POLITEKNIK MALAYSIA

KEMENTERIAN PENGAJIAN TINGGI

KOLEJ KOMUNITI MALAYSIA

DFT50114-Integrated Project
FINAL YEAR PROJECT
GUIDELINES

2022 Edition

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

DEPARTMENT OF INFORMATION TECHNOLOGY AND COMMUNICATION
DEPARTMENT OF POLYTECHNIC EDUCATION AND COMMUNITY COLLEGES

TRACK

SOFTWARE AND APPLICATION DEVELOPMENT
NETWORKING SYSTEM
INFORMATION SECURITY
DATA MANAGEMENT AND VISUALIZATION
WEB DEVELOPMENT

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PREFACE

Thanks be to Allah S.W.T for by His mercy, since the beginning of the introduction of the Project Guideline in 2018, it has become as an effective reference in guiding and advising students and academic staff in the supervision of diploma students specifically for Diploma in Information Technology (Digital Technology) offered across 15 polytechnic. This Project Guideline provides specific guidelines on project scope, roles and responsibilities, project planning, project implementation, project intellectual property, formatting, and evaluation of final year projects. It is hope that the idea, concept, and principle stated in this guideline could facilitate students, management, and supervisors.

The Second Issue of this Final Year Project Guideline encompasses suggestion based on feedbacks and comments received from supervisors/lecturers and Panels of Accessor and the addition of new ideas/topic based on Continuous Quality Improvement (CQI) that has been carried out for the DFT50114 Integrated Project course. Students and supervisor/accessor are advised to closely follow the procedure/guideline stated in this revised edition (second issue) in order to minimize inconsistency in assessment, evaluation, and formatting (documentation) of the final project report.

Thank you and congratulations to the Committee Members for their efforts, dedication and focus on improving the content of this second issue of this Final Year Project Guideline. It is hope that this project guideline will contribute towards producing quality final projects by the students and excellent supervisory skills by the academic staffs of the Department of Information Technology and Communication.

Computing Unit, Curriculum Department
Department of Polytechnic Education and Community Colleges
Ministry of Higher Education
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WRITING COMMITTEE MEMBERS

Patron

Major (K) Mohd Noor Bin Shahudin
Senior Director (Academic)
Department of Polytechnic Education and Community Colleges

Advisor

Dr. Norhayati binti Zakaria
Director
Curriculum Department

Chairman

Ts. Azman bin Ahmad
Computing Unit, Curriculum Department

Deputy Chairman

En. Abd Aziz bin Bakeri
Computing Unit, Curriculum Department

Editor

Pn. Nurizah binti Mahmor
Ungku Omar Polytechnic (PUO)

Book Cover Designer

Ts. Mohd Razif bin Mustapha
Balik Pulau Polytechnic (PBU)

Proof Reader

Pn. Siti Nur Shahida binti Md. Aziz
Curriculum Department

Authors

PART I

Chapter 1: Introduction
Pn. Suhainy binti Sulaiman (PUO)
En. Abd Aziz bin Bakeri (UP BK)

Chapter 2: Roles and Responsibilities
En Muhammad Faiz bin Pauzi (UP BK)

Chapter 3: Project Planning
Ts. Azman bin Ahmad (UP BK)

Chapter 4: Project Implementation
Ts. Mohd Razif bin Mustapha (PBU)
En Khairul Anuar bin Mohd Radzali (PUO)

Chapter 5: Project Intellectual Property
Ts. Zainolrin bin Saari (PMJ)

Chapter 6: Log Book
En. Abd Aziz bin Bakeri (UP BK)

Chapter 7: Proposal and Technical Report Writing
Ts . Ainie Hayati binti Noruzman (PSIS)
Pn. Siti Dianah binti Abdul Bujang (PSIS)

Authors

PART II

Technical Report Writing and Poster Format

Pn. Nurizah binti Mahmor (PUO)
Ts . Ainie Hayati binti Noruzman (PSIS)
Pn. Siti Dianah binti Abdul Bujang (PSIS)

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A word of appreciation to all parties directly involved as well as all parties who
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DFT 50114 Final Year Project Guidelines
Diploma in Information Technology (Digital Technology)
Department of Information Technology and Communication
Department of Polytechnic Education and Community Colleges

Track

Software and Application Development
Networking System
Information Security
Data Management and Visualization
Web Development

Table of Contents

1.0 INTRODUCTION

1.1 Introduction

Final Year Project Guideline Diploma in Information Technology (Digital Technology) Politeknik Malaysia to be used by students and lecturers of Jabatan Teknologi Maklumat Dan Komunikasi (JTMK) Politeknik Malaysia. This guideline is for Diploma in Information Technology (Digital Technology) tracks which are Networking System, Software and Application Development, Information Security, Data Management and Visualization and Web Development.

DFT50114 Integrated Project is a compulsory course to be taken by the fifth (5^{th}) semester (for 3.0 years) and sixth (6^{th}) semester 's (for 2.5 years) diploma students. Each student will complete a project based on their field of studies. The project guideline allows the students an opportunity to practice their theoretical knowledge and problem-solving skills around information technology. Students will be assessed on their skills in designing, problems solving, and performing technical management work.

1.2 Project Category

To ensure the implementation of DFT50114 Integrated Project course for Diploma in Information Technology (Digital Technology) - DDT programme at Politeknik Malaysia runs smoothly and focuses on the existing strengths, the clusters of project implementation cover the basic areas of information technology, namely:

a) Multimedia and animation
b) Internet of Things (IOT)
c) Artificial Intelligent (AI)
d) Software application
e) Web application
f) Mobile application
g) Networking system
h) Hardware design
i) Robotic programming
j) Information system
k) Security system
l) Data management & visualization
m) Data analysis

1.3 Type of Project: Product Based

Product based projects produces products in the form of prototypes, goods, processes, and systems using appropriate technology. The development of this project can either use new methods or existing methods and students can refer to problem solving processes done/implemented by the institutions, industries, or communities. Methods of development and testing on the project should be clearly stated and detailed along with supporting data, analysis and evidence related to the project. If students use existing tools such as Arduino or raspberry pi, students must have their contributions in the project.

1.4 Project Structure

In general, the implementation of course is based on the requirements of the curriculum structure DFT50114 Integrated Project for the program. The number of credits for the DFT50114 Integrated Project course is four (4). All Common Core courses must be completed before registering for this course.

The Integrated Project course has to be completed within one (1) semester includes activities related to identifying problems, determining objectives, submitting literature review, setting research methodology, data collection, analysis, and validation of results, debating results, drawing conclusions and recommendations. However, these activities are varies based on the curriculum documents that has been design for each program.

1.5 Project Characteristics

In general, the characteristics of the project are:

a) has a clear implementation period and objectives;
b) projects development that leads to problem solutions that are well-defined; scientifically and systematically;
c) based on the needs of the industry (industry-driven) or/and community (community-driven);
d) have commercial and entrepreneur values;
e) have value added elements to improve the quality of existing projects (future upgrade);
f) to consider the latest technology developments such as the 4th Industrial Revolution technology, green technology and innovation, energy saving, recycling, ergonomics, entrepreneurship and other related; and
g) have commercial value.

(*Source: Buku Pelaksanaan Projek Pelajar (Program Diploma) Politeknik Malaysia*)

2.0 ROLES & RESPONSIBILITIES

2.1 Introduction

Project implementation requires systematic work by all parties in terms of effective management, coordination, and monitoring processes. This is to ensure the quality of the projects that meet all aspects set by the Curriculum Structure as well as the need to comply with Computing Standards. In this project guideline, work structure at the level of JTMK are proposed.

2.2 JTMK Level for Student Project Implementation Committee

The committee consists of:

a) Head of Department
b) Head of Program
c) JTMK Research, Innovation and Commercialization Unit (UPIK) Coordinator
d) JTMK Student Project Coordinator
e) Project Course Coordinator
f) Project Supervisor

The proposed JTMK Student Project Committee Chart are shown in **Figure 2.1**.

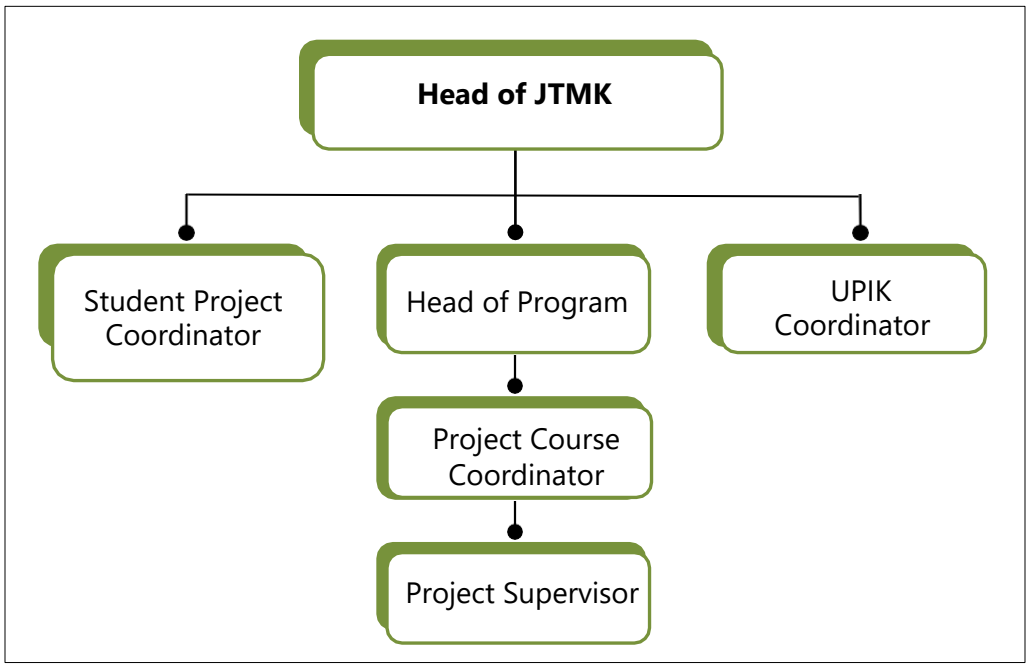


Figure 2.1: JTMK Level Student Project Committee Chart

Terms of Reference(s) for Student Project Implementation Committee:

a) plan the implementation of Integrated Project courses at the departmental level including the use of facilities and financial allocation (if any);
b) coordinate, monitor and ensure the implementation and evaluation of Integrated Project courses at the departmental level runs smoothly and effectively based on the current in forced curriculum documents;
c) identify solutions to issues/problems across programs in the department;
d) report the implementation of the Integrated Project course to the polytechnic level and the polytechnic management; and
e) held meetings as required.

Note: *The formation and terms of reference of the Student Project Implementation Committee at the departmental level can be adjusted according to the needs of the department and the respective study program.*

2.3 Roles and Responsibilities

To ensure that the implementation of the Integrated Project course can run smoothly and achieve the objectives.

2.3.1 JTMK Head of Department

The followings are the duties as JTMK Head of Department:

a) chairing the Student Project Implementation Committee Meeting at the departmental level to discuss matters related to the implementation of the Integrated Project course;
b) bring and discuss matters related to the Project course in the Academic Management Committee/Student Project Implementation Committee Meeting at the polytechnic level;
c) ensure the implementation and evaluation of Integrated Project courses based on the current in forced curriculum documents;
d) elect and appoint officers involved with Integrated Project courses at the departmental level; and
e) obtain allocation for the implementation of the student Integrated Project course (if any).

2.3.2 JTMK Student Project Coordinator

The followings are the duties as JTMK Student Project Coordinator:

a) be an intermediary officer between the academic department and UPIK;
b) give briefings to the Project Supervisors;
c) establish a project inventory database maintained in the department;
d) keep a certified copy of the Student Project Registration Form;
e) ensure that project inventory records are updated from time to time;
f) identify and appoint a project Evaluation Panel with confirmation;
g) coordinate department level student project competitions/symposiums/colloquiums/ seminars; and
h) address issues or problems that arise.

