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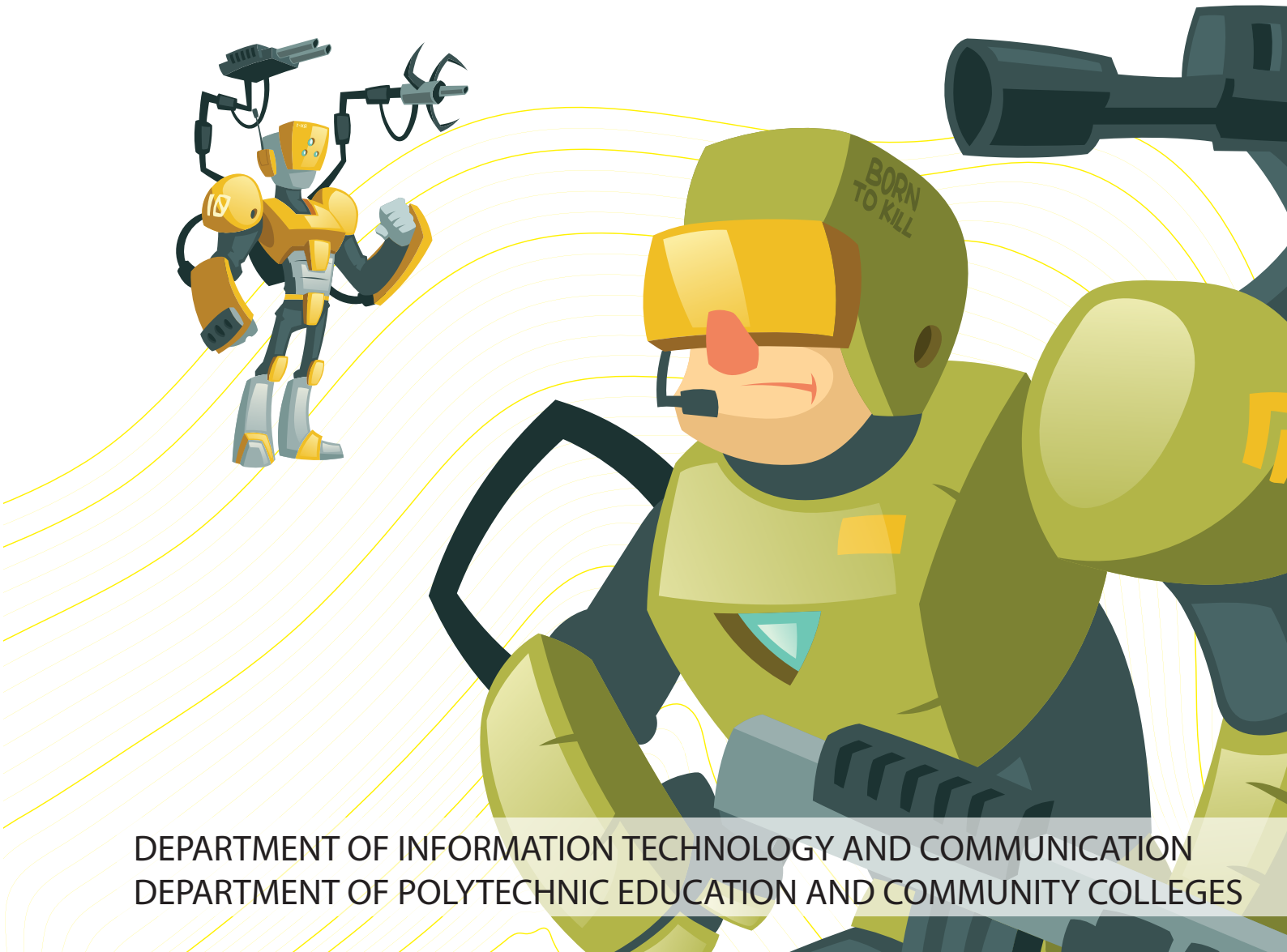
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

KOLEJ KOMUNITI MALAYSIA

PROJECT GUIDELINE

GAMES TECHNOLOGY TRACK | 2022 EDITION

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)



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

PROJECT GUIDELINE DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY) GAMES TECHNOLOGY TRACK

2022 Edition

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PREFACE

Gratitude be to Allah S.W.T for, by His mercy, Project Guideline Diploma in Information Technology (Digital Technology) for Games Technology Track is completed and to be a useful tool for the students and academic staffs in the supervision of the project since the first edition in 2018. This project guideline offers detailed instructions on the project scope, roles and duties, planning, implementation, intellectual property, formatting, and evaluation of the projects. This policy's notions, concepts, and guiding principles are intended to help the students, management, and supervisors to ensure a high quality project to be created.

The Second Edition of this Final Year Project Guideline includes suggestions based on comments and feedback from supervisors, lecturers, and Accessor Panels, as well as the addition of new ideas or topics based on continuous quality improvement (CQI) of the Game Project course. To produce quality materials in assessment, evaluation, and formatting of the final project reports, it is encouraged that students and their supervisors closely adhere to the procedure or guideline outlined in this revised edition (second edition).

Thank you and congratulations to the committee members for their work, commitment, and emphasis on improving the content of this Project Guideline. It is with great expectation and hope that this project guideline will help the students to produce exceptional final projects with the help of outstanding supervision skills from the academic staffs.

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Token of appreciation

A word of appreciation to all parties directly involved as well as all parties who Has collaborated in refining the

PROJECT GUIDELINE DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY) GAMES TECHNOLOGY TRACK

Diploma in Information Technology (Digital Technology)

Department of Information Technology and Communication

Department of Polytechnic Education and Community Colleges

Track

Games Technology

CONTENTS

1.0 INTRODUCTION, ROLES AND RESPONSIBILITIES

1.1 Introduction

Project Guideline Diploma in Information Technology (Digital Technology) has been developed for the Games Technology track of the Diploma in Information Technology (Digital Technology) and to be used by the students and the lecturers of Department of Information Technology and Communication at all polytechnics.

Game Project is a compulsory course to be taken by the final year diploma students, where each of them will need to finish a project related to their study field. The project guidelines used will help the students to apply their understanding of information technology theories and put to the test their ability to solve related problems. An assessment will be conducted to evaluate their design and problem-solving skills as well as their ability to carry out technical management tasks.

1.2 Type of Project: Product Based

Game Project can create products in the form of processes, games, and prototypes. Students can use problem-solving techniques applied by industries, institutions, or communities in the development of this game project, whether they are new or already in use. The game project's development and testing procedures should be pointed out in detail, supported by relevant statistics, research, and other project-related evidence.

1.3 Project Structure

In general, the requirements of the Game Project curriculum structure for the programme are used as a guide to implement the course. Before enrolling in the course, the student must first complete all core courses. The Game Project course, which must be finished in one (1) semester, includes tasks like identifying issues, setting up objectives, handing in a literature review, developing a research methodology, designing a game, collecting data, conducting analysis, validating the findings, drawing conclusions, and making recommendations. These activities, however, may differ depending on the curriculum documents created for the program.

1.4 Project Characteristics

The Game Project is generally characterized as follows:

a) timeline and objectives are clearly stated;
b) project development that results in detailed solutions, both scientifically and systematically;
c) possess commercial and entrepreneurial values;

d) incorporate value-added components to enhance the standard of ongoing projects (future upgrade);
e) take into account current technological advancements; and
f) has commercial value.

