to submit a copy of the same to the supervisor and retain the student’s copy. The mandatory meeting has to be done from 2nd week until 12th week of the Phase I. The FYP Phase I (investigation) report has to be submitted

during the 14th week. The minimum requirement of the investigation report is specified in the section [4.1].

Assessment:

The investigation report is marked by second marker first and then by supervisor, where they mark using separate assessment form and then they discuss to come with an agreed mark. Further, an internal moderation will be conducted by the FYPC after first and second marking, to ensure the marks awarded are consistent.

A signing-off Learning contract is arranged in the 16th week, during which you will get detailed comments on IR from your supervisor. The comments on further improvement are given during the signing-off learning contract session. You are supposed to note down the corrections to be amended in the final year project report after this signing-off learning contract session with your supervisor.

Processes involved in the independent marking of IR – Investigation Report

3. 2 Final Year Project Phase II (Implementation):

In Phase Two (Semester 2 of Year 3), the proposed plan is implemented from the design proposed along with building , testing, analyzing and discussing the results and finally end up with conclusion of the project and the benefits of the project to the society. There must be an additional enhanced/improved literature review related to the project implemented under the literature review chapter and

enhanced sustainable development along with project management and moral professionalism and ethical consideration must be included under the discussion.

During the Project Phase II, you are briefed about on implementation, evaluation, testing, analysis and how to prepare the final year project report by the FYP Project manager. He will also brief you on how to prepre for your final presentation, communication skills, preparation of slides for final presentation and time management. As during project Phase I, you shall meet your supervisor once in every month and record the discussions in the project log sheet and submit a copy to supervisor. The mandatory meeting has to be done from 2nd week until 12th week of the Phase I. The FYP Phase II (Implementation) softbound report has to be submitted to admin during the 12th week while the final hardbound report has to be submitted to admin during the 13th week. The minimum requirement of the implementation – final report is specified in the section [4.2].

Assessment:

Your FYP Poster presentation should be completed by you during the 13th week. Your final presentation shall be conducted during the 14th week onwards. You will have to do your final presentation in front of your FYP supervisor and second marker. Also, the final year project reports are marked by your second marker first and then by your supervisor. An internal moderation will be conducted by the FYPC after first and second marking, to ensure the marks awarded are consistent. Then, it goes to the external examiner board for final approval, where the external examiners do ensure the quality of the project keeping complex investigation & problem solving, design, testing, simulation, analysis, discussion and conclusion are at appropriate standards and the marks awarded are in consistent to the level of difficulty.

Processes involved in the independent marking of FYP

3.3 Duration:

Students will complete the project over TWO (2) semesters. Students are reminded to constantly refer to the project timeline sheet furnished during the FYP commencement week for further details. Any changes to the timelines and / or duedate(s) will be made known to the students via email and / or during the project briefings.

3.4 People Involved

a. SoCT FINAL YEAR PROJECT COMMITTEE (FYPC):

- **FYPC Members:**

1. Head of School (HOS)
   - Mrs. Supriya Singh(SV)
   - Email: supriya@staffemail.apu.edu.my
2. Academic Leaders
   - Dr. Thomas Patrick O'Daniel
   - Email: thomas.patrick@staffemail.apu.edu.my
   - Mr. NARESH KUMAR APPADURAI (NKA),
   - Email: naresh@staffemaiapiit.edu.my
   - Mr. KAMALANATHAN (KNT)
   - Email: Kamalanathan@staffemail.apu.edu.my
   - Mr. AU YIT WAH (AYW)

- Email: yit.wah@ staffemail.apu.edu.my
- Dr. CHEN TET KHUAN (CKN)
- Email: tet.khuan@staffemail.apu.edu.my

3. Project Manager
   - Mr. DHASON PADMAKUMAR (PDK)
   - Email: dhason@ staffemail.apu.edu.my

b. Student FYP Process in detail:

- You must do your project individually.

Initial steps for the FYP process

Route Option A:

- Sign-up to https://fypbank.apiit.edu.my
- Search for and choose one of the right project proposals from the FYPBANK offered by the SoCT. And once selected that specific title will temporarily be removed from the FYPBANK to ensure that no two students attempt the same project. Your request to continue working on the selected title will be reviewed by the concerned supervisor within 2 working days. Or do a preliminary research for the project title and meet the concerned supervisor after making an appointment through the Lecturer consultation hours.
- This option is provided to all of you based on the First in First out (FIFO) process.

Route Option B:

- You as an individual, can propose your own ideas/titles/projects.
- Sign-up to https://fypbank.apiit.edu.my and submit your project proposal.
- The Project Manager will review your ideas/titles/projects for acceptance.
- Upon acceptance, the Project Manager will assign a right FYP supervisor and Second marker based on expertise / capabilities / supervisory-loading.

Step 2 - FYP Standard Process for Route Option A or B:

- Each academic staff shall supervise a minimum of 1 FYP and a maximum of 3 FYP(s) per intake.
- Signing of learning contract session will be held in the 1st week of the Phase II (Semester 2 of level 3).
- FYP Poster day will be held next week after the due date for the

submission FYP softbound final report to admin.

- Final presentation shall be conducted after the submission of softbound final report and hardbound final report. You will have to do your final presentation in front of your FYP Supervisor and Second marker.
- Softbound final report and hardbound final report shall be submitted to admin prior to your final presentation.

d. Responsibilities of a final year project student:

- Attend all FYP briefing sessions with his/her Project manager.
- Define an appropriate area of investigation / research.
- Arrange, prepare for and attend regular meetings with his / her supervisor and record such meetings in the online diary on https://fypbank.apiit.edu.my and the Project Log Sheet.
- Pepare and submit the draft project proposal form (PPF) to https://fypbank.apiit.edu.my.
- Prepare and submit the Project Specification Form (PSF) to https://fypbank.apiit.edu.my.
- Complete and submit the appropriate Ethics Form, approved by supervisor, to admin before carrying out research.
- Plan, carry out, manage and document the investigation and project work and maintain a file of such work.
- Submit the Investigation report (IR) to admin on the specified due date.
- Attend the Signing-Off Learning Contract session with his / her supervisor to get feedback on IR – Investigation Report.
- Develop and test his / her artefact and provide supporting documentation of the work done.
- Submit the final reports (softbound and hardbound) in the correct format on the specified due dates.
- Present his / her artefact and discussion of the work done.

e. Responsibilities of a supervisor are to:

- Discuss with supervisee and thereupon agree on a learning contract of the FYP that the student will embark, including methods, deliverables, milestones and meetings
- Be available, where possible, for regular pre-scheduled supervisory meetings with the supervisee and, by appointment at other times, either through Lecturer Consultaiton System or email, within reasonable time frame in relation to the learning contract.
- Provide supervisee with reasonable assistance in obtaining access to advice, materials and resources with which to carry out the project.
- Provide supervisee with reasonable support and advice on managing, documenting and presenting the project.