2.3.3 Head of Program

The followings are the duties as Head of Program:

a) monitor the implementation and evaluation of Integrated Project courses based on the current in forced curriculum documents;
b) analyze the achievement of learning outcomes; and
c) regulate the continuous improvement of the quality of study programs (CQI).

2.3.4 Project Course Coordinator

The followings are the duties as Project Course Coordinator:

a) be the liaison officer between the student and the Project Supervisor;
b) prepare a list of Project Supervisors certified by the Head of Department;
c) submit the list of Project Supervisors to the Departmental Timetable Coordinator;
d) brief students on Integrated Project courses;
e) provide information related to the Integrated Project course;
f) prepare a schedule of project activity planning throughout the semester;
g) provide a list of names of members of the student Project group together with the Project Supervisor;
h) keep a certified copy of the Project Registration Form (Refer to **APPENDIX A: PROJECT REGISTRATION FORM**);
i) ensure that there is no duplication and repetition of project titles and approve changes in project titles;
j) distribute the list of Project Supervisors appointed and confirmed by the Head of Department;
k) prepare and distribute schedule of presentation and evaluation of Integrated Project courses;
l) prepare a separate Integrated Project course scoring rubric form for each student;
m) submit a copy of the approved Project Registration Form to the JTMK Student Project Coordinator (Refer to **APPENDIX A: PROJECT REGISTRATION FORM**);

n) distribute the list of appointed project Evaluation Panels;
o) provide procedures and guidelines for the evaluation of Project courses;
p) ensure that marks are recorded into the system;
q) analyze the achievement of learning outcomes of the Integrated Project course;
r) collect, record, and update the Project inventory (Refer to **Chapter 5: Project Intellectual Property**);
s) make recommendations for continuous improvement of the quality of Project courses (CQI); and
t) keep a copy of the Final Project Report and project results if required;

2.3.5 Project Supervisor

The following are the responsibilities of the Project Supervisor:

a) discuss the title and scope of the project/study with students and confirm it;
b) approve and submit the Project Registration Form to the Project Course Coordinator at the beginning of the semester for confirmation (Refer to **APPENDIX A: PROJECT REGISTRATION FORM**);
c) provide a letter of permission to students to carry out projects/studies (if necessary);
d) be responsible for the safety of students while in the laboratory/workshop (if applicable).
e) guide, facilitate and supervise students so that the learning process, knowledge filling and project journey can be implemented towards achieving the set learning outcomes (Refer to **Chapter 7: Proposal and Technical Report Writing**);
f) record student attendance;
g) hold meetings/discussions with students face to face or online (online) as well as review and confirm the summary of project/study progress throughout the semester using the Log Book (Refer to **Chapter 6: Log Book**);
h) guide and advise students on how to write a proposal paper/report appropriate to the type of project/study implemented by the student
i) ensure that the writing is based on the format and writing guidelines that have been set;
j) evaluate projects/studies of students under supervision;
k) record and submit marks to the Project Course Coordinator;
l) ensure that students send a copy of the report and/or project results to the Project Course Coordinator according to the set date; and
m) keep a copy of the Technical Report and project results (if required)

2.3.6 Panel of Assessor

The Panel of Assessors consists of lecturers or external panels who are experts in their respective fields. The following are the responsibilities of the project Evaluation Panel:

a) evaluate the presentation of the student's proposal paper/project by using the scoring form or rubric according to the program of study; and
b) return the scoring form or rubric to the Project Supervisor/Project Course Coordinator on the due date.

2.3.7 Students

The following are the responsibilities of students:

a) comply with safety, health and ethical procedures and regulations in the laboratory/workshop (if applicable);
b) perform responsibilities as a team member in a group project (if applicable);
c) make a preliminary study of the needs of the industry or community in determining the choice of title, originality of ideas and direction of the project as well as having commercial value;
d) select projects that contribute to the needs of the industry or community and are encouraged to collaborate with relevant parties;
e) prepare and submit a project title proposal according to the field of study to the Project Supervisor at the beginning of the semester;
f) complete and submit the Project Registration Form to the Project Supervisor within the prescribed period for evaluation and approval (Refer to **APPENDIX A: PROJECT REGISTRATION FORM**);
g) implement projects according to the calendar and Gantt chart of project implementation;
h) record the progress of the project in the Log Book and obtain the approval of the Project Supervisor;
i) hold face to face or online discussions with the Project Supervisor on a regular basis by bringing along relevant documents;
j) obtain a Letter of Application for Expertise and Industrial Cooperation (if applicable) to carry out the project from the Head of Department (Refer to **APPENDIX D: INDUSTRY EXPERTISE AND COOPERATION SERVICES LETTERS**);
k) prepare and submit the Technical Report together with the product for presentation and evaluation of the project;
l) strive to achieve quality and learning outcomes in accordance with the prescribed evaluation criteria;
m) apply for permission in writing to the department if there is an offer to purchase from any company or organization during the period of study or after graduation; and
n) follow the instructions of the polytechnic from time to time.

3.0 PROJECT PLANNING

3.1 Rules and Regulation

The following are the rules in the implementation of the project that must be followed based on the needs of the program:

a) Students must COMPLETE ALL COMMON CORE courses before enrolling for this course
b) Students are required to meet the needs of course registration process that has been enforced/established by the institution
c) Project title/scope (project proposal) must be presented and approved by the selected committee (supervisor/co-supervisor/accessor)
d) Project title/scope must be aligned with the current track selection in the Diploma in Information Technology (Digital Technology) – DDT program
e) Cross track/ program project development is allowed, subjected to approval from the selected committee and with a proper guide from supervisors
f) Students must complete and submit Project Registration Form once the proposal approved (**APPENDIX A: PROJECT REGISTRATION FORM**)
g) Changes on Project title/scope is allowed, subject to approval. (**APPENDIX B: PROJECT TITLE AMENDMENT FORM**)
h) Students are advised to utilize the practical/lab hours for the needs/uses of special lab equipment.
i) Students need to get a letter of authorization from the institution if an external parties/ industry/stakeholder are involved in the project development. (**APPENDIX D: INDUSTRY EXPERTISE AND COOPERATION SERVICES LETTERS**)
j) Students must adhere to the requirement of PASS both the Continuous Assessment and Final Assessment for this course. (Refer: Arahan Peperiksaan dan Kaedah Penilaian (Diploma) Edisi 6 Jun 2019 or any latest version)
k) Technical Report submission must be free from plagiarism issues
l) Selected project must be submitted to coordinator/supervisor for future reference

3.2 Student Selection and Project Supervisor

Students are encouraged to form a project group based on their group/class/track. Failing to do so, the project coordinator will assign them. (Subjected to discussion/approval from Head of Program)

Each project group will be assigned with a specific supervisor. (This may be differed for some institution that permit students to approach/choose a supervisor based on specific skills /project)

3.3 Project Selection

Students must negotiate with the supervisor/stakeholder regarding project category (Refer **Chapter 1: 1.2 Project Category**) and subjected to approval from the committee

3.4 Financing / Project Development Cost

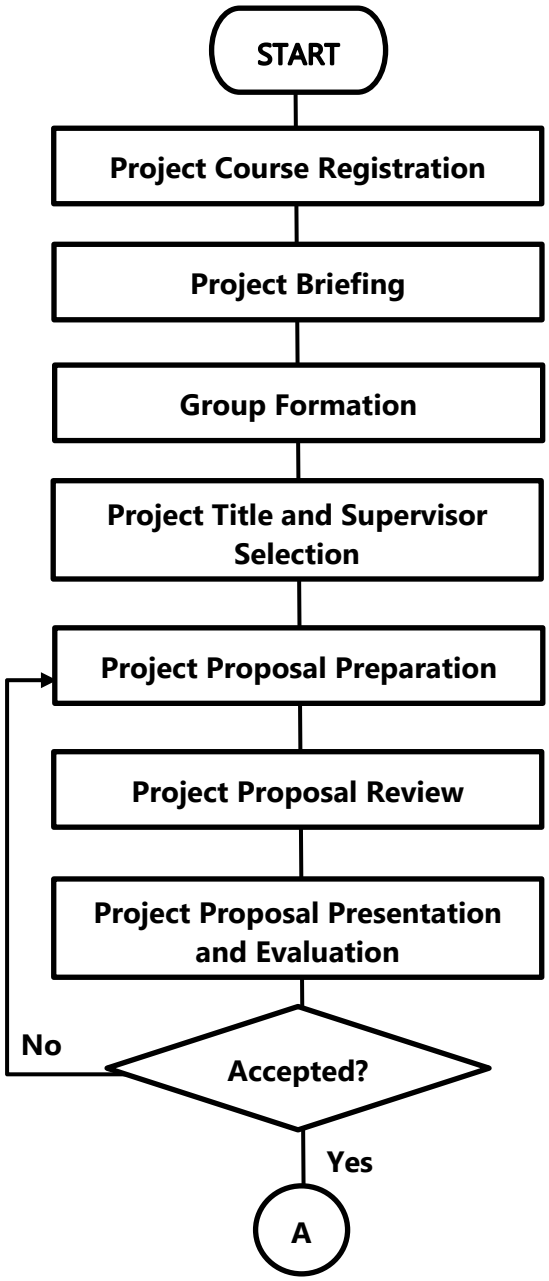
a) Students must bear all the cost involved in the project development.
b) Output of the project belongs to Polytechnic.

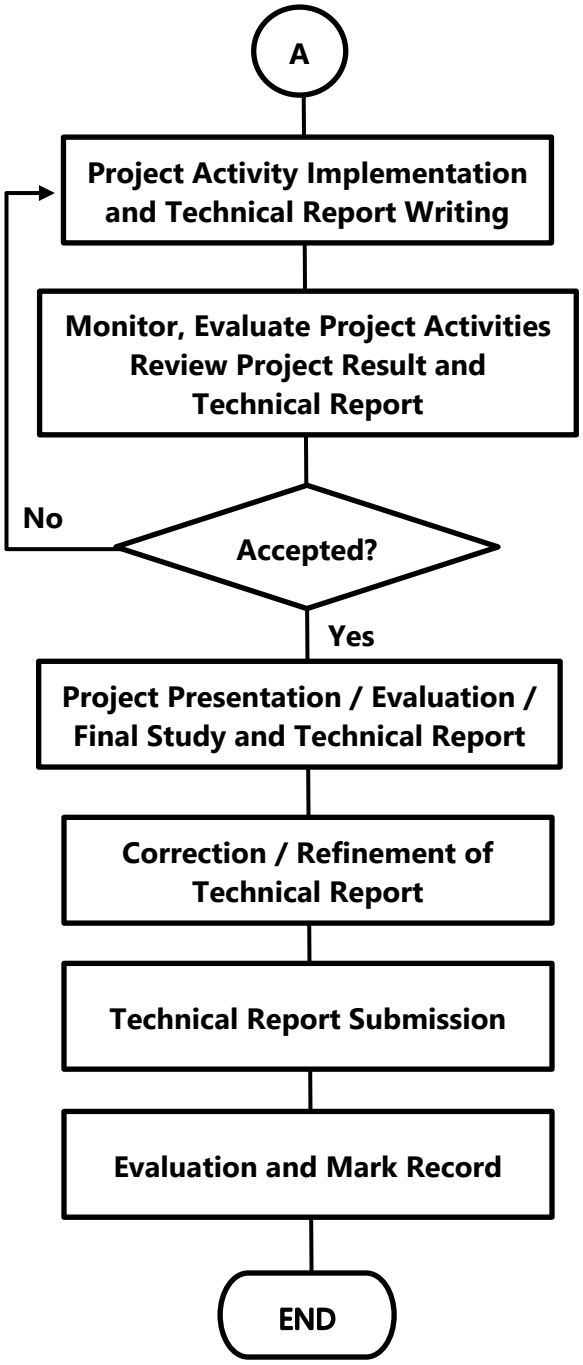
4.0 PROJECT IMPLEMENTATION

4.1 Project Implementation Flow

The Integrated Project Courses conducted within **ONE (1)** semester. The implementation of the project must go through processes and procedures that have been set in the curriculum of DDT program as in **Table 4.1**.