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

1.5 Game Project Committee

The implementation of Game Project requires effective management, coordination, implementation and monitoring from all parties in ensuring that the projects produced by students meet the programme requirements. The work structure proposed at the polytechnic level is as follows:

1.5.1 Game Project Execution Committee at Polytechnic Level

This committee consists of:
a) Deputy Director (Academic) / Deputy Director
b) Head of Department or Head of Academic Department
c) Research, Innovation and Commercialisation Unit (*Unit Penyelidikan, Inovasi dan Komersial* - UPIK)
d) Polytechnic Student Project Coordinator

1.5.2 Game Project Execution Committee at the Department Level

This committee consists of:
a) Head of Department / Head of Academic Department
b) Head of Programme
c) Research, Innovation and Commercialisation Unit Coordinator
d) Department's Student Project Coordinator
e) Project Course Coordinator
f) Project Supervisor

Note: The appointment of such committee depends on the institution's management

1.6 Roles and Responsibilities

To ensure the implementation of the Game Project course runs smoothly and effectively, the persons involved and their responsibilities are listed below:

1.6.1 Deputy Director (Academic) / Deputy Director

a) Chair the Academic Management Committee or Game Project Execution Committee Meeting at polytechnic level to discuss matters related to the execution of the Game Project course.

b) Identify solutions to issues across departments or programmes.
c) Approve the operating budget (if necessary) for the implementation of student projects.

1.6.2 Head of Department / Head of Academic Department

a) Chair the Game Project Execution Committee Meetings at the department level to discuss matters related to the implementation of the Game Project course.
b) Raise and discuss matters related to the Game Project in the Academic Management Committee or Student Project Execution Committee Meeting at polytechnic level.
c) Ensure the implementation and evaluation of the Game Project are done based on the curriculum currently in force.
d) Obtain budget to implement the Game Project course (if any).

1.6.3 Research, Innovation and Commercialisation Unit

a) Plan and facilitate activities related to the development of innovative product, project outcomes competition as well as research findings and innovation
b) Coordinate competitions to select the best projects at polytechnic level.
c) Maintain Game Project Inventory Form at polytechnic level.
d) Coordinate research grant applications as needed.
e) Coordinate Intellectual Property (IP) application process for student projects with potential and have high impact.
f) Inform and coordinate the participation in innovation competitions outside of polytechnic.
g) Inform students in writing if their project has been successfully commercialized for the distribution of commercialization proceeds among the creators (designers/ developers).

1.6.4 Polytechnic Student Project Coordinator

a) Acts as a liaison officer to coordinate the implementation of the Game Project course between UPIK and the Department's Student Project Coordinator, and between the polytechnic and Department of Polytechnic and Community College Education (JPPKK).
b) Coordinate the activity planning calendar or schedule for Game Project course execution approved by the Deputy Director (Academic) or Deputy Director based on the curriculum currently in force.

c) Prepare and communicate/disseminate/inform Game Project management procedures to all Department's Student Project Coordinators based on the curriculum currently in force.
d) Raise and discuss matters related to the Game Project course in the Academic Management Committee or Student Project Execution Committee Meeting or any other relevant meetings at the polytechnic level.
e) Coordinate and manage budget for the implementation of Game Project course (if any).
f) Ensure that Game Project Inventory Form at the department and polytechnic levels are continually updated.
g) Handle any issues or problems that arise.

1.6.5 Head of Programme

a) Monitor the implementation and evaluation of Game Project course based on the curriculum documents currently in force.
b) Analyse learning outcome achievement.
c) Regulate the continuous quality improvement (CQI) of study programmes.

1.6.6 Department's Student Project Coordinator

a) Acts as a liaison officer between the academic department and UPIK.
b) Brief the Project Course Coordinator.
c) Create and update the project inventory database maintained in the department
d) Keep a verified copy of the Project Registration Form (APPENDIX A).
e) Identify and appoint a Project Evaluation Panel with the approval from the Head of Department / Head of Academic Department.
f) Coordinate student project competitions / symposia / colloquiums / seminars at the department level.
g) Handle any issues or problems that arise.

1.6.7 Project Course Coordinator

a) Acts as liaison officer between the student and the Project Supervisor.
b) Brief students on Game Project course.
c) Brief the Project Supervisor.
d) Provide information related to the Game Project course.
e) Prepare an activity for project implementation planner throughout the semester.
f) Prepare a list of members of the student Game Project group together with the Project Supervisor.

g) Submit a copy of the approved Project Registration Form to the Department's Student Project Coordinator.
h) Ensure there is no overlap and repetition of the game project title.
i) Approve change of game project title using the Project Title Amendment Form (APPENDIX B) by week 6 or week 3 for short semester (if any).
j) Provide a letter of permission for field study to students to carry out projects (if necessary).
k) Prepare, and distribute presentation and evaluation schedules.
l) Provide Game Project course rubric forms separately for each student.
m) Manage matters related to the appointed Project Evaluation Panel.
n) Collect, record and update Project Inventory Form (APPENDIX C).
o) Recommend continuous quality improvement (CQI) for the Game Project course.
p) Keep a copy of the Final Project Report and project outcome if needed.

1.6.8 Project Supervisor

a) Discuss project title and scope with students and confirm/verify it.
b) Approve and submit the Project Registration Form to the Project Course Coordinator.
c) Responsible for the safety of students while in the laboratory.
d) Guide, facilitate and supervise students so that the learning process, delivery of knowledge and project journey can be implemented towards achieving the learning outcomes specified.
e) Record students' attendance.
f) Hold meetings or discussions with students physical or virtual as well as review and verify project progress summaries throughout the semester using the Log Book.
g) Guide and supervise students on the method of writing a suitable proposal paper or report for the type of project implemented.
h) Ensure that the writing is based on the prescribed writing format and guidelines.
i) Evaluate students' project under supervision.
j) Record and submit marks in the system.
k) Ensure that students submit a copy of the project report / outcome to the Project Course Coordinator according to specified date.
l) Keep a copy of the report and project results.

1.6.9 Panel of Assessors

a) Evaluate the game progress demonstration and projects presentation using a specified rubric.
b) Return the rubric to the Project Course Coordinator.

1.6.10 Students

a) Comply with safety and health procedures and regulations as well as ethics in the laboratory.
b) Performing responsibility as a team member in a group project.
c) Conduct a preliminary study regarding 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) Complete and submit the Project Registration Form to the Project Supervisor within the specified period for approval.
e) Prepare and submit pitch document to the Project Supervisor at the beginning of the semester.
f) Implement projects according to the project implementation planner.
g) Record the progress of the project in the Log Book and obtain verification from the Supervisor.
h) Discuss with the Supervisor regularly.
i) Prepare and submit the report together with the product for presentation and evaluation of the project.
j) Achieve the learning outcomes through the assessment criteria.
k) Comply with the instructions from the institution from time to time.

Note: Roles and responsibilities depend on the institution's management

2.0 PROJECT PLANNING

2.1 Introduction

Game Project planning is a discipline addressing how to complete a project within a certain timeframe, usually with defined stages and designated resources. During the project planning phase, the scope of the project is defined by a work breakdown structure (WBS) and the project methodology to manage the project is decided on. Setting measurable objectives, identifying deliverables, scheduling and planning tasks, costs, quality and resources are estimated and a project schedule with milestones and task dependencies is identified. The main deliverable of this phase is a project plan.