- Approve / Reject PPF / PSF. If PPFs are to be rejected, the supervisor shall advise the students accordingly before the student prepares the PSF.
- Ensure that any changes to the project proposal and specification, which were discussed and agreed upon by both the supervisor and second marker, are made and adhered to by the supervisee.

f. Responsibilities of the second marker are to:

- Mark and comment of PSF
- Together with the supervisor, mark and provide reasonable comments in the Investigation report (IR) on how the project and research can be improved.
- Together with the supervisor, mark the FYP – artefact, documentation and presentation.

g. The Project Manager

The overall role of the Project Manager is to manage the process. More specifically the responsibilities will include:

- Chairing the FYPC.
- Conducting the FYP (Final Year Project) briefing sessions for you.
- advising new supervisors and second markers as to what is expected of them and the project in relation to the award.
- briefing the students at the start of the award on project processes and what is an acceptable project.
- consulting with the Academic Leader on the allocation of FYPs to the supervisors. Staff loads within each group to be monitored using https://fypbank.apiit.edu.my/.
- making sure that marking of all the PPFs, PSFs and Signing-Off Learning Contracts have been assessed within a reasonable time period and appropriate feedback has been given back to the supervisees.
- monitoring the support given to the students by their supervisors.
- monitoring of conformance to due dates and reporting non conformances to the academic Academic leaders.
- ensuring that the marked FYP documents are available for the Interanl moderation and External moderation board.
- ensuring the necessary facilities and assistance are provided to students who fail and would need to retake the project.
- maintaining the https://fypbank.apiit.edu.my/ system.
- ensureing that a reply-email is to each email received from the FYP students within 48-hour / 2-working days.

h. Project Administrators

APU has designated two adminstrator Miss. Jonas David Yassu (jonas.david@staffemail.apu.edu.my) to manage day-to-day FYP matters as follows:

(i) Responsible for scheduling of final presentations.
(ii) Passing the IR – Investigation Reports and Final documents to the concerned Second marker and Supervisors on time.
(iii) Ensurring that the marked IRs and final documents reach FYP department on time.
(iv) Ensuring that the marked IR and final documents with assessment forms are submitted to Internal moderation board and External moderation board on time.
(v) Sending out advice letters, signed by Project manager, to the students who have failed in IR and final.
(vi) Advise on payment of fees related to referrals
(vii) Administration of certain functionalities within https://fypbank.apiit.edu.my

i. Project Team

The Project Team consists of the following lecturers who you may additionally consult in the absence of the Project Manager(s) / Second marker / your supervisor. You may also meet them to obtain insights, suggestions or advice pertaining to your project.

- Mr DAVID TAN, Dr. MA'EN, Mrs. NURUL HANIZA MOHTAR, Mr. QUSAY SABAH ISHAQ and Mr. SHOUNAK GHOSH – specialising in Network Computing
- Mr. AU YIT WA,Mr. AMAD ARSHAD, Dr.KURUVIKULAM CHANDRASEKARAN ARUN and Mr. YOGESWARAN – specialising in Mobile Technology
- Mrs.YUSNITA, DR. MARYAM, Dr. MOHAMED SHABBIR HAMZA, Dr.THOMAS, Mr. UMAPATHY and Dr. MEISAM ESLAHI – specialising in Forensic Computing, Information Systems Security, Computer Security and Digital Forensics
- Mr.DHASON, Dr. KESAVA and Mr.SIVA CHELLIAH – specialising in Software Engineering
- Mrs.THAM, Mrs. HEMA VADUDAVAN and Mrs.VEERAMANI – specialising in Business Information Systems and Technopreneurship
- Mr.EHSAN RANA, Mr.ZAILAN, Miss.MARY TAN, Mrs.VINOTHINI and Dr.VAZEERUDEEN – specialising in Intelligent Systems and Information Technology
- Mr. JACOB SOW TIAN YOU, Mr. JODIE PRAKOSO PANUDJU, Mr. LEO GERTRUDE DAVID and Dr. CHEN TET KHUAN – specialising in Games Development and Game Design.
- Mr.NARESH, Mr. EDWIN PIO RUFUS SAMIRAJ, Mrs.Aida, Mrs. RIZAWATI BINTI ROHIZAN – specialising in Web Media Technology, Multimedia Technology, Digital Audio, Computer Graphics & Imaging, and Animation.
- Mr.DHASON, Mr.WONG CHUNG WEI and Dr.KALAI – specialising in Web Programming & Internet Technology

- Mrs.Lai Chew Ping, Mr.ABDALLAH and Mrs.SEETHA – specialising in Database Administration & Management
- Ms.ZETY MARLIA,Mr.JERRY and Miss.KHALIDA – specialising in Technology in Teaching and Learning
- Dr KALAI, Mr.MOHAMAD FIRDAUS, Mr.SHOUNAK and Mr.EHSAN – specialising Cloud Computing
- Dr PREETHI, Mr.Kadhar, Raheem, Dr SIVAKUMAR, Dr BOOMA and Prof. Dr.MANDAVA RAJESWARI and – specialising in Data Analytics
- Mr.EHSAN RANA, Mr.ZAILANs, Mr MOHAMMAD REZA and Mr.KAMALANATHAN, Mrs.NOR AZLINA – specialising in (IOT)

PART II
Format of writing the Project Report

4.1 **Project Phase I – Investigation Report**

The Investigation report should not exceed 6,000 – 8,000 words in length, excluding the log sheet and the appendices. The number of pages in total should not exceed 70 ~ 100 including log sheet and appendices. DO NOT try to produce the biggest report possible. Quality is more important than quantity. The student may choose the font – Times New Roman but the main text must be 10 or 12 point type with line spacing of 1.5. Chapters, headings and pages should be numbered sequentially for reference. The report must be laser-printed or high quality printed on A4-size paper with a weight between 70 and 100g/sm and should be on the right-hand (i.e. *recto*) page with a left margin of 40-50mm and other margins of 15-20mm. The final report must have a title page bearing the following information (see sample title template):

- The full title of the project.
- The full name of the student as registered with APU.
- The Student ID in brackets.
- The award for which the student is registered.
- A statement that the qualification is awarded by Asia Pacific University of Technology and Innovation and that the report is submitted in partial fulfilment of that programme.
- The full name of the supervisor & second marker.
- Month and year of due date

A soft-bound investigation report will be submitted to admin with a CD containing softcopy of the IR – Investigation report.

The format of the IR should contain the following sections:-

MINIMUM REQUIREMENT FOR DOCUMENTATION - INVESTIGATION REPORT (IR)

(*Please refer to the project zip file carrying the project materials received from your Poject Manager*)

Cover Page
Acknowledgement
TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION TO THE STUDY

- Background to the project
- Problem context
- Rationale
- Potential benefits
- Tangible benefits
- Intangible benefits
- Target users
- Scope and objectives

Use the background to define your research objectives - the questions that need to be answered by your research. Describe the goals for your system in terms of problems it will solve. Clearly identify the scope, in terms of the level of challenge. Specifically identify areas / functionalities which will not be considered.