Table 4.1: Integrated Project Course Flowchart

Integrated Project Course Flow Chart	Person in Charge (PIC)	Reference
	Project Coordinator Student Student, Supervisor Student Student, Supervisor, Accessor Supervisor Student, Supervisor	Academic Calendar, Project Planner Appendix A: Project Registration Form Chapter 7: Proposal & Technical Report Writing Appendix F: Evaluation Rubric

Integrated Project Course Flow Chart	Person in Charge (PIC)	Reference
	Student Supervisor Student, Supervisor, Accessor Student Student Student, Supervisor, Coordinator	Chapter 7: Proposal & Technical Report Writing Chapter 6: Logbook Appendix F: Evaluation Rubric Appendix I: Declaration of authenticity and ownership

4.1.1 Project Implementation Planner

Week	Short Sem	Task	Assessment	Mark	Remark
Week 1	**Week 1**	**1.0 PROJECT PROPOSAL** **1.1** Prepare project plan and project design			**Student, Supervisor**
Week 2			**Proposal Presentation**	**CLO 3** 10 %	**Student, Supervisor, Internal Accessor**
Week 3	**Week 2**	**2.0 PROJECT DEVELOPMENT** **2.1** Plan requirement and design specifications. **2.2** Manage the hardware or software configuration. **2.3** Develop problem specification and design. **3.0 DELIVERABLES** **3.1** Present deliverables. **3.2** Prepare project documentation **3.3** Present final project		**CLO 1** 35 %	**Student, Supervisor**
Week 4					**Student, Supervisor**
Week 5	**Week 3**				**Student, Supervisor**
Week 6			**Demonstration 1**		**Student, Supervisor**
Week 7	**Week 4**				**Student, Supervisor**
Week 8					**Student, Supervisor**
Week 9	**Week 5**		**Demonstration 2**		**Student, Supervisor**
Week 10					**Student, Supervisor**
Week 11	**Week 6**				**Student, Supervisor**
Week 12					**Student, Supervisor**
Week 13	**Week 7**		**Demonstration 3**		**Student, Supervisor, External Accessor**
Week 14					
Week 15	**Week 8**		**Technical Report** **Logbook** **Final Presentation**	**CLO 4** 15% **CLO 1** 10% **CLO 2** 30%	**Student, Supervisor, Internal Accessor**

The project planner can be amendable according to polytechnic's preferences.

4.1.2 Project Course Registration

Students register for the Integrated Project course based on the method/guideline required by the polytechnic.

4.1.3 Project Implementation Briefing

As part of its role, the Students Project Coordinator/ Project Course Coordinator delivers a project briefing to the Project Supervisor and students in the first week of the lecture. This briefing session is to ensure all parties involved are clear and consistent information are delivered and aligned with their respective duties and responsibilities towards the production of quality student projects, innovative and have commercial value. The contents of the briefing are proposed as follows:

a) course outline (CLO, PLO, AST) based on curriculum documents;
b) project implementation activities according to the calendar and calendar/planning schedule of project course implementation activities;
c) types of projects based on the needs of the respective programs;
d) theme, title, and project ideas in the respective field;
e) distribution of students according to the Project Supervisor;
f) registration of project title agreed by the Project Supervisor and/or Project Course Coordinator;
g) evaluation of project proposal presentation;
h) students Log Book;
i) students project implementation;
j) distribution of marks based on the curriculum document of the Project course;
k) project reporting, presentation, and Technical Report;
l) project budget;
m) project ownership/Copyright; and
n) Polytechnic Student Project Implementation Guidebook (Diploma Program) currently in force that must be complied with.

4.1.4 Formation of Project Group

The project is implemented in groups (not more than three (3) students) according to the category of project to be carried out. Project can't be implemented individually. The scope of assignments for each group member should be clearly stated and detailed. Project Proposal Papers and Technical Reports can be produced in groups, but the writing should follow the scope of assignments of each group member.

Note: *The priority for the formation of project groups is according to the student track/department. If there is no further option of students of the same department, students are allowed to form groups with students of different tracks complying with condition provided that the project contains elements of each track/department.*

4.1.5 Selection of Project Title and Project Supervisor

Students must submit the Project Registration Form (Refer to **APPENDIX A: PROJECT REGISTRATION FORM**) for the confirmation of project title and project supervisor no later than the 3rd week (Week 1 for short semester) of the lecture session, depending on the Project course implementation calendar or any current amendments. The Student Project Coordinators/Project Course Coordinators/Project Supervisors are encouraged to set themes/categories to help students generate ideas and determine the project direction. The selected project title should meet the scope and in line with the course curriculum according to the respective program of study. The project ideas can be from the students themselves, supervisors, the local community, or industry collaborations.

The Project Supervisor needs to confirm the project title that the student has chosen. The project title is a title that has been agreed upon by the Project Course Coordinator, Project Supervisor, and students to meet the criteria stated in Chapter 1: Introduction; 1.2: Project category.

Change of project title is only allowed with the consent of the Project Supervisor and approval by Project Course Coordinator. Changes or amendment for project title can be done up to the fifth (5^{th}) week of lectures or third (3^{rd}) week for short semester with approval of Project Supervisor. Students should refer to the project inventory before proposing a new title to the Project Supervisor. However, students can also refer to previous projects for the intention of improving existing products. Students need to fill in the required form to change/amend their project title (Refer **APPENDIX B: PROJECT TITLE AMENDMENT FORM**)

4.1.6 Preparation of Project Proposal

The preparation for project proposal depends on the requirements of the Integrated Project course and program of study (Refer to **Chapter 7: Proposal and Technical Report Writing**) in the writing process. Project proposal need to be prepared in English. However, it is subject to the Student Project Committee at the respective polytechnics.

4.1.7 Review of Project Proposal

The Project Supervisor should review the Project Proposal prepared by the student to determine the suitability of the project. If the Project Proposal fails to meet the specified characteristics/criteria and there are none-conformities, the student must make amendments to the Project Proposal with the supervision of the Project Supervisor. Relevant information may refer to **Chapter 7: Proposal and Technical Report Writing**.

4.1.8 Presentation and Evaluation of Project Proposal

Students need to present a Project Proposal to the Project Supervisor/Panel of Assessors. The Project Supervisor/Assessors will evaluate the student's Proposal based on the rubric provided by the Project Course Coordinator (Refer to **RUBRIC A: PROPOSAL PRESENTATION RUBRIC**). For Project Proposal that meet the characteristics/criteria but there are comments from the Project Supervisor/Assessors, students are required to make appropriate amendments and re-submit the revised proposal. The Project Supervisor will record the marks into the Polytechnic Information Management System (SPMP) or iPUO Information Management System used at the polytechnic.

4.1.9 Project Activity Implementation and Technical Report Writing

Approval to proceed with the project is subjected to the Project Supervisor/Panel of Assessors which evaluates the Project Proposal based on the criteria and scope. Students need to implement the planned project activities and produce a Project Technical Report (Refer to **Chapter 7: Proposal and Technical Report Writing**) based on the approved Project Proposal. The project implementation follows the project implementation planner (Refer to **4.1.1**) as well as the project's Gantt Chart of based on the chosen methodology for each group. The project methodology that can be adapted by students is as in **Figure 4.1.**

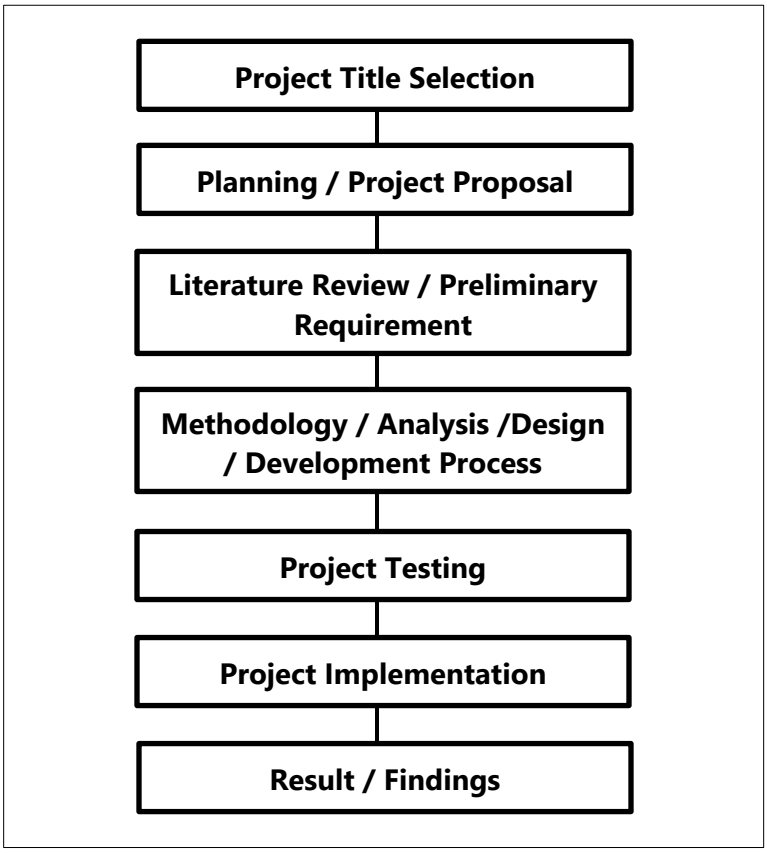


Figure 4.1: Summary of Methodology Used for Project Development

The Project Supervisor should supervise and guide students throughout the entire project implementation process starting from the project briefing until obtaining commendation in the writing process of the Project Technical Report.

Other than using the existing methodology, students can choose to implement their projects using green elements and practices that can be referred to the JPPKK POLYGreen Blueprint, Ministry of Higher Education (MOHE).

During the project development and implementation process, students must bear all expenses themselves, but students can discuss with their Project Supervisor to obtain allocation from the polytechnic if their project is of interest to the polytechnic.

Students must obtain permission from the Project Supervisor and the officer in charge to use the polytechnic facilities. Other than that, students need to obtain a letter of permission to carry out activities outside the polytechnic from the Project Supervisor signed by the Director of the Polytechnic/TPA/Head of Department.

4.1.10 Monitoring and Evaluation of Project Activities and Review of Project Results and Technical Report Writing

The Project Supervisor monitors, reviews, and evaluates the Logbook as well as project activities carried out by each student on a regular basis, and it must be recorded. Project results should be reviewed by the Project Supervisor prior to the presentation and evaluation session by the Panel of Assessors. The method used for project monitoring and evaluation either via online or face-to-face depends on Project Supervisor (whichever is appropriate).

4.1.11 Project Presentation/Evaluation/Final Study and Technical Report

Students must present the results of the project for the purpose of evaluation by the Panel of Assessors according to the scoring rubric that has been set. If the project results fail to meet the required criteria, then the student needs to have a discussion with the Project Supervisor, make corrections, resubmit the Technical Report and redo the presentation (if required).

4.1.12 Correction/Refinement of Technical Report

Based on the recommendations of the Panel of Assessors, students are required to make appropriate corrections with the guidance of the Project Supervisor as well as resubmit the finalized Technical Report.

4.1.13 Submission of Project Results and Final Technical Report

Student are required to submit:

a) Final Project Report in bound which has been certified by the Project Supervisor and Project Course Coordinator in the form of digital copy (PDF); and
b) Declaration of Authenticity and Title Form (Refer to **APPENDIX E: DECLARATION OF AUTHENTICITY AND PROPERTY RIGHTS**) and **Chapter 5: Project Intellectual Property** to the Project Supervisor/Project Course Coordinator for record keeping.

Note: *The submission method and report form can be modified according to the suitability of the respective study program project course.*

4.1.14 Evaluation and Mark Record of the Technical Report

Technical Report will be evaluated by the Project Supervisor after the bound report is submitted. The Project Supervisor/Project Course Coordinator records the marks and completes all components of the Project course evaluation based on the curriculum of the program into the Polytechnic Information Management System (SPMP) or iPUO Information Management System used in polytechnics.