2.2 Rules and Regulation

The following are the rules for the implementation of the project that must be adhered to based on the needs of the programme:

a) Students must **PASS ALL COMMON CORE** and **PREREQUISITE** courses before enrolling for this course.
b) Only students who register for the Project course are allowed to implement projects.
c) Students should seek guidance or advice from the Project Supervisor in the selection of project titles.
d) The selection of titles is based on the respective programme areas and students are strongly encouraged to undertake projects across a field studied in line with the latest technological developments.
e) Students need to register the title of their project using the Project Registration Form (APPENDIX A).
f) Change of project title is allowed with the approval of the Project Course Coordinator by using the Project Title Amendment Form (APPENDIX B).
g) The selection of titles is based on the respective programme areas and students are strongly encouraged to undertake projects across a field studied in line with the latest technological developments**.**
h) Students need to prepare a Gantt chart based on the Project Implementation Planner. Working plan provided in the form of a Gantt chart detailing the distribution tasks between team members (if applicable) and time targets for each assignment. The planning or scope of work must refer to the actual task to carry out the project.
i) Students need to record project implementation activities in the Log Book (APPENDIX D).
j) Students need to obtain a letter of permission from the polytechnic if the project involves external agencies or industries.
k) Students are required to complete all evaluation components of the Game Project as required in the curriculum document.
l) All the project requirements will be kept at respective polytechnics as references.
m) Students need to ensure that all the project requirements are independent of elements of plagiarism.

2.3 Distribution of Students and Project Supervisors

The formation of team members and Project Supervisors will be organised by the Project Course Coordinator.

2.4 Project Selection

The selection of the project is carried out after discussion between the Project Supervisor and students.

2.5 Project Costing

The entire cost of the students' project is fully supported (funded) by the student. However, polytechnics have no constraint if student get any sponsorship for the project but need to inform the Project Supervisor.

2.6 Project Implementation Planner

WEEK	SHORT SEMESTER	CLO	ASSESSMENT	TOPIC / TASK	REMARKS
Week 1	Week 1	CLO4	**Log Book** **Technical Report** *(Draft Chapter 1, 2 & 3)*	**1.0 INTRODUCTION TO GAME DEVELOPMENT** 1.1 Explain various types of life cycle models in game project development. 1.2 Discuss game concepts in game project development. 1.3 Explain roles and responsibilities in game project development **2.0 PRE-PRODUCTION: BRAINSTORMING GAMES IDEA** 2.1 Explain fact-finding techniques used in game project pre-production phase 2.2 Identify appropriate fact-finding techniques in game project pre-production phase	Student/ Supervisor
Week 2		CLO4	**Log Book** **Technical Report** *(Draft Chapter 1, 2 & 3)*	**Continue Topic 2** 2.3 Prepare the information gathered from fact-finding process 2.4 Explain various types of documentation in games development 2.5 Discuss pitch document in game project planning 2.6 Discuss marketing principles to promote marketable game project	Student/ Supervisor
Week 3	Week 2	CLO3C LO4	**Log Book** **Technical Report** *(Draft Chapter 1, 2 & 3)* **Pitch Document**		Student/ Supervisor/ Accessor
Week 4		CLO4	**Log Book** **Technical Report** *(Draft Chapter 4)*	**3.0 PRODUCTION: GAME DESIGN AND DEVELOPMENT** 3.1 Build user interface in game project development to conform HCI concepts 3.2 Build game sprites/ assets in game project development using suitable software 3.3 Build game levels in game project development 3.4 Construct audio to suit the game project's genre.	Student/ Supervisor
Week 5	Week 3	CLO4	**Log Book** **Technical Report** *(Draft Chapter 4)* **Game Progress Demonstration 1**		Student/ Supervisor
Week 6		CLO4	**Log Book** **Technical Report** *(Draft Chapter 4)*		Student/ Supervisor
Week 7	Week 4	CLO1 CLO4	**Log Book** **Technical Report** *(Draft Chapter 4)*		Student/ Supervisor/ Accessor
Week 8		CLO1 CLO4	**Log Book** **Technical Report** *(Draft Chapter 5)*	**4.0 POST-PRODUCTION: GAME TESTING AND DEPLOYMENT** 4.1 Explain software testing methods in game project post-production 4.2 Perform software testing in game project post-production	Student/ Supervisor
Week 9	Week 5	CLO4	**Log Book** **Technical Report** *(Draft Chapter 5)* **Game Progress Demonstration 2**		Student/ Supervisor
Week 10		CLO4	**Log Book** **Technical Report** *(Draft Chapter 5)*		Student/ Supervisor
Week 11	Week 6	CLO1C LO4	**Log Book** **Technical Report** *(Draft Chapter 6)*		Student/ Supervisor/ Accessor

<table>
<tr><th>WEEK</th><th>SHORT SEMESTER</th><th>CLO</th><th>ASSESSMENT</th><th>TOPIC / TASK</th><th>REMARKS</th></tr>
<tr><td>Week 12</td><td></td><td>CLO4</td><td>Log Book
Technical Report
(Draft Chapter 6)</td><td rowspan="3">Continue Topic 4

4.3 Prepare technical document in game project post-production
4.4 Build the project to executable file in game project post-Production</td><td>Student/ Supervisor</td></tr>
<tr><td>Week 13</td><td rowspan="2">Week 7</td><td>CLO4</td><td>Log Book
Technical Report
(Draft Chapter 6)
Game Progress Demonstration 3</td><td>Student/ Supervisor</td></tr>
<tr><td>Week 14</td><td>CLO1CLO4</td><td>Log Book
Technical Report
(Complete report)</td><td>Student/ Supervisor/ Accessor</td></tr>
<tr><td>Week 15</td><td rowspan="2">Week 8</td><td rowspan="2">CLO2</td><td colspan="2">Project Presentation</td><td rowspan="2">Student/ Supervisor/ Accessor</td></tr>
<tr><td>Week 16</td><td colspan="2">Submission of the project and related documentation</td></tr>
</table>

Note:
This project planner may be amended according to the polytechnic's preferences.
Log Book carries 5% of the overall game project marks.
Technical Report carries 20%
- *Chapter 1 Introduction*
- *Chapter 2 Literature review*
- *Chapter 3 Project Methodology*
- *Chapter 4 Game Design*
- *Chapter 5 Project Testing and Analysis*
- *Chapter 6 Conclusion and Recommendations*

Pitch Document carries 15%.
Game Progress Demonstration 1, 2 and 3 carries 30%.
Project Presentation carries 30%

2.7 Project Gantt Chart

Activity \ Week/ Short Semester	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16
	Week 1		Week 2		Week 3		Week 4		Week 5		Week 6		Week 7		Week 8	
1.0 INTRODUCTION TO GAME DEVELOPMENT The entire game development is recorded, implemented and reported from time to time **2.0 PRE-PRODUCTION: BRAINSTORMING GAMES IDEA** Prepare the information gathered from fact-finding process, game project planning & pitch documentation and marketable game project																
Technical Report (20%) Chapter 1, 2 & 3																
Pitch Document (15%)																
3.0 PRODUCTION: GAME DESIGN AND DEVELOPMENT Prepare and build game project development with HCI concepts, genre, game sprites/ assets, game levels and audio using suitable software **4.0 POST-PRODUCTION: GAME TESTING AND DEPLOYMENT** Prepare a software testing in game project post-production																
Technical Report (20%) Chapter 4																

Game Progress Demonstration 1 (30%)																
Technical Report (20%) Chapter 5																
Game Progress Demonstration 2 (30%)																
4.0 POST-PRODUCTION: GAME TESTING AND DEPLOYMENT Prepare technical document and executable file in game project post-production																
Technical Report (20%) Chapter 6																
Game Progress Demonstration 3 (30%)																
Log Book (5%)																
Project Presentation (30%)																

Note: This Project Gantt Chart may be amended according to each polytechnic

3.0 PROJECT IMPLEMENTATION

3.1 Project Implementation Flow Chart

The implementation of the project must follow the procedures that have been set in the curriculum of Diploma in Information Technology (Digital Technology) and the Game Project syllabus. This course is conducted within ONE (1) semester only.