- Aims
- Objectives
- Deliverables - Functionality of the proposed system
- Nature of Challenges
- Overview of this report and Project Plan

Briefly describe what the reader will find in each of the chapters - be sure to mention the key points / findings that are there.

CHAPTER 2: LITERATURE REVIEW

Materials should be from academic publications, journals, conference proceedings and books as far as possible.

- Introduction
- Domain research
- Technical research
- Similar Systems (a minimum of 3 similar systems)
- Architecture (diagrams illustrating the similar systems)
- Conclusions

CHAPTER 3: SYSTEM DEVELOPMENT METHODOLOGY

- Identify the system development methodology you have chosen
- Justify your selection
- Describe the system development methodology
- Give an overview of the diagrams associated with the methodology
- Give a brief overview of how this project will proceed
- (Select one right system development methodology)

CHAPTER 4: PRIMARY RESEARCH

- Introduction
- Explain how your data gathering and analysis will help you with the quality of your
- Project deliverables.
- Focus on methods that are appropriate for the research problem, and why
- You selected the ones you will use.
- (Select at least one right data collection method and explain about it with justification. You may use more than one method.)

- Design
- Observation: describe the actions / tasks to be observed and the objective for each item or group of items on the observation checklist.
- Questionnaire, survey, interview, focus groups: describe the questions to be asked
- And their objectives.
- Ensure that questions, checklists, and experiment descriptions pertain to the project – what you intend to do - and are not generic in nature.
- Meet your supervisor along with printed copy of your Ethics form and your Observation checklist / Questionnaire / Interview questions

CHAPTER 5: SYSTEM ARCHITECTURE

- Introduction
- Describe the core features and elements of the system.
- Abstract Architecture
- System design (it should be very detailed) use-case diagram, specification, class-diagram, activity-diagram, sequence diagram)
- Or
- (Context diagram, DFD – Level 0 and DFD Level 1)
- Database design
- Entity relationship diagram (Use either Dezign - http://www.datanamic.com/dezign/ or Visual Paradigm- http://www.visual-paradigm.com/)
- Database table structure
- Interface design (storyboard) – should be very detailed (use either MS Paint- http://windows.microsoft.com/en-

us/windows7/products/features/paint or Pencil - http://pencil.evolus.vn/)

- Development / Deployment
- Identify the programming language, IDE, libraries, DBMS, Operating System, etc. you will use to develop the system, and any other resources required. If this is a web-based system, identify the webserver and browser versions that will be supported.
- Programming language chosen
- IDE chosen
- libraries chosen
- Database Management System chosen
- Operating System chosen
- Web Server chosen
- Web browser chosen

CHAPTER 6: PROJECT PLAN

- Release Plan
- Decompose and prioritize the list of core features / requirements from
- What will you tackle first? How will your system evolve?
- Test Plan
- Describe your test-driven development strategy
- Test plan for unit testing
- Test plan for User acceptance testing

CHAPTER 7: CONCLUSION AND REFLECTIONS

- What was achieved at the end of the first leg of the project?
- Were you able to do enough investigation / research with regards to what you want to achieve?
- Were there any gaps in your research and design – areas where you may want to further explore and improve?

REFERENCES (Compulsory)

This is a reference list, so every source listed here must have a corresponding citation in the body of the report.

APPENDICES (Compulsory)

- First 2 pages of turnitin report
- Log sheets (a minimum of 3 log sheets)
- PPF (Photostat copy)

- PSF (Photostat copy)
- Ethics form (Photostat copy)
- Gantt chart for IR (detailed)

An Investication report, which does not conform to the requirements, will normally not be considered for assessment.

4.2 Project Phase II - Project Report (Implementation)

The final report report should not exceed 15,000 – 20,000 words in length, excluding the log sheet and the appendices. The number of pages in total should not exceed 150 ~ 200 including log sheet and appendices. DO NOT try to produce the biggest report possible. Quality is more important than quantity. The student may choose the font – Times New Roman but the main text must be 10 or 12 point type with line spacing of 1.5. Chapters, headings and pages should be numbered sequentially for reference. The report must be laser-printed or high quality printed on A4-size paper with a weight between 70 and 100g/sm and should be on the right-hand (i.e. *recto*) page with a left margin of 40-50mm and other margins of 15-20mm. The final report must have a title page bearing the following information (see sample title template):

- The full title of the project.
- The full name of the student as registered with APU.
- The Student ID in brackets.
- The award for which the student is registered.
- A statement that the qualification is awarded by Asia Pacific University of Technology and Innovation and that the report is submitted in partial fulfilment of that programme.
- The full name of the supervisor & second marker.
- Month and year of due date

Two copies of the report will be submitted, one soft-bound and one hard-bound**.** The soft-bound final report will be submitted with 2 CDs containing softcopy of project documentation and source codes of the running program. The hard-bound final report must be submitted to admin a week later. This hard-bound report will be retained by APU and might be put on display if judged to be of a suitable quality. The colour of the cover-page in the hard-bound copy will be dark blue. CDs are not required for the hard-bound submission.

Important Notes:

1. The 2 CDs attached to the softbound final report shall be used during presentation to demonstrate the final system. Please verify the contents of both CD before submission.

2. Students are expected to bring along their own computer during presentation. Students may alternatively opt to use the desktop computer in the presentation room. However, it is the sole responsibility of the student to ensure that the system is sufficiently tested (inclusive of software & necessary components) prior to the presentation. Arrangements can be made with the lab assistant if assistance is required. Such request if any should be planned well in advance – before 5-working days.

MINIMUM REQUIREMENT FOR DOCUMENTATION - FINAL YEAR PROJECT REPORT

(*Please refer to the project zip file carrying the project materials received from your Poject Manager*)

Cover Page
Acknowledgement
TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION TO THE STUDY

- Background to the project
- Problem context
- Rationale
- Potential benefits
- Tangible benefits
- Intangible benefits
- Target users
- Scope and objectives

Use the background to define your research objectives - the questions that need to be answered by your research. Describe the goals for your system in terms of problems it will solve. Clearly identify the scope, in terms of the level of challenge. Specifically identify areas / functionalities which will not be considered.

- Aims
- Objectives
- Deliverables - Functionality of the proposed system
- Nature of Challenges
- Overview of this report and Project Plan

- Briefly describe what the reader will find in each of the chapters - be sure to mention the key points / findings that are there.

CHAPTER 2: LITERATURE REVIEW

Materials should be from academic publications, journals, conference proceedings and books as far as possible.