4.2 Project Evaluation

Integrated Project course evaluation should be done throughout the semester. Students' achievement is measured based on the learning outcomes set out in the course curriculum of the respective program. All evaluation components (elements of project management and implementation, presentation, and project report) that refer to the evaluation component (Assessment Specification Table) of the Integrated Project course in the respective program must be fully implemented by each student and evaluated individually.

Students will also need to make corrections to the Final Project Report as required by the Project Supervisor and the Evaluation Panel (if any). Assessment in the form of individuals in a group, must be proven through a scoring rubric form for each student provided by the Project Course Coordinator according to the suitability of the Integrated Project course of their respective program.

Evaluation is carried out by the Project Supervisor and an appointed Evaluation Panel. A Panel of Assessors from each department or institution of higher learning and outside industry can be appointed to evaluate the presentations and results of students' projects/studies. The selection of the appropriate place and time will be determined by the Student Project Coordinator. Assessment using the Project Scoring Form with the relevant assessment rubric is according to the program of study.

Among the items assessed (referring to the curriculum requirements of the program) are as follows:

a) Proposal Presentation
b) Project Demonstration (3)
c) Final Presentation (Poster)
d) Final Presentation
e) Logbook
f) Technical Report

All forms of assessment are subject to the Malaysian Polytechnic Examination and Assessment Methods (Diploma) Instructions (issued by the Examination and Assessment Division (BPN), JPPKK) which are in force. The proposed rubric is as in **ASSESSMENT RUBRICS** section:

a) Proposal Presentation – 10%
b) Project Demonstration (3) – 35%
c) Final Presentation (Poster) – 15%
d) Final Presentation – 15%
e) Logbook – 10%
f) Technical Report – 15%

The Panels of Assessor may consist of polytechnic lecturers and external panels from industries or academia from higher learning institutions. Among the tasks of the project Evaluation Panel are:

a) evaluating the project presentation using a scoring form or rubric; and
b) providing comment/feedbacks for the improvement of student projects.

Students may **FAIL** the Integrated Project Course if:

a) they do not fully meet the evaluation component of the Integrated Project course referring to the curriculum of the program of study currently in force;
b) there are evidence of plagiarism in the implementation/production of projects/studies (ideas, writings, or inventions of others); and
c) they do not meet the Examination Instructions and Assessment Methods (Diploma) of Malaysian Polytechnic (issued by BPN, JPPKK) which are in force as well as the instructions issued by the polytechnic from time to time.

5.0 PROJECT INTELECTUAL PROPERTY

5.1 Introduction to Intellectual Property

Intellectual property refers to inventions derived from the mind including literary and artistic works, symbols, names, images in various forms whether photographs or drawings and designs used in trade or business. Intellectual property is divided into two categories, namely Industrial Property and Copyright. Industrial Property includes Trademarks, Patents, Industrial Designs and Geographical Indications. Copyright includes literary and artistic works such as novels, poems, performances, films, musical works, paintings, photographs, sculptures and building designs.

Intellectual property is an idea from the mind of a human being protected by law. By achieving the right balance between the interests of innovators and the broader public interest, intellectual property aims to foster an environment in which creativity and innovation can flourish. It is also the right of use or permission of others to use the invention in accordance with the terms that have been agreed. In Malaysia, copyright is an exclusive right given to owners to control the use of their creations according to a period prescribed by law. The Copyright Act 1987 is the basis for obtaining copyright protection in Malaysia. The main purpose of intellectual property registration is to ensure that each invention receives copyright protection so that the rights of the owner are guaranteed from any misuse.

5.2 Protection and Types of Intellectual Property

Intellectual Property may be protected under Malaysian law or any law in the world recognized by Malaysia. There are six categories of intellectual property such as copyright, patent, trademark, industrial design, geographical indications, and layout design of an integrated circuit.

5.2.1 Copyright

Copyright protection in Malaysia is based on the Copyright Act 1987. Therefore, the Malaysian Intellectual Property Corporation (MyIPO) which is a body established by the government has been responsible for managing the protection of various forms of intellectual property. Copyright is an exclusive right granted by law for a certain period to the creator of a work to control the use of their work. Malaysia does not have a copyright registration system. A work is automatically protected once it meets the following conditions:

a) the work is original;
b) the work has been written, recorded, or made into material form;
c) the creator is a qualified person; and
d) the work is made in Malaysia or the publication of the work in Malaysia.

5.2.2 Patent

A patent is an exclusive right granted to an invention, whether a product or process to produce a new way of something, or even for a technical solution to a problem. Patents are protected under the Patents Act 1983 and patent protection is for twenty (20) years from the date of filing of the application. A patent will be awarded when it meets the following characteristics:

a) Novelty;
b) Involves the steps they create; and
c) Can be used in any industry

5.2.3 Trademark

Trademark means a stamp used/proposed to be used for the purpose of indicating the relationship between the goods/services and the registered owner/user of the trademark during business. Trademarks may consist of words, logos, pictures, names, letters, numbers, or a combination of such elements. Each registration is valid for a period of ten (10) years from the date of application. Renewal of registration must be made every ten years if still interested.

5.2.4 Industrial Design

Industrial design is the overall external appearance of an item or product. Shape or configuration is a three-dimensional aspect while a pattern or decoration encompasses two dimensions. The three- or two-dimensional or both features present in a finished product shall be by industrial methods. These features will give a unique appearance to an item or product. A registered industrial design is given protection for five (5) years from the date of filing. Coverage may be extended for two (2) periods where each period of coverage is for five (5) years. This means that the maximum period of cover is for fifteen (15) years.

5.2.5 Geographical Indications

Geographical indication is an indication that identifies any goods as originating in a country or region, or an area or place where the specified quality, or reputation of other characteristics of the goods is essentially derived from their geographical origin. Geographical markings may be applied on or natural or agricultural produce of any industrial product or handicraft. Registered Geographical Indicators are given ten (10) years of protection and can be renewed every ten (10) years.

5.2.6 Layout-Design of an Integrated Circuit

Integrated Circuit Layout Design is a three-dimensional arrangement of the elements and integrated circuit along with circuit connections arrangement provided for an integrated circuit intended to be manufactured.

5.3 Registration Of Intellectual Property

The Centre of Research & Innovation (*Pusat Penyelidikan & Inovasi*, PPI), JPPKK stipulates that the registrar of intellectual property for student projects is registered as copyright. However, in certain cases the Student Project Coordinator Polytechnic/Department and *Unit Penyelidikan, Inovasi dan Komersialan* (UPIK) can suggest if there is a student project that has high impact and potential to be patented.

5.4 Intellectual Property Ownership (Staff, Students, Third Parties)

All intellectual property are properties of the polytechnic when it is produced by staff or students during the period of study or conducting research with the institution. Intellectual property derived from collaboration with third parties will become the joint property of the institution and third parties, subject to the applicable terms. The intellectual property will be filed or registered in the name of polytechnic. Polytechnic is responsible to take all necessary actions in enforcing intellectual property rights in the event of exploitation and any violation of intellectual property rights.

The project ownership can be divided into THREE (3) categories:

i. All project's results are the property of polytechnic if:
   - the project was developed or designed on the needs of the polytechnic program of study; and
   - projects generated, designed, developed, or produced using facilities, materials, funds or other resources belonging to the polytechnic; or
   - the project was designed with the support of and under the supervision of the Polytechnic Project Supervisor.

ii. All project's results derived from collaboration with industry become the joint property of the polytechnic and industry in accordance with the terms of collaboration that have been agreed between the polytechnic and industry.

iii. All project's results also become the property of the polytechnic in accordance with the terms of collaboration that have been agreed between the polytechnic and industry.

5.5 Distribution of Incentives to Creators and Institutions

Inventors who are Staff, Students or Third Parties who successfully invent products (either individually or jointly) that are the property of the polytechnic, and the invention meets the basic criteria for protection under the patent law, they are eligible to be considered for special incentives as stipulated by JPPKK. Distribution of Incentives to inventors and institutions is subject to the current circular in forced by The Centre of Research & Innovation (*Pusat Penyelidikan & Inovasi*, PPI), JPPKK

5.6 Project Inventory

The Project Supervisor is responsible for checking the originality of the project. The Project Course Coordinator must constantly update the student's project inventory so that no projects are repeated or overlapped with previously developed projects. Students must submit the Project Inventory Form in the form of hard copy and soft copy to the Project Supervisor.

Project inventory must be submitted together with the project technical report and project results. An inventory of student projects should be kept at the program and polytechnic levels for the purpose of coordinating and reviewing the accreditation program of study. Information required in the student project inventory are as follows:

a) Project Title
b) Group Members
c) Research Cluster Category (Refer to **Chapter 1; 1.2: Project Category**)
d) Supervisor
e) Project Abstract
f) Registration of Intellectual Property other than Copyright (potential and high-impact products)

5.7 Participation in Competitions/Symposiums/Colloquiums/Seminar

Students are encouraged to participate in competitions or presentations of project at seminars or colloquiums at any level. The involvement of students in prestigious innovation and skills competitions can encourage creativity among students. Any project participation in any competition is recommended to refer to the respective UPIK polytechnic to coordinate and review the competition materials such as posters, slides etc.

5.8 Commercialization

Commercialization means an innovative product or service that is registered through intellectual property under a polytechnic and has the potential to generate income continuously through a recognized financial platform. Therefore, successful, or recognized or listed final projects with the potential to be commercialized through various competition or exhibition platforms can be considered for the purpose of commercialization according to the circular in force. For the continuation of this student project, the student Project Supervisor can refer to KUPIK at the polytechnic and JPPKK for follow-up action.

5.9 Authenticity and Plagiarism

A project is categorized as original and authentic when the project is produced or developed by students in groups without elements of plagiarism. Plagiarism refers to the act of using or copying the work of others without permission and knowingly acknowledging the work as one's own work without giving recognition to the original author. The act of giving recognition to the original author can be made by quoting or citing the source referred to.

Based on the Malaysian Polytechnic Examination Instructions and Assessment Methods (Diploma) currently in force (issued by BPN, JPPKK), plagiarism is a form of academic misconduct and if guilty, can be prosecuted. Therefore, the assessment of the authenticity of student projects must involve a screening process to ensure that it is free from plagiarism. Examples of plagiarism are as follows:

a) Intentional plagiarism such as ordering someone to complete an assignment or completing an assignment.
b) The possibility of causing plagiarism such as using ideas without citation or taking information without citations from the thesis.

Students must complete the Declaration of Authenticity and Ownership form and be certified by the project supervisor. (Refer to **APPENDIX E: DECLARATION OF AUTHENTICITY AND OWNERSHIP**)

5.10 Dispute Resolution

In the event of any dispute or controversy arising from enforcement, or in any relevant manner, the Intellectual Property Committee will resolve the dispute or controversy that arises. The Intellectual Property Committee will appoint a mediator if disputes and controversies that arise cannot be resolved. The appointed mediator must have his appointment approved by the parties involved. The mediator would carry out any procedure deemed appropriate in the mediation process if all parties involved are given a fair chance of defense.

5.11 Polytechnic/JPPKK Authority

Polytechnic or JPPKK reserves the right to review and amend any part contained in this intellectual property as it deems appropriate to ensure that it is always relevant and up to date.

6.0 LOG BOOK

6.1 Introduction

Project Log Books are prepared by students individually to record each activity work, new discoveries and assignments carried out throughout the implementation period. This book is also one of the methods for Project Supervisors to monitor development and progress of the project at each meeting and discussion with the students.

Each student must complete a clearly written and detailed Log Book for evaluation purposes by the Project Supervisor. Items evaluated in the Log Books are:

a) Written Activities;
b) Signature of verification; and
c) Performance of Psychomotor Skills.

6.2 Log Book Usage Guideline

The Log Book usage guidelines are as follows::

a) Students need to record all activities related to the project conducted according to the needs of the program of study;
b) Log books should be brought along in every meeting and discussion with the Project Supervisor for review purposes and validation;
c) Log Book should be submitted to the Project Supervisor for review and validated/checked once a week;
d) The Project Supervisor must provide feedback/comments in the student's Log Book every week; and
e) The Log Book should be submitted to the Project Supervisor for final evaluation.