Note: The implementation of the flow chart outlined is subject to the current Academic Calendar issued by the Department of Polytechnic Education and Community Colleges

Flow Chart	Involvement	Reference
START		
Project briefing	Coordinator	Game Project Guideline, Project Planner
Project group formation	Student	
Selection of project title & supervisor	Coordinator, Student, Supervisor	Project Registration Form
Pitch document preparation	Student	
Pitch document review	Student, Supervisor	Log Book
Game development 30%	Student, Supervisor	Log Book
Game progress demonstration 1	Student, Accessor, Supervisor	Assessment rubric, Log Book
Game development 60%	Student, Supervisor	Log Book
Game progress demonstration 2	Student, Accessor, Supervisor	Assessment rubric, Log Book
Game development 90%	Student, Supervisor	Log Book
Game progress demonstration 3	Student, Accessor, Supervisor	Assessment rubric, Log Book
Game development 100%	Student, Supervisor	Log Book
Project presentation	Student, Supervisor, Accessor	Assessment rubric, Log Book
Project amendment & technical report review	Student, Supervisor	Log Book
Technical report, Log Book & Project Inventory Form submission	Student	Assessment rubric
Assessments evaluation record	Coordinator, Supervisor	
END		

Figure 3.1 Project Course Implementation Flow Chart

Note:
Coordinator: Project Course Coordinator
Project Planner: Project Implementation Planner
Game Project Guideline: Games Project Guideline Diploma in Information Technology (Digital Technology) for Games Technology Track

3.1.1 Project Briefing

The Project Course Coordinator presents project implementation to the Project Supervisors and students. This briefing is to ensure all parties involved get clear and consistent information on their duties and responsibilities. The contents of the briefing are proposed as follows:

a) course outline based on curriculum documents;
b) project implementation activities according to the calendar and project implementation planner;
c) types of projects based on the needs of the programme;
d) project themes, titles and ideas;
e) game project inventory;
f) distribution of students according to the Project Supervisor;
g) registration of project title agreed by the Project Supervisor;
h) format and evaluation of assessment;
i) implementation of projects;
j) The marks based on the curriculum document;
k) game progress demonstration and project presentation;
l) project cost;
m) project ownership/copyright; and
n) enforcement of Project Guideline Diploma in Information Technology (Digital Technology) for Games Technology Track.

3.1.2 Project Group Formation

Projects can be implemented individually or in groups (not more than three (3) students). For group projects, the scope of task for team members should be clearly detailed and stated in the pitch document.

Note: The formation of project groups can be added or changed according to the needs of the programme.

3.1.3 Selection of Project Title and Project Supervisor

Students must submit the Project Registration Form (APPENDIX A) for the selection of the project title. Project Course Coordinator and Project Supervisors are encouraged to set themes to help students generate ideas and determine projects to be implemented. The title of the selected project must meet the scope and be in line with the curriculum. The project ideas are from the students themselves, Project Supervisors, local community, or industry collaborations. If needed, the approved questionnaires can be prepared and distributed to selected people or area. The findings will help students to make sure the project is aligned with the certain need of current market.

Students may refer to the game project inventory before proposing a new title or previous project to the Project Supervisor. Previous projects can be used for the purpose of improving existing products. Change of project title is only allowed with the consent of the Project Supervisor and the approval of the Project Course Coordinator within week six (6) or week three (3) for short semester.

3.1.4 Pitch Document Preparation

The preparation of a pitch document depends on the needs of the course and programme. The pitch document can only be written in English based on the given format (is there a format attached in this guideline). Students must discuss the details and divide the tasks among team members.

3.1.5 Pitch Document Review

The Project Supervisor should review the pitch document prepared by the students to determine the suitability of the project. If it fails to meet the specified characteristics or criteria, the students must make correction to the document with the guidance of the Project Supervisor. All the documents which have been reviewed should be kept by the Project Supervisor.

3.1.6 Project Activities Implementation

In project activities implementation, students need to develop their game that have been planned. They also must produce a technical report based on the pitch document and the implementation of the project must follow the project implementation planner. The Project Supervisor should consult and guide students in the entire process of game development.

All expenses for project activities are under the responsibility of the students themselves, but students may discuss with the Project Supervisor to obtain allocation from the polytechnic if the project is of interest to the polytechnic. Students are also encouraged to work with the Project Supervisor to get research grants from any ministry or organization that offers the grant. Permission to use the polytechnic facilities must get the support from the Project Supervisor and the consent of the officer in charge.

Students must prepare a technical report chapter by chapter and complete the Log Book after meeting with the Project Supervisor. The Project Supervisor must monitor, review, and evaluate the Log Book as well as all project activities implemented by each student on a regular basis.

3.1.7 Game Progress Demonstration

Students develop the game project by referring to project implementation planner. The game progress demonstration is divided into three (3) stages:

a) Game Progress Demonstration 1: 30% complete
b) Game Progress Demonstration 2: 60% complete
c) Game Progress Demonstration 3: 90% complete

Project results should be reviewed by the Project Supervisor prior to the presentation and evaluation session by the panel of assessors. Students are required to make the appropriate corrections and improvement based on the comments from the panel of assessors and Project Supervisor during the demonstration.

3.1.8 Project Presentation

Students must complete the game project by conducting an alpha and beta testing. The complete final product of the project will be evaluated by the panel of assessors according to the rubric given.

3.1.9 Project Amendment and Technical Report Review

Students are required to make amendments based on the comments from the panel of assessors during the project presentation. The technical report should complete based on their game product. All the documents which have been reviewed should be kept by the Project Supervisor.

3.1.10 Technical Report, Log Book and Project Inventory Form Submission

Students are required to submit:

a) Three (3) copies of the technical report signed by the Project Supervisor. (A copy for the Project Supervisor, library, and student);
b) Log Book (verified by the Project Supervisor); and
c) A completed Project Inventory Form.

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

3.1.11 Assessment Evaluation Record

The Project Supervisor must complete all the assessment criteria based on the curriculum document. The Project Supervisor will record the marks into the system.

3.2 Project Course Evaluation

Project course evaluation must be done throughout the semester. Student achievement is measured based on the learning outcomes. Evaluation components in assessment of the Game Project course must be implemented and assessed individually. Project evaluation is based on the assessment rubrics. The course assessment rubrics consists of:

a) Pitch document;
b) Log Book;
c) Game progress demonstration;
d) Technical report; and
e) Project presentation.

Evaluation is done by the Project Supervisor and the panel of assessors. The panel of assessors may consist of polytechnic lecturers and external panels from industries or academic sector appointed by the polytechnic. They can be appointed to evaluate game progress demonstration and project presentation. The tasks of the panels are:

a) evaluate the project presentation based on the rubric; and
b) provide comments and feedback for the improvement of projects.