- Introduction
- Domain research
- Technical research
- Similar Systems (a minimum of 3 similar systems)
- Architecture (diagrams illustrating the similar systems)
- Conclusions

CHAPTER 3: SYSTEM DEVELOPMENT METHODOLOGY

- Identify the system development methodology you have chosen
- Justify your selection
- Describe the system development methodology
- Give an overview of the diagrams associated with the methodology
- Give a brief overview of how this project will proceed
- (Select one right system development methodology)

CHAPTER 4: PRIMARY RESEARCH

- Introduction
- Explain how your data gathering and analysis will help you with the quality of your
- Project deliverables.
- Focus on methods that are appropriate for the research problem, and why
- You selected the ones you will use.
- (Select at least one right data collection method and explain about it with justification. You may use more than one method.)
- Design
- Observation: describe the actions / tasks to be observed and the objective for each item or group of items on the observation checklist.
- Questionnaire, survey, interview, focus groups: describe the questions to be asked
- And their objectives.
- Ensure that questions, checklists, and experiment descriptions pertain to the project – what you intend to do - and are not generic in nature.
- Meet your supervisor along with printed copy of your Ethics form and your Observation checklist / Questionnaire / Interview questions

CHAPTER 5: REQUIREMENTS VALIDATION

- Analysis of Data
- Analysis of data collected through Questionnaire (if you have collected research data using this method)
- Analysis of data collected through Interview (if you have collected research data using this method)
- Analysis of data collected through Observation (if you have collected research data using this method)
- Analysis of data collected through Group discussion (if you have collected research data using this method)
- Conclusion
- Relate how the findings of the various research methods applied affected your decision to either retain the requirements or make changes to them. Provide examples from your findings to support your decisions.

CHAPTER 6: SYSTEM ARCHITECTURE

- Introduction
- Describe the core features and elements of the system.
- Abstract Architecture
- System design (it should be very detailed) use-case diagram, specification, class-diagram, activity-diagram, sequence diagram)
- Or
- (Context diagram, DFD – Level 0 and DFD Level 1)
- Database design
- Entity relationship diagram (Use either Dezign - http://www.datanamic.com/dezign/ or Visual Paradigm- http://www.visual-paradigm.com/)
- Database table structure
- Interface design (storyboard) – should be very detailed (use either MS Paint- http://windows.microsoft.com/en-us/windows7/products/features/paint or Pencil - http://pencil.evolus.vn/)
- Development / Deployment
- Identify the programming language, IDE, libraries, DBMS, Operating System, etc. you will use to develop the system, and any other resources required. If this is a web-based system, identify the webserver and browser versions that will be supported.
- Programming language chosen
- IDE chosen
- libraries chosen
- Database Management System chosen
- Operating System chosen
- Web Server chosen
- Web browser chosen

CHAPTER 7: PROJECT PLAN

- Release Plan
- Decompose and prioritize the list of core features.
- What will you tackle first? How will your system evolve?
- Test Plan
- Describe your test-driven development strategy
- Test plan for unit testing
- Test plan for User acceptance testing

CHAPTER 8: IMPLEMENTATION

- Screenshots
- Screenshots for home page
- Description
- Screenshot for sign page
- Description
- Screenshot for sign-up page (sign-up.aspx)
- Description
- (Should be very detailed. 2 screenshots per page and do it for all important forms or pages)
- Sample codes (at least for 3 programs)
- Sample codes written for the programs
- Sample codes written for sign-up.aspx.c
- Sample codes written for sign-out.aspx.c

CHAPTER 9: SYSTEM VALIDATION

- Unit testing
- User acceptance testing
- Conclusion

CHAPTER 10: CONCLUSIONS AND REFLECTIONS

- Critical evaluation (it must be very detailed)
- Conclusion
- What was achieved at the end of the first leg of the project?
- Were you able to do enough investigation / research with regards to what you want to achieve?
- Were there any gaps in your research and design – areas where you may want to further explore and improve?

REFERENCES (Compulsory)

This is a reference list, so every source listed here must have a corresponding citation in the body of the report.

APPENDICES (Compulsory)

- First 2 pages of turnitin report.
- FYP Poster
- Project Investigations Feedback and Learning Contract Form
- Log sheets (a minimum of 3+3 = 6 log sheets)
- PPF (Photostat copy)
- PSF (Photostat copy)
- Ethics form (Photostat copy)
- Gantt chart for FYP (detailed)

A project report, which does not conform to the requirements for presentation, will normally not be considered for assessment.

Appendix A
Citation of References

How to Cite References

When you are writing your assignment or essay it is essential that you provide detailed and precise information on all the sources you have consulted (references). You may have used books, journal articles, newspapers, TV programmes, videos, the internet, government papers, statistics, etc. Every time you use quotations, or draw upon facts and arguments you must acknowledge your sources. This protects you from accusations of plagiarism (stealing other people's ideas and statements and passing them off as your own).

Citing your references also enables the reader to identify and trace the works that you used, and shows the authority on which you base your statements, demonstrates how well acquainted you are with the subject, and is a starting point for anyone else wanting to find out about the subject.

The Harvard System

A number of methods exist for citing references. The Institution uses the Harvard (Author/Date) System as set out by the British Standards Institution specification BS 5605 (1990).

List of References:

All references used in carrying out the project and in producing the thesis must be listed in alphabetical order following the below given style and format.

Books:

Single author: Format:
FAMILY/SURNAME, Initials. (Year of Publication – in brackets) Book Title – in italics or underlined. Series title and volume – if applicable. Edition – if not the first. Place of Publication: Publisher.

Bibliography example:
NEVILLE, C. (2010) The Complete Guide to Referencing and Avoiding Plagiarism. 2nd edition. Maidenhead: Open University Press.

In-text examples:
(Neville, 2010)

Neville (2010) commented that ….

"Direct quotations are placed in double quotations marks" (Author's Surname, year of Publication, p. – followed by page numbers – in brackets)

Two authors: Format:
FAMILY/SURNAME, Initials. & FAMILY/SURNAME, Initials. (Year of Publication – in brackets) Book Title – in italics or underlined. Series title and volume – if applicable. Edition – if not the first. Place of Publication: Publisher.

Bibliography example:
MIDDLETON,V.T. C. & HAWKINS, R. (1998) Sustainable Tourism: A Marketing Perspective. Oxford: Butterworth- Heinemann..

In-text examples:
(Middleton & Hawkins, 1998)

As stated by Neville Middleton & Hawkins (1998)….

"Direct quotations are placed in double quotations marks" (First Author's Surname & Second Author's Surname, year of Publication, p. – followed by page numbers – in brackets)

Three authors:

Format:
FAMILY/SURNAME, Initials. FAMILY/SURNAME, Initials. & FAMILY/SURNAME, Initials. (Year of Publication – in brackets) Book Title – in italics or underlined. Series title and volume – if applicable. Edition – if not the first. Place of Publication: Publisher.

Bibliography example:
BRADBURY, I., BOYLE,J. & MORSE,A. (2002) The Scientific Principles for Physical Geographers. Harlow: Prentice Hall.

In-text examples:
(Bradbury, Boyle & Morse,2002)

As noted by Bradbury, Boyle & Morse (2002)….