6.3 Log Book Writing

Listed below are the requirements for writing a Log Book for project implementation activities:

a) Students need to record activities and assignments throughout the week;
b) Students need to write in details their planned activities in Weekly Activity Report's column and it must be aligned with the stated planning in their Gantt Chart;
c) Students need to state actual achievements or current project status in the space provided;

d) Students need to fill in the Assignment Proposal section with the relevant suggestions as improvement measures to project; and
e) Project Supervisor must provide feedback/comments on each assignment which has been carried out by students.

6.4 Log Book Content Format

The following is the format for the contents of the Log Book:

a) Front Cover of Log Book
b) Contents of the Log Book including:
    i. Project and Group Details
    ii. Student Roles in Project Development
    iii. Weekly Activity Report

Note: *The content format of the Log Book can be modified according to the suitability of the course of each program of study respectively.. (Refer to* ***APPENDIX C: STUDENT LOG BOOK FORMAT****)*

7.0 PROPOSAL & TECHNICAL REPORT WRITING

A Technical Report is to present a solution to a problem to prompt action. Technical reports provide a record of developing expertise and are a legal record of work and decision making. The items outlined are subject to need as well as suitability with reference to the curriculum of the program of study currently in force at the polytechnic.

7.1 Content of Proposal Presentation

Table 7.1 shows the content/outline for Proposal:

Table 7.1: Proposal Content/Outline

No	Topic/Chapter	Description
1.0	Introduction	Clearly explains the project to be undertaken.
2.0	Problem Statement	Clearly explains the problems.
3.0	Objectives	The main objective is very clear during first submission.
4.0	Scope	Clearly clarify scope for system and user.
5.0	Project Significance (Cannot be measured)	Excellently explains the project significance.
6.0	Literature Review	Clearly describes the theories or evidence related to the project based on previous studies.
7.0	Methodology	Clearly describes the method will be used in developing and implementing the project
8.0	References	Well organized list of references that are significant to the project. The arrangements of the list must follow APA format.
9.0	Gantt Chart	Well organized chart that clearly reflects the plans and progress of the project (project schedule).
10.0	Cost Planning	Well organized calculation of cost planning.
11.0	Conclusion	Clearly conclude the whole project proposal

There are several aspects of values/characteristics that will be assessed in Proposal Presentation. The values/characteristics that need to be focused on are as follows:

7.1.1 Leadership

a) Effective Leadership
Exhibits very clear evidence of being able to effectively lead group members in reaching project objectives.

b) Knowledge and Skills in leadership
Provide a very clear proof of knowledge and understanding in practice.

7.1.2 Teamwork

a) Alternate role
Demonstrate clear evidence of switching between roles as a group leader and a group member in practice.

b) Foster good relationship
High capacity to build positive relationships and collaborate successfully with other group members to attain goals.

c) Respect and accept opinions
Capable of respecting and accepting the opinions of others in order to achieve the group's goals.

7.1.3 Autonomous Learning

All Six (6) aspects of Autonomous Learning are described as an excellent new problem-solving idea. There are:

a) **New Idea**
b) **Problem Statement**
c) **Project Literature**
d) **Methodology**
e) **Costing and**
f) **References**

7.1.4 Self-Involvement

Participate fully in independent learning.

7.1.5 Social Responsibility

All four (4) aspects of Social Responsibility must clearly articulate the project's contribution to the community or stakeholder.

a) **Background**
b) **Scope**
c) **Significance**
d) **Costing**

Table 7.2 shows the summary of the aspect values and the content for the proposal presentation.

Table 7.2: Summary of proposal presentation

Aspect Value	Content
Leadership a) effective leadership b) knowledge skills in leadership	Project Objectives
Teamwork a) alternate role b) foster good relationship c) respect and accept opinion	
Autonomous learning	a) New Idea, b) Problem Statement, c) Project Literature, d) Methodology, e) Costing f) References.
Self-involvement	
Social responsibility	a) Background, b) Scope, c) Significance, d) Costing

7.2 Content of Technical Report Writing

7.2.1 Abstract

A brief and concise summary of the project to help users understand the project problems, purpose, methods, and scope but NOT results, conclusions and recommendations. The length should not exceed 100 words (in one page only). Abstracts should be provided in two languages Bahasa Malaysia and followed by English language on the same page separately. Among the important information in the abstract are:

- What and why is the project/study done?;
- What problem are you trying to solve? (Problem Statement);
- What approaches/methods are used to solve the problem? (i.e.: simulation, model analysis, prototyping, data collection and analysis, products);
- What are the project findings/outcome? (Findings/Results);
- What are the implications of your findings and results based on your project? (Conclusions); and
- Suggestions of approaches or improvements that can be made for further study in the same issue. (Recommendation/Future Works)

7.2.2 Project Plan

a) Problem Statement

Problem statement refers to a concise description of an issue/problem that requires a solution guided by the advance of the study. It describes the problem to be addressed as well as the contribution project findings to solve the problem either in part or as a whole.. The problem statement must have a clear correlation with project background considering the following:

i. factor/cause of the problem;
ii. effects/impact on the country/society/economy/environment;
iii. reference issues gathered from the following:
    - Preliminary Research Method
    - Articles/Journals/Reports/Past Studies

b) Objective

The objectives of the project should be linked to the problem statement and should clearly state how the problem can be solved. Number of project objectives proposed are between TWO (2) to THREE (3) objectives. In writing the project objective, students are advised to use the SMART criteria (Specific, Measurable, Achievable, Realistic and Time oriented). This is to ensure the written objectives are organized and clear. Verb is used to show the specific action or focus for each objectives' statement.
Examples of verb: identify, determine, compare, understand, explain, analyze, evaluate, design, develop, testing, implementation etc.

c) Scope

The scope of the study explains the limits for the implementation of the project carried out. This explanation is important to ensure that the evaluator can understand the boundaries of the study in question. Students need to explain the limitations in the study such as number of samples, target user, study period, place limitations and others*.
**The other scope was depending on the supervisor/stakeholder/user requirement.*

d) Literature Review

A literature review reviews information derived from journals, books, past proceedings, or recent studies related to the project. It is a systematic process that requires research and finding, collecting, reading, and formulating the information in detail. It can provide ideas and direction to focus on current issues studied. The amount material as reference required is at least THREE (3) scholarly references published within the previous five years or any project/system related to the proposed project. The main elements that need to be considered for reference analysis are:

a) find similarities and look for contrast – compare or synthesize in terms of interface/ functionalities/solution/cost/etc.
b) give an opinion (criticized) – advantage/disadvantage
c) summaries

*Comparative studies need to be presented in Table form.

e) Methodology

Methodology refers to a brief explanation of the most suitable methods/techniques /processes in developing a project. The project design can be described (exploratory, descriptive, causal, or experimental) and whether data collected are qualitative, quantitative, or mixed methods. Proposed methodology that can be used are:

a) ADDIE;
b) Agile;
c) Prototyping;
d) Scrum,
e) JAD etc.

f) Gantt Chart

Gantt chart projects the overall activities and progress of the project. This activity planning involves structured timeline that shows weekly plans for project development based on the methodological flow chart. Planning each activity is necessary with detailed distribution of tasks among group members and time targets for each task. The suggested planning or scope of work can refer to System Development Lifecycle (SDLC) implementation methodology learned in System Analysis and Design course.

7.2.3 Requirement Specification

a) Functional Requirement

It is a description of the service provided by the software or WHAT a system does. It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality that defines what function a system/network/security is likely to perform in the first place. Each track should be able to write its Functional Requirement based on the suitability of the project specifications.

b) Non-Functional Requirement

It is a specification that describes the system's operational capabilities and constraints that enhance its functionality and determine HOW the system must perform. These may be speed, security, reliability, etc. **Table 7.3** shows the product's non-functional requirements.

Table 7.3: Products of Non-Functional Requirements

Requirement	Product
Performance	The website's load time should not be more than one second for users.
Reliability	Applicants can access their resumes 98% of the time without failure.
Availability	Applicants can access their resumes 98% of the time without failure.
Maintainability	If the automated email services become unavailable, they can be under maintenance for approximately three hours.
Recoverability	Employers can post jobs on the website throughout the week at any time during the day. In the case of unplanned system downtime, all features will be available again after one working day
Capacity	Up to 500 applicants can request a resume review. Up to 1,000,000 resumes can be stored.

Requirement	Product
Serviceability	The applicants' automated emails can be edited and replaced by uploading an XML file; there is no need to recompile any code.
Security	Only the users with the role "site admin" can view the applicant's verified phone number.
Manageability	When editing the code for applicants' profile pages, the rest of the site stays up and running.
Environmental	Resume reviews are performed Monday through Friday from 9 AM to 6 PM.
Data integrity:	The system shall maintain data integrity by keeping backups of all updates to the database for every record transaction.
Interoperability	The website must follow the service-oriented architecture.
Usability	The website's interface must be user-friendly and easy to use.

Source: https://winatalent.com/blog/2020/05/what-are-non-functional-requirements-types-and-examples/

c) Hardware and Software Requirement

Hardware and Software requirements are the specifications used in the project development. The list of requirements should be written in table form.

d) System Configuration

System configuration defines the computer hardware, its processes and the variety of devices used throughout the entire system and its boundaries.

e) Security Requirement

Explain the security features/exceptional handling method implemented in the project.

7.2.4 Final Design

It is a project development design that includes the implementation of an activity or process in the project. Each of the tracks should be able to design projects based on their project specifications.

a) Logical Design

Explain and show the details of a logical design project. It includes all system or network development diagrams, including data flow diagrams, flowcharts, entity-relationship diagrams, contact diagrams, schematic diagrams, and logical network topology.

b) Physical Design

Explain and show the details of the physical design project. It includes all user interface design and physical network topology.

**Logical and physical design is selected according to the appropriateness of the project background.*

c) Experimental Concept

Explain and show the detailed planning to meet the objective, collect data using suitable tools and executed the experiment.

7.2.5 Test Description and Results

Students need to explain the development process and the result of the project. The testing processes also must be done to verify the functionality of the project. The description of each content of the test description and results is defined as follows:

a) Unit Testing Plan

The goal is to ensure that each unit of software code functioned as planned. Developers perform unit testing during the development (coding phase) of an application. A unit of an application is testable, and the scope and activities of unit testing are described using the form provided. **Table 7.4** shows example of Unit Testing Plan.

Table 7.4: Unit Testing Plan

UNIT TESTING PLAN (UTP)						
No	**Test Case Name**	**Test Procedure**	**Pre-condition**	**Expected Result**	**Tester**	**Result (Pass/Failure)**
1	Login	User is required to fill the username and password field before access the system	Users need to register or sign up before login	Prompt notification successful login	Mohd Mazlan	Pass
2						

**** Expected result will be based on the test case name procedure***

b) Integration Testing Plan

Explain and show the details of the physical design project which include checking the interface design of their interactions and compliance with the requirements. **Table 7.5** shows example of Integration Testing Plan.

For example, when we look at the login and signup features in an e-commerce application, we consider them separate entities. To determine whether a user can log in or sign up after adding items to their basket and then proceeding to the checkout, we must first determine whether the two functionalities are interconnected.

Table 7.5: Integration Testing Plan

INTEGRATION TESTING PLAN (ITP)						
No	**Test Case Name**	**Test Procedure**	**Pre-condition**	**Expected Result**	**Tester**	**Result (Pass/Failure)**
1	Login	User is required to click Submit button	None	User will directly go to Homepage system after login	Mohd Mazlan	Pass
2						

**** Expected result will be based on the test case name procedure***

7.2.6 Major Findings and Discussion

The description of each content of the significant findings and discussions is defined as follows:

a) The Advantage(s) of the Project
List the advantages of the product.

b) The disadvantage(s) of the Project
List the disadvantages of product.