Students will **FAIL** the project course if:

a) the project does not fully meet the evaluation criteria;
b) there is evidence of plagiarism in the development/designing of the project; and
c) does not comply with the examination rules and regulation i.e. *Arahan-Arahan Peperiksaan dan Kaedah Penilaian (Diploma) Politeknik Malaysia* issued by Bahagian Penilaian dan Pentaksiran (BPN), JPPKK as well as the instructions issued by the polytechnic from time to time.

Note: The items above are based on the consideration of the management of the respective polytechnic

4.0 INTELLECTUAL PROPERTY

Intellectual Property is an exclusive right granted by law for a specified period to the creator of a work to control the use of their work. Intellectual property is now seen as an industrial sector that contributes to the socio-economic development of a country. Copyright protection in Malaysia is based on the Copyright Act 1987 which recognizes the creator as the owner of the work when it meets the specified criteria. Intellectual Property Corporation of Malaysia (MyIPO) is a body established by the Malaysian government that has been responsible for managing the protection of various forms of intellectual property such as trademarks, copyrights, patents and industrial designs, geographical indication and integrated circuit layout designs.

4.1 Statutes

The statutes related to Intellectual Property include any enshrined property such as:

a) Patents and utility innovations as defined in the Patent Act 1983;
b) Copyright and protection granted according to the Copyright Act 1987;
c) The trademark and its protection granted pursuant to the Trademark Act 1976 and under the common law for confusion;
d) Industrial design and its protection granted under the Industrial Designs Act 1996*;* and
e) Supervising the communication and multimedia industry leading to inclusion in Communications and Multimedia Act 1998.

4.2 Intellectual Property Rights

Intellectual property is all types of matters protected under laws set out in item 4.1. The definition of intellectual property refers to the result of an invention based on one's mind. The name for Intellectual Property itself is given based on inventions or works produced through the thinking and intellectual power of a person whether ideas, inventions, designs, sketches, drawings, writing, and music. The definition of computer programmes is either through design, integrated circuit layout, and database. Intellectual property rights are rights regulated under specific laws that allow intellectual property owners to exercise exclusive control over the exploitation of such rights with the aim of profiting from commercialisation activities.

4.3 Copyright

a) Copyright Act 1987 protects the creator of a work to control the use of the work produced. Based on the breakdown of the categories of works are such as literature, art, music, film, sound, broadcast and publication.
b) Students may register copyright as exclusive rights protection for invented products.

c) MyIPO suggests that the protection of project work can be divided into two categories namely Literature (protecting manuals and writing on student products) and Art (protecting graphics found on the products produced). However, it depends on the suitability of the work produced.
d) The period of coverage is indefinite, does not need to be renewed, but may expire after 50 years of the death of the owner.

4.4 Originality

A project is categorized as original when the project is produced or developed by students individually or in groups without elements of plagiarism. According to *Dewan Bahasa dan Pustaka (Kamus Pelajar Edisi Kedua)*, plagiarism is the result of scooping up other people's work or writings that are republished as their work (usually in the case of composing). the Cambridge Online Dictionary, plagiarism means the process or practice of using another person's ideas or work and pretending that it is your own. In this context, plagiarism refers to the act of using or copying another person's work/work without permission and knowingly acknowledging the work as their work without giving credit/recognition to the original author. The act of giving credit or recognizing the original author can be expressed by quoting or citing the source referred. Based on the *Arahan-Arahan Peperiksaan dan Kaedah Penilaian (Diploma)* instructions currently in force, plagiarism is a form of academic malpractice and conviction, and 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.

4.5 Prior Art Search

Prior art search is a form of review done on previous inventions to ensure the latest elements (novelty) of an invention while avoiding infringement of intellectual property rights (infringement) or imitation of the invention. To perform the patent search process, an easy way is to use keywords through the following sources:

a) Google Patents via the link https://patents.google.com
b) European Patent Office (www.espacenet.com)
c) Patent Lens Home (www.patentlens.com)
d) WIPO - Search International and National Patent Collections (www.wipo.int/pctdb)
e) Korean Intellectual Property Office (KIPO) (www.kipo.go.kr/en)
f) Official website of the United States Department of Trademarks and Patents and US Patent and Trademark Office (http://www.uspto.gov/patent)

More detailed information on intellectual property including patents can be accessed on the Intellectual Property Corporation of Malaysia (MyIPO) website, via the link http://www.myipo.gov.my.

4.6 Registration of Intellectual Property Project

Research and Innovation Center (PPI) JPPKK, stipulates that the registrar of intellectual property for student projects is registered as copyright. However, in certain cases, UPIK can suggest if there is a student project that has high impact and potential to be registered.

4.7 Ownership of Intellectual Property Right

Intellectual Property will be filed or registered in the name of the polytechnic. The polytechnic is responsible for taking all necessary actions in enforcing intellectual property rights in the event of exploitation and any violation of intellectual property rights.

4.7.1 Project ownership can be divided into three (3) categories:

a) All student project produced are the property of the polytechnic if:
   i. the project was developed or designed on the needs of the polytechnic programme of study;
   ii. projects generated, designed, developed or produced using facilities, materials, funds or other resources belonging to the polytechnic; or the project is designed with the support of and under the supervision of the Polytechnic Project Supervisor; and
   iii. the project was designed with the support of and under the supervision of the Polytechnic Project Supervisor.

b) All student projects produced through collaboration with industry become the joint property of the polytechnic and industry following the terms of collaboration that have been agreed between the polytechnic and industry.

c) All student projects produced also become the property of the polytechnic following the terms of collaboration that have been agreed upon between the polytechnic and industry.

4.8 Distribution of Incentives to Creators and Institutions

Distribution of incentives or royalties for winning competitions received are as follows:

Table 4.8: Distribution of incentives or royalties for winning competitions received

Distribution of Incentives	Creators	Institution
The first RM250,000.00	80%	20%
RM250,000.00 to RM1,000,000.00	70%	30%
RM1,000,000.01 to RM2,000,000.00	60%	40%
RM2,000,000.00 and above	50%	50%

Source*: Buku Panduan Pelaksanaan Projek Pelajar (Program Diploma) Politeknik Malaysia Edisi 2021*

Example:
Based on the commercialisation policy of the Ministry of Science, Technology & Innovation (MOSTI) and *Polisi Pengkomersialan*, JPPKK stated that the distribution of incentives obtained from the value of the winning money amounted to RM5,000.00 according to the 80:20 formula, which is 80% of the total winnings given to the inventor/ teammate, while the remaining 20% is distributed to the owner of the product, namely the polytechnic.

4.9 Project Inventory

The Project Supervisor is responsible for checking the originality of the project or study produced. The Project Course Coordinator must constantly update the student project inventory so that no projects or studies are repeated or overlap with previously developed projects or studies. Students must submit the Project Inventory Form (APPENDIX C) in hardcopy and softcopy to the Project Supervisor together with the report and product. An inventory of student projects should be kept at the programme and polytechnic levels to coordinate and review the accreditation of study programmes. The information required in the Project Inventory Form (APPENDIX C) consist of:

a) Project Name
b) Team Members
c) Research Cluster Category
d) Project Supervisor
e) Abstract
f) Registration of Intellectual Property Number other than Copyright (potential and high impact products)

4.10 Participation and Achievement

Students are encouraged to participate in competitions or presentations of project produced or innovations at seminars or colloquiums (colloquia) at any level. Student involvement in innovation and skills competitions such as International Invention & Innovation Exhibition (ITEX), Malaysia Technology Expo (MTE), Innovation and Invention Competition through Exhibition (iCompEx), International Engineering Invention & Innovation Exhibition (i-Envex) and other prestigious competitions that can improve skills as well as encourage creativity and innovation among students. Any project participation in any competition is recommended to refer to the respective polytechnic UPIK officer for the purpose of coordination and review of competition materials such as posters to meet the required standard.