"Direct quotations are placed in double quotations marks" (First Author's Surname, Second Author's Surname & Third Author's Surname, year of Publication, p. – followed by page numbers – in brackets)

Four or more authors:

Format:
FAMILY/SURNAME, Initials.et al (Year of Publication – in brackets) Book Title – in italics or underlined. Series title and volume – if applicable. Edition – if not the first. Place of Publication: Publisher.

Bibliography example:
CAMPBELL, N.A. et al. (2008) Biology. 8th Ed. London: Pearson.

In-text examples:
(Campbell et al., 2008)

As concluded by Campbell et al. (2008)….

“Direct quotations are placed in double quotations marks” (Author’s Surname et al., year of Publication, p. – followed by page numbers – in brackets)

Journal article (printed journal article)
Printed article format:
FAMILY/SURNAME, Initials. (Year of publication – in brackets) Title of article. Title of journal - in italics or underlined. Volume number. (Part number/month – in brackets). p. followed by page numbers.

Bibliography example:
TEFTS, K. & BLAKSEE, S. (2000) Did you hear the one about Boolean operators? Incorporating comedy into library instruction. Reference Services Review. 28 (4). p. 369-378.

In-text examples:
(Trefts & Blaksee, 2000)

This supports Trefts & Blaksee’s (2000) evidence that…

“Direct quotations are placed in double quotations marks” (Author’s Surname, Year of Publication, p. – followed by page number – in brackets)

Journal article (online/electronic journal article) Online article format:
FAMILY/SURNAME, Initials. (Year of publication – in brackets) Title of article. Title of journal - in italics or underlined. [Online – in square brackets] Volume number. (Part number/month – in brackets). p. - followed by page numbers. Available from - URL. [Accessed: followed by date in square brackets]

Bibliography example:
WILSON, J. (1995) Enter the cyberpunk librarian: future directions in cyberspace. Library Review. [Online] 44 (8). p.63-72. Available from: http://www.emeraldinsight.com.

[Accessed: 30 January 2012]

In-text examples:
(Wilson,1995)

According to Wilson (1995)….

“Direct quotations are placed in double quotations marks” (Author’s Surname, Year of Publication, p. – followed by page number – in brackets)

Conference Papers
Conference Papers are similar to authors who contribute chapters to books, i.e. the contribution appears as part of a wider publication.

Format:
FAMILY/SURNAME, Initials or AUTHORING BODY OR GROUP. (Year of publication - in brackets) Title of Paper. In - Full Title of Conference - in italics or underlined. Series title and numbers if applicable. Location and Date of Conference. Place of Publication: Publisher. Page numbers of paper.

Bibliography example:
FISH, J. (2008) Managing changes in the workplace. In Professional Managers Conference. Blackpool, Monday 18th to Wednesday 20th February 2008. Blackpool: PubM. pp. 42-45.

In-text example:
(Fish, 2008)

Fish (2008) noted that…..

"Direct quotations are placed in double quotations marks" (Author's Surname, Year of Publication, p. – followed by page number – in brackets)

For further Harvard referencing system – guide and example, click the link below: http://www.staffs.ac.uk/support_depts/infoservices/learning_support/refzone/harvard/in dex.jsp

Office Record	*Receipt*
Date Received:	Student name:
Received by whom:	Student number:
	Received by:
	Date:

Appendix B – Draft Project Proposal Form (PPF)

Draft Project Proposal Form

Student Name:

Student No:

Email Address:

Programme Name:

Title of project:

Please record which modules your topic is related to:

Instruction:
This is the draft proposal of your FYP which needs to be submitted to the project administrator by hardcopy – refer to your timeline for submission deadline.

1. Introduction

Assume the reader has very little knowledge of the subject.
Introduce the topic, the sector of business/industry concerned and how the project relates to it. Define the context of the problem and identify the research required to solve it.

2. **Literature Review and References**
Literature review is where some of the areas outlined in the proposed contents
References must be relevant to your project

3. Problem Statement
Identify past and current work in the subject area.
Outline the key references to other people's work, indicate for the most pertinent of these how your proposal relates to the ideas they contain.

4. Project Aims and Objectives
Identify the AIM(s) of the project, i.e. what the overall achievement is intended to be, in terms of both academic and commercial/industrial advances.
Identify the particular intellectual difficulties posed by the proposal, the problems to be addressed, and explain how these might be solved.
Clearly list individual measurable OBJECTIVES which can be related to the workplan and deliverables.
Aims and objectives are subject to approval from supervisor and students are expected to revise them if deemed inappropriate for a Level 3 project.

5. Deliverables
Provide a clear list of the outputs from the project.

Appendix C – Project Specification Form (PSF)

A. Project Title.

B. Brief description on project background.
(.i.e. problem context, rationale, description of problem area, nature of challenge)

C. Brief description of project objectives.
(i.e. scope of proposal and deliverables)

D. Brief description of the resources needed by the proposal.
(i.e. hardware, software, access to information / expertise, user involvement etc.)

E. Academic research being carried out and other information, techniques being learnt.
(i.e. what are the names of books you are going to read / data sets you are going to use)

F. Brief description of the development plan for the proposed project. (i.e. a general description of the development plan, the major areas of functions to be developed and the order in which developed)

G. Brief description of the evaluation and test plan for the proposed project.
(i.e. what is the success criteria and how will be evaluated & implementation will be tested, indicate the estimated size of the demonstration/test database)

Appendix D – Timelines for IR – Investigation Report

Timelines for APU Final Year Project
Investigations, Analysis and Design (Semester 1)

DATE (Week Beginning)	EVENT	Student Activity	Reference
1 (Orientation)	Session 1: FYP Commencement Briefing	• Set timescale for conducting work and review of milestones	• *https://fypbank.apiit.edu.my/* • Project Handbook • https://lms2.apiit.edu.my/my/

2	Milestone 1: Draft Project Proposal Submission	• Read description and requirements of project specialism from Project Handbook. • Commence preliminary research on suitable topic for project • Discuss with lecturer to obtain inputs on specific topic	• *https://fypbank.apiit.edu.my/* • Project Handbook • https://lms2.apiit.edu.my/my/
3	Supervisor Clinic: Proposal Review	• Attend supervisor clinic – see timetable for venue and time	• *https://fypbank.apiit.edu.my/* • Project Handbook • https://lms2.apiit.edu.my/my/
4	Session 2: Project Specification Writing	• Prepare draft Project Specification (PSF)	• *https://fypbank.apiit.edu.my/* • Project Handbook

5	Session 3: Ethics Supervisory Meeting – Project Specification Writing	• Prepare Ethics form • Meet supervisor having booked an appointment via consultation hour.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
6	Supervisory Meeting – Ethics Form & Project Specification Writing Milestone 2: Ethics Form (Part	• Meet supervisor having booked an appointment via consultation hour. • Submission of **Ethics Form (Part 1)** after obtaining supervisor's signature. • Ensure you make a photocopy of the signed Ethics Form which must be included in the Investigation Report and	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
7	*Milestone 3:* Project Specification Form Submission	• Completion and submission of PSF	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/