7.2.7 Recommendation and Conclusion

Students must be able to make some conclusions about the project and discuss the importance of the outcome. Students also must make a recommendation or suggestion to enhance the project for future works.

7.2.8 References

References are sources and materials used as reference in project/study. Each material should be listed according to material priority order concerning the page reference. The references should listed according to the format or method used for citations.

7.3 Entrepreneur Mind Set

Students must relate the project with real-life problem solving by engaging the product with an entrepreneur mind in technical report writing.

7.4 Technical Report Writing Format

Items	Description
Cover Page	• Contains: Project title, authors' names, registration numbers, department name, polytechnic name, and session of study • Colour paper: Blue • Paper size: A4 • Font size: 14 pt • Font Type: Times New Roman
Paper and Size	Use only high quality white A4 70-gram or A4 80-gram paper, size 210mm X 297mm.
Margin	For each page, the margin should be: • Left: 3.5 cm • Top and Bottom: 2.5 cm • Right: 2.0 cm • Header and Footer: 1.5 cm
Typesetting	1.5 spacing should be used in preparing the technical project report included for tables or charts. The typesetting which acceptable is: • Font Type: Times New Roman, Font Size: 12 pt. • Chapter Title: Uppercase, Bold, Centered **(e.g.: 1.0 ABSTRACT)** • Chapter Subsection: Title Case, Bold, Align left **(e.g.: 2.1 Problem Statement)** • Paragraph: Justify
Figure and Table	All tables, charts, figures, and graphs should be numbered and have titles. Both the number and the title should be centered either directly above for tables label and directly below for figure label. The numbering must be related to the Chapter. **(e.g.: Figure 2.4: The interface of system, Table 1.1: Hardware Requirement)**
Project Technical Report	Report must be written minimum 30 pages length and not more than 50 pages (**EXCLUDING** the front page, appendices, and references)
Paging	Bottom right
References	Any material taken from another source must be identified and cited/quoted (a brief reference is given to the source and to be included in the text). The student must follow The American Psychological Association (APA) reference citations style for references in text.
Binding	Comb binding with plastic cover

ASSESSMENT RUBRICS

- A: PROPOSAL PRESENTATION (10%)
- B: PROJECT DEMONSTRATION 1 (10%)
- C: PROJECT DEMONSTRATION 2 (10%)
- D: PROJECT DEMONSTRATION 3 (15%)
- E: FINAL PRESENTATION – POSTER (15%)
- F: FINAL PRESENTATION (15%)
- G: LOG BOOK (10%)
- H: LOG BOOK – CHECKLIST
- I: TECHNICAL REPORT (15%)

☐ SUPERVISOR
☐ EXTERNAL ASSESSOR
☐ INTERNAL ASSESSOR

PROPOSAL PRESENTATION
(10%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Proposal Presentation Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Leadership									
1.1 Effective leadership • Project Objective	Demonstrates very clear evidence of the ability to lead group members effectively in achieving objectives	Demonstrates clear evidence of the ability to lead group members effectively in achieving objectives	Demonstrates moderate evidence of the ability to lead group members effectively in achieving objectives	Demonstrates less evidence of the ability to lead group members effectively in achieving objectives	10	(/ 4) * 10			

Aspects	Proposal Presentation Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1.2 Knowledge and skills in leadership • Project Objective	Very clear evidence of knowledge and understanding demonstrated in practice	Able to demonstrate evidence of knowledge and understanding in practice moderately	Able to demonstrate evidence of knowledge and understanding in practice and require minor improvements.	Able to demonstrate evidence of knowledge and understanding in practice with major improvements	10	(/ 4) * 10			
2. Teamwork									
2.1 Alternate role	Show clear evidence to assume alternate roles as a group leader and a group member demonstrated in practice	Able to demonstrate in practice the ability to assume alternate roles as a group leader and a group member to achieve the same goal	Able to demonstrate in practice the ability to assume alternate roles as a group leader and group members with some effect(s) and require minor improvements	Attempt to demonstrate in practice the ability to alternate roles as a group leader and group members but with limited effect and require improvements	10	(/ 4) * 10			
2.2 Foster good relationship	High ability to foster good relationship and work together effectively with other group members towards goal achievement	Able to foster good relationship and work together with other group members towards goal achievement	Able to foster relationship and work together with other group members towards goal achievement with some effect(s) and require minor improvements	Able to foster relationship and work together with other group members towards goal achievement but with limited effect and require improvements	10	(/ 4) * 10			

Aspects	Proposal Presentation Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
2.3 Respect and accept opinions	Able to very well respect and accept opinion of others in achieving group's objectives	Able to well respect and accept opinion of others in achieving group's objectives	Able to respect and accept opinion of others in achieving group's objectives	Limited respect and acceptance of others' opinions in achievement group's objectives	10	(/ 4) * 10			
3.Autonomous learning New Idea • Problem Statement • Project Literature • Methodology • Costing • References	Describe an excellent new idea to solve problems	Describe good new ideas to solve problems	Describe moderate new ideas to solve problems	Describe less effective new ideas to solve problems	20	(/ 4) * 20			
4.Self-involvement	Fully engage in independent learning	Consistent in engaging for independent learning	Strive to become accustomed to independent learning	Minimize self - involvement in independent learning	10	(/ 4) * 10			
5.Social responsibility Contribution to community / stakeholder • Background • Scope • Significance • Costing	Describe very clearly project contributions to community or stakeholder	Describe clearly project contributions to community or stakeholder	Describe moderately project contributions to community or stakeholder	Poorly describe project contributions to community or stakeholder	20	(/ 4) * 20			
						Total Score (100)			
						Proposal Presentation Score (10%) **Formula = (Total Score/100 * 10)**			

PROJECT DEMONSTRATION 1
(10%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Project Demonstration 1 Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Progress of Project Development	More than **40%** complete	More than **30%** complete	More than **20%** complete	Less than 2**0%** complete	20	(/ 4) * 20			
2. Interface/ Structure Design	Clearly explain the design of project structure in details.	Able to explain the project structure design briefly.	Explain the project structure design in general only.	Show the project structure design without explanations.	20	(/ 4) * 20			
3. Content and Concept of Project	The project content does offer **80%** solution to the problem.	The project content does offer **60%** solution to the problem.	The project content does offer **40%** solution to the problem.	The project content does offer **20%** solution to the problem.	20	(/ 4) * 10			

Aspects	Project Demonstration 1 Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
4. System Security and Features/ Exceptional Handling	Implement a very clear system security and features /Exceptional Handling	Implement a clear system security and features /Exceptional Handling	Implement a moderate system security and features /Exceptional Handling	Implement a fair system security and features /Exceptional Handling	20	(/ 4) * 10			
5. Testing	Test cases are very clearly tested with expected output and actual output	Test cases are clearly tested with expected output and actual output	Test cases are moderately tested with expected output and actual output	Test cases are fairly tested with expected output and actual output	20	(/ 4) * 10			
						Total Score (100)			
						Project Demonstration 1 Score (10%) **Formula = (Total Score/100 * 10)**			

PROJECT DEMONSTRATION 2
(10%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Project Demonstration 2 Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Progress of Project Development	Progress more than **80% complete**	Progress more than **65%** complete	Progress more than **50%** complete	Progress less than **50%** complete	20	(/ 4) * 20			
2. Interface/ Structure Design	Clearly explain the design of project structure in details.	Able to explain the project structure design briefly.	Explain the project structure design in general only.	Show the project structure design without explanations	20	(/ 4) * 20			

Aspects	Project Demonstration 2 Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
3. Content and Concept of Project	The project content does offer **100%** solution to the problem.	The project content does offer **80%** solution to the problem.	The project content does offer **60%** solution to the problem.	The project content does offer **40%** solution to the problem.	20	(/ 4) * 20			
4. System Security and Features/ Exceptional Handling	Implement a very clear system security and features /Exceptional Handling	Implement a clear system security and features /Exceptional Handling	Implement a moderate system security and features /Exceptional Handling	Implement a fair system security and features /Exceptional Handling	20	(/ 4) * 20			
5. Testing	Test cases are very clearly tested with expected output and actual output	Test cases are clearly tested with expected output and actual output	Test cases are moderately tested with expected output and actual output	Test cases are fairly tested with expected output and actual output	20	(/ 4) * 20			
						Total Score (100)			
						Project Demonstration 2 Score (10%) **Formula = (Total Score/100 * 10)**			

☐ SUPERVISOR
☐ EXTERNAL ASSESSOR
☐ INTERNAL ASSESSOR

PROJECT DEMONSTRATION 3
(15%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Project Demonstration 3 Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Project achievement and objective	Project is **100%** complete and achieve all objectives	Project is more than **80%** complete and achieve all objectives	Project is more than **50%** complete and achieve a few objectives	Project is less than **50%** complete and achieve only one objective	12.5	(/ 4) * 12.5			
2. User Requirements	All requirements were met.	Several requirements were met	Only one requirement was met	No requirement was met	12.5	(/ 4) * 12.5			
3. Construction and functionality	Excellently describes how the system was constructed and how it functions	Clearly describes how the system was constructed and how it functions	Moderately describes how the system was constructed and how it functions	Generally, not clearly describes how the system was constructed and how it functions	12.5	(/ 4) * 12.5			

Aspects	Project Demonstration 3 Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
4. Feasibility	Excellently communicated feasibility of construction and implementation most of the time	Clearly communicated feasibility of construction and implementation most of the time with minor error	Moderately communicated feasibility of construction and implementation most of the time with minor error	Generally, not clear communicated feasibility of construction and implementation most of the time with minor error	12.5	(/ 4) * 12.5			
5. Originality	Product shows an excellent genuine idea	Product shows a good genuine idea	Product shows moderate amount of genuine idea	Copied product	12.5	(/ 4) * 12.5			
6. Marketability	Provide strong evidence through market surveys **AND** have a client (with proof) **OR** recognition from outside parties (lab tested, MyIPO, testimonial)	Provide strong evidence such as market surveys **OR** have a client (with proof) **OR** recognition from outside parties	Provide a few evidence from both sources of newspapers, blogs, social media or etc.	Least attempt is made for a market potential	12.5	(/ 4) * 12.5			
7. Creativity	Excellent ideas, creative and inventive.	Good ideas, creative and inventive.	Moderate ideas, creative and inventive.	Least creative ideas and inventive.	12.5	(/4)*12.5			
8. System Security, Features and Testing	Excellent implementation of user controls and validation controls	Good implementation of user controls and validation controls	Moderate implementation of user controls and validation controls	Least implementation of user controls and validation controls	12.5	(/4)*12.5			
						Total Score (100)			
						Project Demonstration 3 Score (15%) **Formula = (Total Score/100 * 15)**			

☐ SUPERVISOR
☐ EXTERNAL ASSESSOR
☐ INTERNAL ASSESSOR

FINAL PRESENTATION (POSTER)
(15%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Final Presentation (Poster) Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Contents	Details on the poster capture the important information about the topic and increase the audience's understanding	Details on the poster include important information but the audience may need more information to fully understand	Details on the poster relate to the topic but are too general or incomplete. The audience needs more information to understand	Details on the poster have little or nothing to do with main topic that makes it hard for the audience to understand	20	(/ 4) * 20			
2. Use of Graphics	All graphics used are related to the topic and the choice of fonts and colors are affective/ interesting	All graphics are related to the topic and usage the fonts and colors are good.	All graphics are related to the topic and usage the fonts and colors are acceptable.	Graphics do not relate to the topic usage the fonts and colors are poor.	20	(/ 4) * 20			

Aspects	Final Presentation (Poster) Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
3. Organization	Information is very organized with clear titles and subheadings	Information is very organized with titles and subheadings	Information is very organized, but titles and subheadings are missing or do not help the reader to understand	The Information appears to be disorganized.	20	(/ 4) * 20			
4. Layout and Design	All information on the poster is in focus and can be easily viewed and identified from 6 feet away	Most of the information on the poster is in focus and the content easily viewed and identified from 6 feet away	Most of the information on the poster is in focus and the content easily viewed and identified from 4 feet away	Most of the information on the poster is unclear or too small	20	(/ 4) * 20			
5. Mechanics	No grammatical, spelling or punctuation errors.	Almost no grammatical, spelling or punctuation errors.	A few no grammatical, spelling or punctuation errors.	Many grammatical, spelling or punctuation errors.	20	(/ 4) * 20			
						Total Score (100)			
						Final Presentation (Poster) Score (15%) **Formula = (Total Score/100 * 15)**			