In addition, such competitions can encourage students to venture into research and further create collaboration between polytechnics and external agencies such as non-governmental organizations, institutions of higher learning, associations of entrepreneurs and individuals at home and abroad. The involvement and achievement of students in any competition can provide exposure and added value to the student's identity and human capital.

4.11 Commercialisation

Commercialisation is 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. Products with the potential to be commercialised through various competition or exhibition platforms may be considered for commercialisation purposes.

5.0 LOG BOOK

This chapter specifically to write progress of the activities and works completed by the students within the project's timeline based on any chosen methodologies. Besides that, it will assess the positive values, ethics, and accountability in engaging society of the student's project. It is one of the requirements in continuous assessment percentage which carries 5% of the total assessment. Students should submit the Log Book along with the game design document to the designated supervisor during the weekly consultation session to be graded and verified. There are three main parts that need to be completed in the Log Book (APPENDIX D):

a) Weekly progress report
   Details of the progress that syncs with the Gantt chart.
b) Task Suggestion
   Details of the planning for the next task based on a Gantt chart include suggestion for improvement.
c) Supervisor's feedback
   Supervisor's feedback and comment for the progress and planning report.

5.1 Responsibilities of Students and Supervisors

The information should be handwritten unless there is an unavoidable problem that requires students to type. It is compulsory for students to consult with their supervisor for the weekly progress. Supervisors must confirm the progress and the upcoming task that need to be done with the comment or suggestion along with supervisor's signature, designation stamp and date for every meet.

6.0 REPORT WRITING

Game Project implementation involves the writing of a pitch document and a technical report. Pitch documents are prepared at the beginning of the semester and technical reports are submitted end of the semester. This chapter covers details of these two documents.

6.1 Pitch Document

Pitch Document is a preliminary document that details the project study to be implemented. It is an overall plan that describes the background of the study, the strategies used to obtain answers to the research problems and the importance of the research. The contents of the Pitch Document are as in Table 6.1.

Table 6.1: Contents of Pitch Document

ITEMS		DESCRIPTION
1.1	**Introduction**	i. Provide a brief overview of the game and the motivation behind choosing the game idea. ii. Describe of the basic facts findings and importance of the game idea. iii. The introduction should be written in paragraph form.
1.2	**Problem Statement**	i. Describe any issues or problems that have been identified and lead to the development of the project. ii. Provide a clear and concise description of the issues that need to be addressed which is the specific problems in the field of research that need to be addressed (e.g. lack of understanding of a subject, low performance). iii. It should be derived directly from the literature or from compelling personal or professional reasons for pursing the investigation. iv. The problem statement should be written in point form. **Example 1:** The younger generation in Malaysia could not recognize all the state flags in all 13 states and 3 federal territories in Malaysia. A survey has been conducted among 8-10 year old kids and found that 80% of the younger generation is unable to recognize Malaysia's state flags. The result of the study can be seen in Figure 6.1.

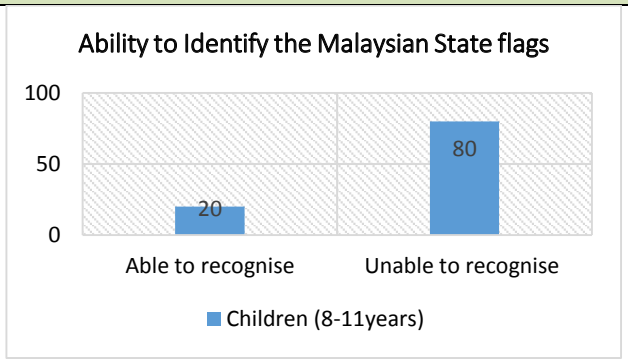
<table>
<tr><th colspan="2">ITEMS</th><th>DESCRIPTION</th></tr>
<tr><td></td><td></td><td> 

Figure 6.1 Ability to identify Malaysian State Flags

Example 2:
The younger generation also has fewer knowledge about famous places of each state. According to the Kids-World-Travel-Guide (2020), children in Malaysia need more knowledge about our local places as part of the learning process since Malaysia is a very child-friendly country.</td></tr>
<tr><td>1.3</td><td>Objective</td><td>i. Objectives should be specific, measurable, achievable, realistic and time oriented.
ii. Objectives must have the benefits or impact that will be generated if the research problem is answered.
iii. Objectives must be closely related to the statement of the problem.
iv. The objective should be written in point form.

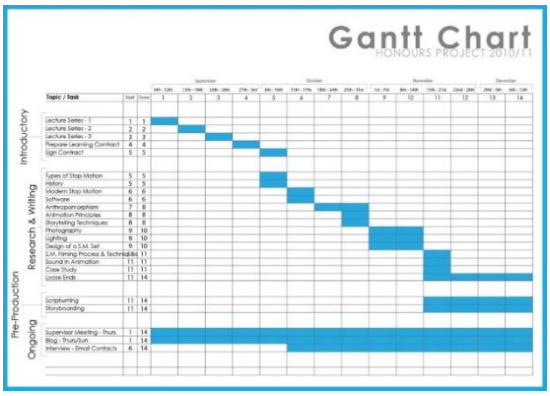
Example:
a) To develop the iconic places in all the states of Malaysia in 3D.
b) To develop a prototype of Mobile 3D Pool Flag game.
c) To recognize the state flags and match it with Malaysia’s map.</td></tr>
<tr><td>1.4</td><td>Project Scope</td><td>1.4.1 State the scope and the project limitation by mentioning exactly the expected game project focus. The project scope should be written in paragraph form.

1.4.2 Game Scope
i. State the project limitation in the game.
ii. Describe about the produced by the project and its key features.
iii. Constraints
If the project faces certain physical boundaries, these can be a source of risk and thus should be defined further.
iv. Inclusions or Exclusions</td></tr>
</table>

ITEMS		DESCRIPTION
		Many projects have items that are uncertain because projects of that type or size sometimes do and sometimes don't include those things. They need to be explicitly included or excluded from the project. **Example:** This study developed a prototype of a serious game containing three modules. The assignments and activities provided through these three modules are appropriate with the age of the target user. Besides that, the project uses Malay as the game language. Malay is chosen for the prototype since the game is developed for Malaysian children. **1.4.3 Target User** i. State the type of user who will buy or use this game. ii. State the age or sex is relevant, indicate that; more important, tell what other kinds of games they like to play. iii. Describe the target audience **Example:** The target users are children aged seven to nine years. At this age range, Malaysian children has been exposed to science related subjects in school.
1.5	**Methodology**	Research methodology defines the game project methods and logic steps on what to do, how to solve the problem, which research methods and achieve proposed objectives. This section should be written in paragraph form.
1.6	**Game Description**	In this section students are required to write a game significance which must consist of the all the item below: This section should be written in paragraph form. **1.6.1 Idea or Storyline** Describe the general idea of the game. Then narrate a story that lead to this idea and development of the storyline from your idea. **1.6.2 Platform** Describe the type of electronic delivery system used to play a game. **1.6.3 Gameplay** Gameplay consists of the five (5) information below:

ITEMS		DESCRIPTION
		i. **Game Objective** Describe the game objective. ii. **Game Rules** Describe overall game rule. iii. **Game Control** Describe in detail how this game works, the button uses to operate this game and the medium to play this game. iv. **Challenge** The challenge/ obstacle/ limitation the player needs to overcome in this game. v. **Scoring** Describe scoring method and victory of the game in detail. **1.6.4 Genre** Identify the nature of your game and describe further how you implement the genre in your game. Some examples of game genre include action game, fighting game, maze game, platform game, survival horror, role-play game, simulation game, music game, puzzle game or sport game. **1.6.5 Player Motivation** Describe what the players need to achieve or accomplish in the game. Also include the elements or functions such as rewards, puzzles or benefits in the game that triggers the player to continuously play your game. **1.6.6 Description of Character** Illustrate and sketch computer generated 2-Dimensional (2D) or 3-Dimensional (3D) character design and elaborate the characteristic of the characters in the game. **1.6.7 Description of Environment and Assets** Include a rough sketch or computer generated 2-Dimensional (2D) or 3-Dimensional (3D) design of environments or assets and elaborate the characteristic of your environments or assets in your gameplay. **1.6.8 Flow Chart** Give a complete flow chart for your game from the starting of game until the completion of the game.

ITEMS		DESCRIPTION
		1.6.9 Storyboard Include a rough sketch of each frame of your game from the beginning till the ending of the game. Give appropriate and detailed description for each storyboard scenes on how the game works as well as how the agents function in the game.
1.7	**Game Significance**	i. In this section students are required to write a game significance which must consist of the all the item below: significance of the game. This section should be written in paragraph form. ii. State game implication, the motivation of project and the important for the industry practice or knowledge advancement. iii. Describe new and the unique selling point in your game proposal or idea and how far the product can be marketable. **Example:** The use of serious games as one of the initiatives in moral education enables children to practice good behaviors at home without being influenced by the constraints of place and time since the mobile platform, for example the smartphone used, makes the Home Tour prototype easy to carry and use. Such an approach is ideal for young people and children who tend to prefer something simpler and more sophisticated like what is available on smartphones.
1.8	**Project Requirement**	In this section, students are required to write game project requirement which must consist all of them as below. This section should be written in paragraph form. Specify all the hardware, software and user requirements used in the game project development, for example personal computer, device, storage and software. Summarize the use of the hardware and software according to the need of your project; indicate whether the game requires or can make optional use of any special hardware or accessories.

ITEMS		DESCRIPTION
1.9	**Development Schedule**	In this section, students are required to write about the game project development schedule which must consist all of them as below. This section should be written in table form. **1.9.1 Team Task** Describe each member's task and responsibilities accordingly with the appropriate amount of workload. **1.9.2 Project Costing** The process of estimating, planning and controlling expenses, with the target of keeping within supported spending plan. **1.9.3 Gantt Chart** The timeline shows important activities that will be carried out in game project. Students must be aware of important activities highlighted in the timeline. The timeline is provided separately in the project implementation chapter. Please use appropriate software for Gantt chart, for example Microsoft Project and Click Chart Diagram. A successful project is a well-planned and organised project. **Example:** 
1.10	**Conclusion**	Summarise the chapter content that has been implemented for the project.

Note: The number of Pitch Document should not exceed **THIRTY (30)** pages.

6.2 Technical Report

The project report is a technical writing that needs to be produced by each project group. The report needs to be prepared in detail describing the entire project. Students are required to write technical report which must consist all of them as below.

a) Front page
b) Declaration of Authentication and Ownership
c) Acknowledgment
d) Abstract
e) Table of Contents
f) List of Tables
g) List of Figures
h) Chapter 1 Introduction
i) Chapter 2 Literature Review
j) Chapter 3 Methodology
k) Chapter 4 Game Design
l) Chapter 5 Project Testing and Analysis
m) Chapter 6 Conclusion and Recommendation
n) References
o) Appendix

Table 6.2 Contents of Technical Report

ITEM		DESCRIPTION
Abstract		Abstract is a summary of the entire contents of the project report in 100 to 250 words (in one page only). It must be prepared in two languages, i.e. Bahasa Malaysia and English on separate pages. The content of the abstract should consist of the following details: a) Background; b) problem statement; c) objective(s); d) methodology; e) findings or impacts; f) suggestions for improvement; g) conclusion; and h) keywords (should not exceed 5 keywords).
Table of content		A list of report items with their commencing page numbers.
1.0	**Introduction**	**1.1 Introduction** The introduction highlights key issues related to the focus of the project and supported by the findings of previous projects.

ITEM		DESCRIPTION
		1.2 Project Background Project background refers to the latest information related to current issues that are the focus of the study. The purpose is to inform the reader about the status related to those current issues. **1.3 Problem Statement** Problem statement describes the problem to be solved as well as the contribution of project findings to solve the problem either in whole or in part. **1.4 Objective** The objective of the study should be related to the problem statement. The number of objectives proposed is between two (2) to three (3) objectives. **1.5 Project Scope** The scope of the study explains the limits of the implementation of the project carried out. **1.6 Project Requirement** Write a summary, use of the hardware and software according to the needs of the project. **1.7 Game Significance** Write a short description on the importance, contribution and the implications of the project conducted. **1.8 Project Plan** Show the timeline of the project progress to complete the project using Gantt chart and project cost management.
2.0	**Literature Review**	**2.1 Introduction** In literature review, general topics, issues or areas of focus need to be identified for providing an appropriate context for the literature review. Overall trends of the topic, recommendations in theory, methodology, evidence and conclusions or new problems or perspectives need to be stated. **2.2 Comparative of Previous Studies or Project** In this section, students are required to make comparison of previous studies or projects that relevant to the current project.
3.0	**Methodology**	**3.1 Introduction** The introduction of the chapter discusses the content contained in this chapter briefly and concisely.

ITEM		DESCRIPTION
		3.2 Project Methodology Explain briefly, the project development model based on methodology that is suitable with the project.
4.0	**Game Design**	**4.1 Introduction** Explain the contents contained in this chapter briefly and concisely. **4.2 Game Description** The introduction should include a brief description about the game, its genre, player type, technical form, references and theme. Reader should be able to understand what the basic idea of this game is. 4.2.1 Storyline 4.2.2 Genre 4.2.3 Player Motivation 4.2.4 Theme **4.3 Characters, Weapons and Object Design** Briefly describe about the characters, weapons and object design. 4.3.1 Main Characters 4.3.2 Enemy Characters or Obstacles 4.3.3 Player Weapons or Power-ups 4.3.4 Objects or Collectable Item This section elaborates the objects which player(s) can come in contact and an event may occur. **4.4 Level Design** Briefly describe about the level design in the overall project. 4.4.1 Menu Scene 4.4.2 Level 1 4.4.3 Level 2 (if related) **4.5 Game Design** Briefly describe the overall design of the project developed. 4.5.1 Game Structure 4.5.2 Game Play a) Game objectives or goal b) Game rules c) Game controls d) Challenge e) Scoring f) Player immersion 4.5.3 Camera a) Camera view

<table>
<tr><th colspan="2">ITEM</th><th>DESCRIPTION</th></tr>
<tr><td></td><td></td><td>
First Person Shooter (FPS) or third person view (3D game)
b) Camera Angle
2D game
4.5.4 Head Up Display (HUD)
4.5.5 Animation states
a) Player
b) Enemies
c) Environment

Example:
Few of the game objects that were used to design environment have animations. The following game objects have animations in them:
i) River
It has the river wave animation which can be seen in Scene 1.
ii) Fountain
Water flowing animation can be seen in Scene 1.
iii) Leaf falls
It has leaf fall animation in Scene 2.