8	Session 4: Project Objectives and Project Management Supervisory Meeting – Project Objectives and Project	• Begin research plan and initial research to produce Chapter 1 of the documentation • Meet supervisor having booked an appointment via consultation hour. • If PSF was rejected by supervisor or advisor, immediately meet your supervisor or Project Leader	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
9 - 11	Session 5: Research – Literature Review / Secondary Research / Primary Research Supervisory Meeting – Research	• Proceed with research • Meet supervisor having booked an appointment via consultation hour. • Remember to get questionnaire / survey / interview questions and / or observation / experiment checklists approved by supervisors before carrying out primary research	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
12	Session 6: Analysis & Design Supervisory Meeting –	• Proceed with Analysis and Design • Meet supervisor having booked an appointment via consultation hour. • Supervisors to create turnitin accounts for supervisees	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/

13	Session 7: Documentation & Presentation Requirements Supervisory Meeting –	• Complete Investigations, Analysis and Design report • Insert completed documentation into Turnitin and make changes where necessary	• Log Sheet • http://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
14	Milestone 4: Submission of Investigation, Analysis and Design Report	• Go through Project Handbook to ensure report is in the right format including cover page. • Report must be submitting along with Signing Off Learning Contract form (carbonized version provided along with the commencement pack) during orientation	• Log Sheet • http://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/

15 - 16	**Signing Off Learning Contract**	• Both supervisor and second marker mark and provide feedback on the Investigations, Analysis and Design Report • See schedule posted at Webspace / sent via email to know the actual date and time you will have to meet your supervisor for the Signing Off Learning Contract • If your name does not appear on the schedule, send an email to your Project Leader • Feedback given to student and learning contract form handed over by supervisor during Signing Off Learning Contract session. • Supervisor may provide feedback and seek clarifications on the project.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/

Note: Where dates are stated as week number, please refer to timetable for specific date, time and venue. A supervisee is expected to engage in a meeting with his or her supervisor once during each mandatory supervisory meeting. Hence there are a total of 6 meetings (3 meetings per semester) expected from a student. Failing to do this amounts to poor project management (planning) resulting in marks being affected. Students must ensure appointments are made in advance. If a supervisor cannot be reached after repeated attempts, the Projects manager must be duly informed and a meeting will be consequently arranged.

Project (Semester 2)

Week Beginning	ACTIVITY	Student Activity	Reference
1	Session 8: Review of the feedback from previous semester	• Meet supervisor having booked an appointment via consultation hour.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
2	Session 9: Implementation of Artefact Supervisory Meeting	• Meet supervisor having booked an appointment via consultation hour.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
3	Session 10: Testing / Evaluation mechanism Supervisory Meeting	• Meet supervisor having booked an appointment via consultation hour.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
4	Session 11: Reflection on project Supervisory Meeting	• Meet supervisor having booked an appointment via consultation hour.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/

5	Session 12: Presentation and Submission Supervisory Meeting	• Meet supervisor having booked an appointment via consultation hour.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
6 - 14	Independent work on artefact and documentation Supervisory Meeting	• Meet supervisor having booked an appointment via consultation hour. • Show supervisor progress of final system and documentation	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
14	Milestone 5: Submission of Artefact and Documentation (Sofbound-Comb-bound & 2 CDs)	• Collect submission form (pink form) • Review submission guidelines within Project Handbook • Print and bind project (comb binding) with 2 CDs attached • Meet supervisor having booked an appointment via consultation hour.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/
15	Milestone 6: Submission of Documentation (Hardcover Bound)	• Use pink form for submission • Review submission guidelines within Project Handbook • Print and bind project (hardcover)	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook https://lms2.apiit.edu.my/my/

15 - 18	FYP Presentation*	• Rehearse for presentation • Thoroughly scrutinize documentation and artefact • Refer to Project Handbook on preparation of slides for presentation • Check schedule for presentation date and time • Foreign students who would need to an early presentation may write in to the Project Leader to request the same.	• Log Sheet • https://fypbank.apiit.edu.my/ • Project Handbook • https://lms2.apiit.edu.my/my/

Note: Where dates are stated as week number, please refer to timetable for specific date, time and venue. A supervisee is expected to engage in a meeting with his or her supervisor once during each mandatory supervisory meeting. Hence there are a total of 6 meetings (3 meetings per semester) expected from a student. Failing to do this amounts to poor project management (planning) resulting in marks being affected. Students must ensure appointments are made in advance. If a supervisor cannot be reached after repeated attempts, the project manager must be duly informed and a meeting will be consequently arranged.
***FYP presentations will NOT be held during examination week.**

Appendix E – Cover Page for IR & Final Report

1 STOP PERSONAL KNOWLEDGE BASED SYSTEM

FONT SIZE 12, TIMES NEWS ROMAN, CENTERED, BOLD

by

AILEEN MA YEW YUEN

TP0323232

UC3F1916 SE

A project submitted in partial fulfillment of the requirement

For the degree of

B.Sc. (Hons) in Software Engineering

Supervisor: Miss. MARY TING

Second marker: Mr.NATHAN

ASIA PACIFIC UNIVERSITY OF TECHNOLOGY & INNOVATION

SCHOOL OF COMPUTING & TECHNOLOGY

OCT 2019

Appendix F

FYP Poster Day
&
Final Presentation

Final Presentation

General Guidelines

It may be useful to consider the following when preparing and giving your project presentation.

1. **Planning**

- Good preparation will go a long way to helping you achieve a good presentation.
- Please consider the following points
  - Plan and structure the presentation to give a clear, simple and original perspective to the project.
  - Discuss your presentation with your supervisor.
  - Make your slides (just 15 ~ 20 slides) readable by restricting the amount of information on each one.
  - Do practices run of your presentation to friends or family a day or two before the actual final presentation.
  - A good guide is to use no more than one slide per minute of the presentation.
  - Do not try to cover everything and give too much factual information.

2. **Delivery**

- Start your presentation with a very clear statement of what the project is about and what the motivation for doing it was.
- Keep time, do not rush, and do not arrive late.
- Look at your audience (supervisor & second marker);
- Do not talk just to the supervisor / second marker.
- Speak loudly and clearly, use pauses, do not go too fast.
- Varying the tone of your voice helps prevent your audience from falling asleep.
- Do not read from your notes.
- Project your enthusiasm for your project.
- Requirements and Guidelines for the Oral Presentation

You're FINAL Presentation for Final year project phase II – Implementation

The FINAL presentation will take place during week 14/15/16 of your second semester of the year 3. Exact times and venue will be published in webspace. Check webspace for details.

You will be given an exact time for your presentation; however you are required to arrive at least five minutes before the session is due to start.

The total time for presentation is **60 minutes**.