☐ SUPERVISOR
☐ EXTERNAL ASSESSOR
☐ INTERNAL ASSESSOR

FINAL PRESENTATION
(15%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Final Presentation Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Verbal Communication									
1.1 Clear Delivery of Ideas	Able to deliver ideas with great clarity	Able to deliver ideas clearly	Able to deliver ideas fairly and require minor improvements	Able to deliver ideas but require further improvements	20	(/ 4) * 20			
1.2 Confident Delivery of Ideas	Able to deliver ideas with great confidence	Able to deliver ideas confidently	Able to deliver ideas fairly and require minor improvements	Able to deliver ideas with limited confidence and require further improvements.	20	(/ 4) * 20			

Aspects	Final Presentation Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1.3 Effective and Articulate Delivery of Ideas	Able to deliver ideas with great effect and articulate	Able to deliver ideas effectively and articulately	Able to deliver ideas fairly effectively and require minor Improvements.	Able to deliver ideas with limited effect and poor articulation.	20	(/ 4) * 20			
1.4 Adapt Delivery to Audience Level	Able to fully deliver ideas appropriately very well	Able to deliver ideas appropriately to the target audience well	Able to deliver ideas appropriately to the target audience satisfactorily	Able to deliver ideas with limited appropriateness to the target audience and require further Improvements	20	(/ 4) * 20			
1.5 Audience Engagement: Understand and Respond to Question	Able to fully understand and respond to questions very well	Able to understand and respond to questions well	Able to understand and answer questions satisfactorily	Able to understand and answer questions but not able to accurately answer the question	20	(/ 4) * 20			
						Total Score (100)			
						Final Presentation Score (15%) **Formula = (Total Score/100 * 15)**			

LOG BOOK
(10%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Log Book Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Written Activities • refer checklist	Weekly activities written more than 90%	Weekly activities written more than 60%	Weekly activities written more than 30%	Weekly activities written less than 30%	30	(/ 4) * 30			
2. Signature of verification • refer checklist	More than 90% of the supervisor's signatures of verification are shown	More than 60% of the supervisor's signature of verification are shown	More than 30% of the supervisor's signature of verification are shown	Less than 30% of the supervisor's signature of verification are shown	30	(/ 4) * 30			

Aspects	Log Book Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
3. Performance of Psychomotor Skills	Students can perform and describe the project activities accordingly with appropriate illustration / example	Students can perform and describe the project activities accordingly	Students can perform the project activities but have difficulties to describe it accordingly	Progress more than **35%** complete but students cannot perform and describe the project activities accordingly	40	(/ 4) * 40			
						Total Score (100)			
						Log Book Score (10%) **Formula = (Total Score/100 * 10)**			

LOG BOOK CHECKLIST

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Number of Week*		Activities Written			Sign by Supervisor		
		S1	S2	S3	S1	S2	S3
Week 1	Week 1						
Week 2							
Week 3	Week 2						
Week 4							
Week 5	Week 3						
Week 6							
Week 7	Week 4						
Week 8							

Number of Week*		Activities Written			Sign by Supervisor		
		S1	S2	S3	S1	S2	S3
Week 9	Week 5						
Week 10							
Week 11	Week 6						
Week 12							
Week 13	Week 7						
Week 14							
Percentage							

TECHNICAL REPORT
(15%)

STUDENT INFORMATION			
COURSE NAME	INTEGRATED PROJECT	**COURSE CODE**	DFT50114
PROJECT TITLE		**CLASS**	
SUPERVISOR NAME		**DATE**	
STUDENT NAME	**S1:**	**REGISTRATION NUMBER**	**S1:**
	S2:		**S2:**
	S3:		**S3:**

Aspects	Technical Report Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
1. Abstract • Project problem • Purpose • Scope • Method	Describe excellent and specific abstract sentence without grammatical errors. Excellent explanations of the project.	Describe good abstract sentence without grammatical errors. Good explanations of the project	Describe moderate abstract sentence with moderate grammatical errors. Moderate explanations of the project	Describe poor abstract sentence with many grammatical errors. Poor explanations of the project	10	(/ 4) * 10			

Aspects	Technical Report Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
2. Project Plan • Introduction • Problem statement • Objective • Scope • Literature review • Methodology • Gantt Chart	Describe excellent and specific sentence for project plan with specific potential, business / entrepreneur ideas and plan	Describe good sentence for project plan with potential, business / entrepreneur ideas and plan	Describe moderate sentence for project plan with potential, business / entrepreneur ideas and plan	Describe poor sentence for project plan without any potential, business / entrepreneur ideas and plan	10	(/ 4) * 10			
3. Requirement Specification • Functional Requirement • Non-Functional Requirement • Hardware and Software Requirement • System Configuration • Security Requirement / Exceptional Handling	All requirements are excellently described and shows very good potential to market the project / product	Only 3 requirements are clearly described and shows good potential to market the project / product	Only 2 requirements are clearly described and shows moderate potential to market the project / product	Only 1 requirement is clearly described and shows weak potential to market the project / product	10	(/ 4) * 10			
4. Final Design	Excellently shows process in design and very well suited for commercialization purposes	Clearly shows process in design and very well suited for commercialization purposes	Moderately shows process in design and very well suited for commercialization purposes	Poorly shows process in design and very well suited for commercialization purposes	10	(/ 4) * 10			
5. Test Description and Results	Use excellent testing technique and suitable data Excellent result elaboration	Use good testing technique and suitable data Good result elaboration	Use moderate testing technique and suitable data Moderate result elaboration	Use poor testing technique and suitable data Poor result elaboration	10	(/ 4) * 10			

Aspects	Technical Report Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
6. Major Findings and Discussions	Excellent list the advantages and disadvantages	Clearly list the advantages and disadvantages	Moderately list the advantages and disadvantages	Poor list the advantages and disadvantages	10	(/ 4) * 10			
7.1 Conclusions	Excellent elaboration of the conclusion and recommendations	Clear elaboration of the conclusion and recommendations	Moderate elaboration of the conclusion and recommendations	Poor elaboration of the conclusion and recommendations	5	(/ 4) * 5			
7.2 Recommendations	Excellently stated the future work that can be done to extend the project/product in to the market	Clearly stated the future work that can be done to extend the project/product in to the market	Moderately stated the future work that can be done to extend the project/product in to the market	No future work stated to extend the project/product in to the market	5	(/ 4) * 5			
8. References	References are significant to project and very organized with well- constructed using APA format	References are organized and significant to project and follow APA format	References are significant to project and follow APA format	Reference is not significant to the project but follow APA format	10	(/ 4) * 10			
9. Organization of Ideas	The ideas are written with very clear, detailed, and high impact reflection that suit entrepreneurial mind (client need)	The ideas are written with clear, detailed and have a few impacts reflection that suit entrepreneurial mind	The ideas are written with fair detail and high impact reflection that suit entrepreneurial mind	The ideas are written poorly and no impact reflection that suit entrepreneurial mind	10	(/ 4) * 10			

Aspects	Technical Report Score						Student Score		
	Very Good (4)	Good (3)	Fair (2)	Weak (1)	Weightage (%)	Standard	S1	S2	S3
10. Entrepreneur Mindset	Shows excellent real-life problem solving with entrepreneur mindset.	Shows good real-life problem solving with entrepreneur mind set.	Shows moderate real-life problem solving with entrepreneur mindset.	Shows poor real-life problem solving with entrepreneur mindset.	10	(/ 4) * 10			
						Total Score (100)			
						Technical Report Score (15%) Formula = (Total Score/100 * 15)			

APPENDIXES

- A: PROJECT REGISTRATION FORM
- B: PROJECT TITLE AMENDMENT FORM
- C: STUDENT LOG BOOK FORMAT
- D: INDUSTRY EXPERTISE AND COOPERATION SERVICES LETTER
- E: DECLARATION OF AUTHENTICITY AND OWNERSHIP
- F: GENERAL FORMAT FOR TECHNICAL REPORT
    - F-1: Front Cover Format
    - F-2: Declaration Page Format
    - F-3: Approval Page Format
    - F-4: Abstract Page Format
    - F-5: Beginning of Chapter Format
    - F-6: Table and Figure Numbering Format
    - F-7: References Page Format
- G: GENERAL FORMAT FOR POSTER

APPENDIX A

PROJECT REGISTRATION FORM

PROJECT REGISTRATION FORM

DFT50114 INTEGRATED PROJECT

SECTION A: PROJECT TEAM			
STUDENT #1			
NAME			
MATRIX NO		**I/C NO**	
TRACK		**CLASS**	
EMAIL		**PHONE NO**	
STUDENT #2			
NAME			
MATRIX NO		**I/C NO**	
TRACK		**CLASS**	
EMAIL		**PHONE NO**	
STUDENT #3			
NAME			
MATRIX NO		**I/C NO**	
TRACK		**CLASS**	
EMAIL		**PHONE NO**	

SECTION B: PROJECT INFORMATION	
PROJECT TITLE	
PROJECT CATEGORY	<refer to PROJECT GUIDELINE Chapter 1: 1.2 Project Category>
Project Description: *(Please attach a separate sheet if space is not sufficient)*	
SUPERVISOR'S NAME	

SECTION C: DECLARATION		
STUDENT		
I will comply with the implementation timeframe of this project, and I also understand that failure to comply with the project will result in an action taken against me.		
(Student #1 Signature)	(Student #2 Signature)	(Student #3 Signature)
NAME #1:	NAME #2:	NAME #3:
PROJECT SUPERVISOR		
I hereby agree to be the student's supervisor for this semester.		
(Supervisor Signature, Official Stamp, Date)		
PROJECT COORDINATOR		
I hereby approved the student's application to register for this course.		
(Coordinator Signature, Official Stamp, Date)		

APPENDIX B

PROJECT TITLE AMENDMENT FORM

PROJECT TITLE AMENDMENT FORM

DFT50114 INTEGRATED PROJECT

SECTION A: PROJECT TEAM			
STUDENT #1			
NAME			
MATRIX NO		**I/C NO**	
TRACK		**CLASS**	
EMAIL		**PHONE NO**	
STUDENT #2			
NAME			
MATRIX NO		**I/C NO**	
TRACK		**CLASS**	
EMAIL		**PHONE NO**	
STUDENT #3			
NAME			
MATRIX NO		**I/C NO**	
TRACK		**CLASS**	
EMAIL		**PHONE NO**	

SECTION B: PROJECT INFORMATION	
(ORIGINAL TITLE)	
PROJECT TITLE	
PROJECT CATEGORY	<refer to PROJECT GUIDELINE Chapter 1: 1.2 Project Category>
Project Description:	

(Please attach a separate sheet if space is not sufficient)

SECTION B: PROJECT INFORMATION	
Reason for amendment: *(Please attach a separate sheet if space is not sufficient)*	
(NEW TITLE)	
PROJECT TITLE	
PROJECT CATEGORY	<refer to PROJECT GUIDELINE Chapter 1: 1.2 Project Category>
Project Description: *(Please attach a separate sheet if space is not sufficient)*	

SECTION C: DECLARATION		
STUDENT		
I will comply with the implementation timeframe of this project, and I also understand that failure to comply with the project will result in an action taken against me.		
(Student #1 Signature)	(Student #2 Signature)	(Student #3 Signature)
NAME #1:	NAME #2:	NAME #3:
PROJECT SUPERVISOR		
I hereby (agree / disagree) * application to change the title of the student project above. (Supervisor Signature, Official Stamp, Date)		
PROJECT COORDINATOR		
Application to change the title of this project (approved / not approved). (Coordinator Signature, Official Stamp, Date)		

APPENDIX C

PROJECT LOG BOOK

POLITEKNIK _____

PROJECT LOG BOOK
DFT50114 INTEGRATED PROJECT

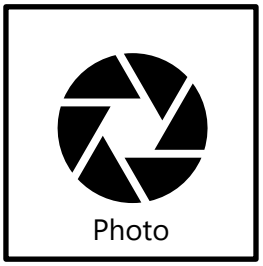
DIPLOMA IN INFORMATION TECHNOLOGY
(DIGITAL TECHNOLOGY)

TRACK:

- ☐ SOFTWARE AND APPLICATION DEVELOPMENT
- ☐ NETWORKING SYSTEM
- ☐ INFORMATION SECURITY
- ☐ DATA MANAGEMENT AND VISUALIZATION
- ☐ WEB DEVELOPMENT

NAME	
REGISTRATION NO	
SESSION	

PROJECT LOG BOOK
DFT50114 INTEGRATED PROJECT



STUDENT INFORMATION	
NAME	
REGISTRATION NO.	
SESSION	
PHONE NUMBER	
EMAIL	
ADDRESS	

TEAM MEMBERS		
NO	**NAME**	**REGISTRATION NO.**
1		
2		
3		

PROJECT DETAILS	
PROJECT TITLE	
PROJECT SUPERVISOR	

STUDENT ROLES IN PROJECT DEVELOPMENT

ROLES	
NO	**TASK DESCRIPTION**

Roles summaries are based on allocating project scopes among group members.