- 5 minutes to set up your system.
- 20 minutes for PPT slide presentation.
- 25 minutes for demonstration
- 10 minutes for question and answer session

Assessment of the FINAL Presentation for Final year project phase II – Implementation

Your presentation will be assessed by your second marker and supervisor. Your assessment will be based on your response to questions, documation as well as quality of the end-product of your FYP.

Your FYP will be assessed as per the marking criteria in **Appendix K.**

FYP Poster Day Presentation

General Guidelines

Poster should look good and be informative, however if it contains too much information the audience may not be able to absorb it all in the time available, or may not feel inclined to bother trying. When designing a FYP poster artistic ability may help to make the poster attractive and eye-catching, but remember that its style must reflect its commercial/technical content and purpose.

On the day of FYP poster presentation, supervisors, lecturers, head of schools, junior FYP students will proceed to students' project display stands and assess the FYP poster. When question asked by anyone, the project student should be able to answer to satisfaction.

Requirements and Guidelines for the FYP Poster Day Presentation

There are some specific requirements for the FYP posters:

- The FYP poster must be A3 size - you will be penalised if the size is significantly different from this.
- It must be mounted on the boards provided
- The poster must contain your name and project title and the name of your supervisor

The content of the poster should address the following points:

- Title.

  This must include the title of your project, your name and the supervisor name.

- Motivation, scope, aims and specification of the project.

  This should provide a broad overview of the project and why it is worth doing. Explain the problem to be investigated in a few sentences and mention the proposed contribution to practical or theoretical issues.

- Description of the problem and proposed solution(s).

  This explains how the problem was investigated and why particular methods and techniques were employed.

- Statement of Results.

  A brief summary of the most important results obtained to date (if applicable).

- Summary and conclusions and/or future work.

  This section should include the main key points of the work as well as merits and limitations of the proposed approach (or technique). If you are at an early stage of the work concentrate on proposed plans to solve the problem.

You are adviced to discuss your poster planning with your project supervisor. The posters should *sell* your project.

Poster Presentation Procedure

The poster presentation will take place during the week 13 of the second semester of the project.

You will be allocated a display stand, on which to display your poster. Formal attire should be used for the FYP poster presentation. You must return the FYP poster to your Project manager at the end of the poster day session. All students must attend the poster day session.

Poster day presentation is done before FINAL presentation.

Appendix G
(IR and FYP Assessment Forms For CSDA FYP)

FYP INVESTIGATIONS REPORT PERFORMANCE CRITERIA

(Agreed form - To be completed by Supervisor & Second marker)

Name: _____ **Supervisor :** _____ ***AGREED* MARKS:**_____

(Subject to confirmation by Exam Board)

Student ID: _____ **Second Marker:** _____

Title:

_____

50-54%

Not	Mostly	Fully	Performance Criteria
☐	☐	☐	Acceptable submission of PPF and PSF
☐	☐	☐	Satisfactory documentation of consultations with the supervisor is provided
☐	☐	☐	Background, problem statement, and research objectives are presented
☐	☐	☐	Provides an introduction to the topic
☐	☐	☐	Research findings (secondary research) are presented and related to the research objectives
☐	☐	☐	Plan for data collection and analysis (primary research) relies on accepted methods
☐	☐	☐	Design specification / system architecture presented meets minimum standards
☐	☐	☐	A known system development methodology has been chosen as the foundation for system development
☐	☐	☐	Project plan covers all necessary phases and activities
☐	☐	☐	Conclusions provide a summary of the report
☐	☐	☐	The document is readable, presentation is consistent
☐	☐	☐	Citation and referencing style is evident and a fair number of sources are cited

Subtract 4 marks from 49 for each Not in the section above

55-64%

Not	Mostly	Fully	Performance Criteria
☐		☐	**All** criteria for a lower mark are **fully** met
☐	☐	☐	PPF and PSF describe the desired outcomes of the project
☐	☐	☐	Documentation of consultations with supervisor shows regular meetings
☐	☐	☐	There is a clear relationship between the background, problem statement, and the research objectives
☐	☐	☐	Provides discussion of the key issues associated with the topic
☐	☐	☐	Research findings (secondary research) are presented with adequate discussion of their significance
☐	☐	☐	Plan for data collection and analysis (primary research) is appropriate for the research objectives
☐	☐	☐	An appropriate design specification / system architecture is presented

☐	☐	☐	System development methodology has been followed, with documentation of any adaptations made to suit the project
☐	☐	☐	Project timeline shows work completed and work remaining
☐	☐	☐	Conclusions provide discussion of what has been learned and how the process could have been improved
☐	☐	☐	Writing style and use of English language is consistent
☐	☐	☐	Citation and referencing style is consistent

65-74%

Not	Mostly	Fully	Performance Criteria
☐		☐	**All** criteria for a lower mark are **fully** met
☐	☐	☐	PPF and PSF show signs of guiding and being influenced by ongoing research
☐	☐	☐	Documentation of consultations with supervisor shows ability to work in an independent, organized manner without excessive supervision and/or guidance
☐	☐	☐	Relevance of the problem statement is established, and research objectives are justified as a path to a solution
☐	☐	☐	Shows a good understanding of the major factual and/or theoretical issues
☐	☐	☐	Research findings (secondary research) are presented with discussion of their implications for the research design
☐	☐	☐	Planned data collection and analysis (primary research) should produce information useful for refining the design and implementation of the final deliverable
☐	☐	☐	Satisfactory system architecture / detailed design specification, showing clear thinking
☐	☐	☐	Project plan should result in development of existing and new skills
☐	☐	☐	Conclusions include discussion of development of existing and new skills
☐	☐	☐	The document has a good logical flow, uses appropriate academic and technical language
☐	☐	☐	Sources are current and relevant

75-100%

Not	Mostly	Fully	Performance Criteria
☐		☐	**All** criteria for a lower mark are **fully** met
☐	☐	☐	Research objectives clearly serve as a path to a resolution of the problem statement
☐	☐	☐	Shows clear evidence of wide reading and engagement with the conceptual issues
☐	☐	☐	Research findings (secondary research) are presented with an appropriate balance between factual detail and key theoretical issues
☐	☐	☐	Data collection and analysis (primary research) plan should produce new information that is useful beyond the scope of this project
☐	☐	☐	Excellent design / system architecture that will clearly support using proven methods for transforming design into implementation
☐	☐	☐	Detailed and realistic project plan that should result in an innovative, well-designed final deliverable
☐	☐	☐	Detailed and realistic conclusions, covering the project and the process

☐	☐	☐	The document is comprehensive and clear, grammatically correct, no problems with academic and technical language
☐	☐	☐	All citations are referenced and all references are cited

Supervisor's comments:
Signature of Supervisor: Date:
Second marker's comments
Signature of Second marker: Date:

Further comments on the agreed recommendation / moderation of overall grade (if applicable)	
Signature of Moderator:	Date:

FYP WITH SOFTWARE DELIVERABLE – FINAL REPORT PERFORMANCE CRITERIA

(Agreed form - To be completed by Supervisor & Second marker)

Name: _____ **Supervisor:** _____ **AGREED MARKS:**____
(Subject to confirmation by Exam Board)

Student ID: _____ **Second marker:** _____

Title: _____

50-54%

Not	Mostly	Fully	Performance Criteria
☐	☐	☐	Overall depth and breadth is sufficient to meet the standard for a final year project
☐	☐	☐	Project poster is provided, along with screenshot video clip when required
☐	☐	☐	Satisfactory documentation of consultation with the supervisor is provided
☐	☐	☐	Background, problem statement, and research objectives are presented
☐	☐	☐	Literature review and underpinning theory are presented
☐	☐	☐	Research methods are discussed and related to the research design
☐	☐	☐	Research findings are presented and related to the research objectives
☐	☐	☐	Final deliverable is appropriate and has clearly been influenced by the research
☐	☐	☐	Implementation follows from design, basic functionality of the system has been tested
☐	☐	☐	The importance of critical appraisal of the project and the process is recognized
☐	☐	☐	The document is readable, presentation (fonts, etc.) is consistent
☐	☐	☐	Citation and referencing style is evident and a fair number of sources are cited
☐	☐	☐	Presentation (viva) demonstrated understanding of the project and personal effort

Subtract 4 marks from 49 for each Not in the section above

55-64%

Not	Mostly	Fully	Performance Criteria
		☐	**All** criteria for a lower mark are **fully** met
	☐	☐	Project poster properly describes the project and shows attention to layout
	☐	☐	Documentation of consultations with supervisor shows regular meetings
	☐	☐	There is a clear relationship between the background, problem statement, and the research objectives
	☐	☐	Literature review provides discussion of sources and underpinning theory
	☐	☐	Research methods chosen are appropriate
	☐	☐	Research findings are presented with adequate discussion of their significance
	☐	☐	There is a clear relationship between the problem statement, the design specification, and the implementation
	☐	☐	No obvious opportunities to make the implementation more effective have been overlooked
	☐	☐	The critical appraisal provides discussion of what has been learned and how the process could have been improved
	☐	☐	Writing style and use of English language is consistent
	☐	☐	Citation and referencing style is consistent
	☐	☐	Presentation (viva) provided evidence of development of existing and new skills

65-74%

Not	Mostly	Fully	Performance Criteria
		☐	**All** criteria for a lower mark are **fully** met
	☐	☐	Documentation of consultations with supervisor shows ability to work in an independent, organized manner without excessive supervision and/or guidance
	☐	☐	Relevance of the problem statement is established, and research objectives are justified as a path to a solution
	☐	☐	Literature review shows a good understanding of the major factual and/or theoretical issues, provides analysis of the relevance of sources and of the underpinning theory
	☐	☐	Research methods are presented with discussion of choices to justify the research design
	☐	☐	Research findings are presented with discussion of their significance and implications, along with evidence of appropriate application of tools and techniques
	☐	☐	Well-designed final deliverable which shows elements of originality and maps consistently to the research
	☐	☐	Useful and well organized evaluation of implementation and testing
	☐	☐	Critical appraisal covers the project and the process, and includes discussion of development of existing and new skills
	☐	☐	The document has a good logical flow, uses appropriate academic and technical language
	☐	☐	Sources are current and relevant
	☐	☐	Presentation (viva) demonstrated a thorough understanding of the project and highlighted personal achievement

75-100%

Not	Mostly	Fully	Performance Criteria
		☐	**All** criteria for a lower mark are **fully** met

	☐	☐	Research objectives clearly serve as a path to a resolution of the problem statement
	☐	☐	Literature review shows clear evidence of wide reading and engagement with the conceptual issues, provides critical analysis of the credibility of sources
	☐	☐	Research methods are presented with a thorough analysis of options and decision rationale that fully justifies the research design
	☐	☐	Achieves an appropriate balance between factual detail and key theoretical issues , and extends this into the design of the final deliverable
	☐	☐	Innovative final deliverable which clearly shows the ability to apply tools and techniques to a professional standard
	☐	☐	Evidence of proven methods and appropriate principles and models being used in transforming design into implementation
	☐	☐	Detailed and realistic critical appraisal of the project and the process , showing evidence of significant development of existing and new skills
	☐	☐	The document is comprehensive and clear, grammatically correct, no problems with academic and technical language
	☐	☐	All citations are referenced and all references are cited
	☐	☐	Demonstrated maturity and critical thinking during the presentation (viva), anticipating questions and offering insightful answers

Supervisor's comments:
Signature of Supervisor: Date:
Second marker's comments

Signature of Second marker: Date:

Further comments on the agreed recommendation / moderation of overall grade (if applicable**)**
Signature of Moderator: Date:

Appendix H
FYP Process Flowchart

FYP Process Flowchart

Students of SoCT

Option A

Sign-up to FYPBaNK https://fypbank.apiit.edu.my/, select one of the right FYP proposals from the FYPBaNK.

Your request to continue working on the FYP title will be approved / rejected by the concerned supervisor within 2 working days. To speed-up this process, make an appointment and meet the concerned supervisor. If rejected, select another right FYP proposal from the FYPBaNK or propose a FYP title yourself. If you don't like the FYP proposal that you had selected from the FYPBaNK, you may deselect it within 2-day.

Prepare a draft PPF and submit it to FYPBaNK.

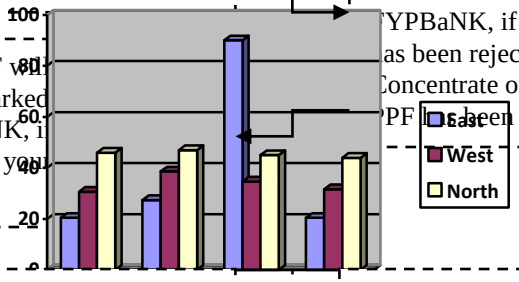
Option B

Project title proposed by the student.

Prepare a draft PPF, Sign-up to FYPBaNK https://fypbank.apiit.edu.my/ , and submit it to FYPBaNK.

Right Supervisor & Second marker are assigned by the Project manager

The draft PPF will be approved / rejected by the Supervisor with comments. Resubmit a new PPF to FYPBaNK, if the draft PPF has been rejected. Concentrate on PSF, if the PPF has been approved.



Submit your PSF to FYPBaNK. The PSF will be rejected by supervisor while it will be marked by marker. Resubmit a new PSF to FYPBaNK, if it has been rejected. Concentrate on your IR, if your PSF has been approved and marked.

Submit the original Ethics Form, signed by the supervisor, to Admin

Submit IR to admin.

Signing off Learning Contact meeting with Supervisor

Submit softbound FYP document to admin.

Submit hardbound FYP document to admin.

FYP Poster Presentation day.

Final Presentation in front of supervisor and 2nd marker.