WEEKLY ACTIVITY REPORT

WEEK:	DATE:	TIME:
Project Progress Report:		
Assignment Proposal (Next Meeting):		
Project Supervisor Feedback: Verified by: (Signature of Project Supervisor) Date:		

Students need to update the report weekly and include relevant attachments in support.

APPENDIX D

INDUSTRY EXPERTISE AND COOPERATION SERVICES LETTER

KEPALA SURAT POLITEKNIK

Rujukan kami:
Tarikh:

NAMA SYARIKAT/ ORGANISASI

Tuan,

Memohon khidmat kepakaran dan kerjasama industri bagi projek pelajar semester ..... Kursus DFT50114 Integrated Project, Program Diploma Teknologi Maklumat (Teknologi Digital)

Adalah dimaklumkan bahawa pelajar-pelajar berkenaan adalah pelajar yang berdaftar di Jabatan Teknologi Maklumat & Komunikasi Politeknik .....

NO	NAMA	NO PENDAFTARAN	NO TELEFON	EMAIL
1				
2				
3				

2. Bagi memenuhi syarat penganugerahan Diploma Teknologi Maklumat (Teknologi Digital), pelajar hendaklah melaksanakan kajian dan menghasilkan projek selari dengan keperluan kursus DFT50114 Integrated Project.

3. Sehubungan dengan itu, saya mewakili pihak politeknik ingin memohon kepakaran dan kerjasama daripada pihak tuan dalam membantu pelajar menyiapkan projek ini. Untuk sebarang pertanyaan, pihak tuan boleh menghubungi Penyelia Projek yang bertanggungjawab iaitu ..... di talian .....

4. Kerjasama dan sokongan yang diberikan oleh pihak tuan didahului dengan ucapan ribuan terima kasih.

Sekian.

"WAWASAN KEMAKMURAN BERSAMA 2030"
"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

Ketua Jabatan
Jabatan .....
b.p Pengarah
Politeknik .....

APPENDIX E

DECLARATION OF AUTHENTICITY AND OWNERSHIP

DECLARATION OF AUTHENTICITY AND OWERSHIP

PROJECT TITLE:
<< Project title >>
<< Project title >>

Session: << 1 2021/2022 >>

We : **1. STUDENT NAME (NRIC : XXXXXX-XX-XXXX)**
2. STUDENT NAME (NRIC : XXXXXX-XX-XXXX)
3. STUDENT NAME (NRIC : XXXXXX-XX-XXXX)

is a students **Diploma in Information Technology (Digital Technology)**, from **Politeknik** at _____(here in after referred to as "the polytechnic").

We acknowledge that the “Project above” and the intellectual property contained therein are the result of my original work/invention without taking or copying any intellectual property from other parties.

We agree to relinquish ownership of the intellectual property of "the Project" to "the Polytechnic" to meet the requirements for the award of **Diploma in Information Technology (Digital Technology)** to me.

Made and truly acknowledged) by the said;

STUDENT NAME #1)
……)
(NRIC : XXXXXX-XX-XXXX)) STUDENT NAME #1

STUDENT NAME #2)
……)
(NRIC : XXXXXX-XX-XXXX)) STUDENT NAME #2

STUDENT NAME #3)
……)
(NRIC : XXXXXX-XX-XXXX)) STUDENT NAME #3

on the date:_____

In front of me **<< Supervisor Name >> (XXXXXX-XX-XXXX)**) ……
as project supervisor on the date:_____) SUPERVISOR NAME

APPENDIX F

GENERAL FORMAT FOR TECHNICAL REPORT

- F-1: Front Cover Format
- F-2: Declaration Page Format
- F-3: Approval Page Format
- F-4: Abstract Page Format
- F-5: Beginning of Chapter Format
- F-6: Table and Figure Numbering Format
- F-7: References Page Format

APPENDIX F – 1
FRONT COVER FORMAT

2.5 cm

3.5 cm

2cm

DEPARTMENT OF INFORMATION TECHNOLOGY AND COMMUNICATION

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

E-BOOKING SYSTEM

GROUP MEMBERS:

MUHAMAD HAFIZI BIN SUBANDI	**01DDT19F1007**
MOHD MAZLAN BIN MOHD NOR	**01DDT19F1008**
MOHD LOKMAN BIN MOHD AMIN	**01DDT19F1009**

SUPERVISOR:

SITI NURHALIZA BINTI ABD RAZAK

SESSION: 1 2021/2022

2.5 cm

2.5 cm

APPENDIX F – 2
DECLARATION PAGE FORMAT

3.5 cm

2cm

DECLARATION

We hereby declare that the technical report entitled "E-Booking System" is based on original work under supervision and guidance of Pn. Siti Nurhaliza Binti Abd Razak except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other diploma or award at Polytechnic or other institutions.

1. Signature :
   Name : MUHAMAD HAFIZI BIN SUBANDI
   Registration No : 01DDT19F1007
   Date :

2. Signature :
   Name : MOHD MAZLAN BIN MOHD NOR
   Registration No : 01DDT19F1008
   Date :

3. Signature :
   Name : MOHD LOKMAN BIN MOHD AMIN
   Registration No : 01DDT19F1009
   Date :

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2.5 cm

APPENDIX F – 3
APPROVAL PAGE FORMAT

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2cm

APPROVAL FOR SUBMISSION

Project Title : E-BOOKING SYSTEM

Session : 1 2021/2022

Submitted by : 1. MUHAMAD HAFIZI BIN SUBANDI (01DDT19F1007)
2. MOHD MAZLAN BIN MOHD NOR (01DDT19F1008)
3. MOHD LOKMAN BIN MOHD AMIN (01DDT19F1009)

"This technical report has been read, checked and approved in term of scope and quality for the award of Diploma in Information Technology (Digital Technology)."

Checked by

Supervisor's Signature :

Supervisor's Name :

Date :

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APPENDIX F – 4
ABSTRACT PAGE FORMAT

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ABSTRACT

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The E-Booking System is a project implemented for Good Luck Hotel, which is an imaginary hotel. It provides people all over the world with an easy and fast way to book hotel rooms online. The interface of the E-Booking System is Web pages that can be accessed with a Web site browser. The system is implemented in PHP (Hypertext Preprocessor) and HTML (Hyper Text Markup Language). Users can perform room booking activities at Good Luck Hotel anytime and anywhere by accessing it via Internet.

The Online Hotel Booking System is an easy-to-use application. Everyone who knows how to use a Web browser can easily carry out booking, change the booking details, cancel the booking, change the personal profile, view the booking history, or view the hotel information by following its simple and clear GUI (Graphical user interface) design.

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APPENDIX F – 5
BEGINNING OF CHAPTER FORMAT

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1.0 PROJECT PLAN

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1.1 PROBLEM STATEMENT

Indent first line for each paragraph -1"

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Single 1.5 spacing between paragraphs

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1.2 OBJECTIVE

The objective E-Booking System development are:

i. To develop an incididunt ut labore et dolore magna aliqua.

ii. To generate report for incididunt ut labore et dolore magna aliqua.

iii. To create incididunt ut labore et dolore magna aliqua.

1.3 SCOPE

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Mobile application development life cycle is a structured analysis technique that is used to plan and manage the development application process. Mobile application development life cycle is a complete development process which is includes five phases where the initial phase is analyze and end with the evaluation phase. This approach is more appropriate to the application that will be developed. Figure 3.1 shows the ADDIE Model.

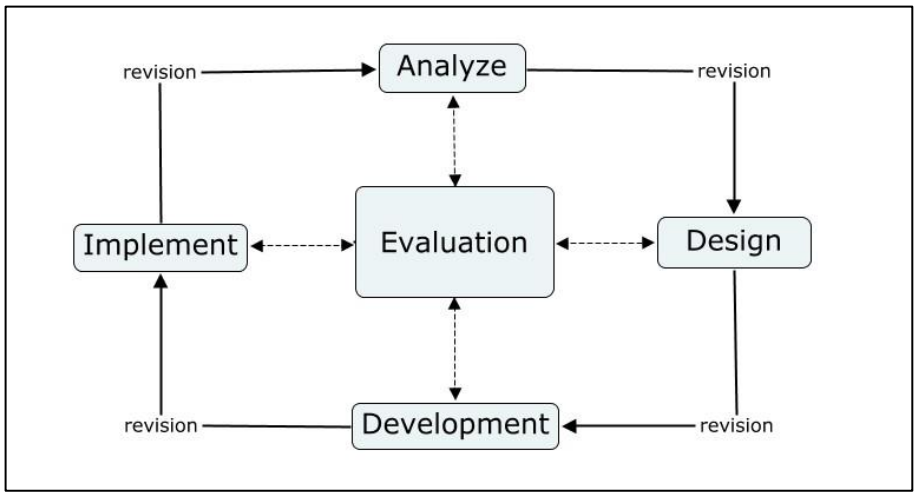

Figure 3.1: ADDIE Model

To develop the SmartStudy Data Structure mobile application, some of the software used is identified. Table 4.1 shows the software required for SmartStudy Data Structure mobile application development.

Table 4.1: Software requirement

Software	**Description**
Unity 3D	Download Unity 3D from web http://Unity3d.com/get-unity/download?ref=personal Mark the box "Active free version of unity" to make the installation process is free of charge. Next, the user must log into the account of unity to launch the installation process. According to the instruction during the installation process until Unity 3D successfully installed in the pc.

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APPENDIX G

GENERAL FORMAT FOR POSTER

PICTURE

Group Member 1,
Student ID
E-mail : .....

PICTURE

Group Member 2,
Student ID
E-mail : .....

PICTURE

Group Member 3,
Student ID
E-mail : .....

POLITEKNIK MALAYSIA

KEMENTERIAN PENGAJIAN TINGGI

KOLEJ KOMUNITI MALAYSIA

PROJECT TITLE

Supervisor's name:

Product Description
Penerangan Produk

Methodology & Materials
Metodologi & Bahan

Significant / Benefit
Kepentingan & Faedah

Problem & Causes
Masalah & Punca

Objective
Objektif

Conclusion
Kesimpulan

PROJECT PICTURE

**** The poster template can be modified to suit the project***

DFT 50114
FINAL YEAR PROJECT
GUIDELINES
2022 Edition

POLITEKNIK MALAYSIA

KEMENTERIAN PENGAJIAN TINGGI

KOLEJ KOMUNITI MALAYSIA

DEPARTMENT OF POLYTECHNIC EDUCATION AND COMMUNITY COLLEGE

ARAS 4 -7 Galeria PjH, Jalan P4W,
Persiaran Perdana, Presint 4,
62100 Wilayah Persekutuan Putrajaya
Tel : 03-88919000 | Faks : 03-88919300
www.mypolycc.edu.my

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