4.5.6 Audio
List the audio clips along with the category and description used for the project in table from.

Example:
List of audio clips in Happy Color
<table>
<tr><th>Name</th><th>Category</th><th>Description</th></tr>
<tr><td>Let It Go (Frozen)</td><td>Background Music</td><td>Plays during the game</td></tr>
<tr><td>Do u Want To build a snowman? (Frozen)</td><td>Background Music</td><td>Plays during the game</td></tr>
</table>
4.6 User Interface
Include all relevant game interfaces with the descriptions below:
4.6.1 Main Menu
4.6.2 Option Menu
4.6.3 Exit Menu
4.6.4 Help Menu/ Dialogue box
4.6.5 Overall level interface
</td></tr>
<tr><td>5.0</td><td>Project Testing and Analysis</td><td>In this chapter, students are required to presents the data and analysis of the project study. The testing processes must be done to verify the functionality of the project. Perform Alpha Testing and Beta Testing which were conducted during post-production phase and describe the processes involved during the tests and the results of the tests.</td></tr>
</table>

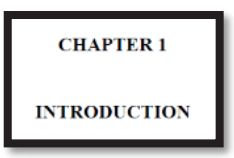
ITEM		DESCRIPTION
		5.1 Introduction Explain the contents contained in this chapter briefly and concisely. **5.2 Alpha Testing** Identify all possible issues and bugs before releasing the product to the users. The purpose is to evaluate the quality of the product and ensure the Beta readiness. **5.3 Beta Testing** This test is to gather user's input on the end product. The product is ready for real time users. Beta testing is to evaluate customer's satisfaction and to ensure the release readiness of the product. **5.4 Analysis and Discussion** The analysis of the study is related to results of beta testing. Analysis are presented in the form of tables, diagrams and statements to enable important data presented.
6.0	**Conclusion and Recommendation**	**6.1 Introduction** The introduction of this chapter is intended to describe the content of the chapter. **6.2 Conclusion** The conclusion of the study presents an overall summary of the project implemented, the results and achievements of the project whether it achieves the objectives or otherwise, as well as the planning and expectations for future studies or projects. Weaknesses and advantages should be stated concisely and accurately. **6.3 Recommendation** Recommendation is the listing of new ideas or suggestions of some further research to enhance the project for future works. **6.4 Project Limitations** Limitations of the project and implications for the field of study can be presented.
	References	List all works cited from published books, public document, journals, articles, thesis, magazines, films, videos, slides, maps, unpublished materials and electronic materials including websites. The format of writing references is to follow the APA style format, refer Reference Format (APPENDIX E : E-6)

ITEM		DESCRIPTION
	Appendix	Appendices are important additional materials in producing a project or study such as project or study experimental study data, equipment information, computer programs, sample questionnaires, maps, pictures, etc. that are too long to be included in the main report. They should be listed according to the relevant information group and should be labelled separately **Example:** Appendix A: Questionnaire Appendix B: List of Respondents

6.3 General Format of Project Report

The following is the format for preparing a project report. Further information in the form of illustrations as in Table 6.3 shows the documentation format for technical report.

Table 6.3: Documentation Format

ITEMS	DESCRIPTION
Cover Page	The cover of technical report must contain project title, game title, authors' name and registration number, name of department and polytechnic, and the study session, refer Front Cover Format (APPENDIX E : E-1).
Paper and Size	High quality A4 size white paper (210 mm x 297 mm) (80 grams).
Margins	i. Top: 2.5cm ii. Bottom: 2.5cm iii. Left side: 3.8cm iv. Right side: 2.5cm
Writing	The acceptable writing format as follows: i. The text is typed using the Times New Roman; font size 12; 1.5 line spacing; justified. ii. Use capital letters to write each beginning of the chapter number and chapter title. iii. Chapter number and chapter title using bold and font size 14. **Example:** 

<table>
<tr><th>ITEMS</th><th>DESCRIPTION</th></tr>
<tr><td></td><td>
iv. Start with a new page for each chapter.
v. The distance between the chapter number and the chapter title is 1.5 spacing. Chapters and sections within chapters should be numbered.
vi. The numbering structure of sections in chapters can be arranged in order of subheading levels and not exceeding three levels.
a) Subheadings (Title Case), (bold), (Flush left)
Example:
1.1 Game Overview
b) Sub-Subheadings and Text (Title Case), (bold), (Flush left)
Example:
5.5.1 Player
vii. Start the subheading with its number from the left margin.
viii. Start the first line of the paragraph with an indent 0.5”.
ix. The Italic format is necessary for all terms other than the language of the report.
x. The report must consist of six (6) chapters in total. All chapters must be written in paragraph.
</td></tr>
<tr><td>Figure and Table</td><td>
All tables, charts, figures, and graphs should be numbered and titled. Both numbers and titles should be centered directly above for tables and directly below for figures, charts and graphs as shown below. The numbering must be related to the chapter and listed in the table list page with repeated header if the table is more than one page.

Example:
Table 5.4: List of Music and Description
<table>
<tr><th>Name</th><th>Category</th><th>Description</th></tr>
<tr><td>Let it go (Frozen)</td><td>Background Music</td><td>Plays during the game</td></tr>
<tr><td>Do u want to build a snowman? (Frozen)</td><td>Background Music</td><td>Plays during the game</td></tr>
</table>


Figure 1.5: The Interface of Gameplay
</td></tr>
<tr><td>Paging</td><td>
i. Each page in the beginning section such as acknowledgments, list of contents, list of tables etc. should be numbered with lowercase Roman numerals (i, ii, iii, iv etc.) except on the cover page Roman numerals should be omitted.
ii. Each content page numbered in bottom right.
iii. The font type: Times New Roman, font size 12 pt.
</td></tr>
</table>

ITEMS	DESCRIPTION
Report Limits	The number of project report pages is 50 to 100 pages. This limit is for text only excluding fronts, references and appendices.
References	i. References are materials that are referenced while preparing a project. List the referenced material on the reference page after the text. Order of references in an alphabetical list. ii. Use The American Psychological Association (APA) reference citations style for references writing. iii. Times New Roman, font size 10 pt., 1.15 spacing. iv. Entries should be organized alphabetically by the last name of the first author; provide the last name and the initials for each author. v. Entries should be single-spaced. vi. If you use multiple works by the same author, organize entries by the year of publication. vii. Do not italicize or put in quotation marks articles or essays. **Example:** **Book - Single Author:** *Last Name,* Initials. (Date). *Title Of Book.* City: Publisher. Miller, R.K. (2009). *The Informed Argument. San Diego: Harcourt Brace Javonich* Publishers **Book – Two Authors:** *Last Name,* Initials, & Last Name, Initials. (Date). *Title Of Book.* City: Publisher. Corcoran, K. & Fischer, J. (2007). Measures for Clinical Practice: Source Book. New York: The Free Press. **Book – Multiple Authors:** Last Name, Initials, Last Name, Initials, Last Name, Initials, & Last Name, Initials. (Date).*Title Of Book.* City: Publisher. Smith, J.A., Dorosz, C., Mann, T.T. (2008). *The Way It Is.* Toronto: Abc Press. **Journal Article – Single Author:** Last Name, Initials. (Date). Title Of Article. *Title of Journal,* Volume:Page Number Range. Andanastuti Muchtar. 2000. Gabungan Pelekukan dan Pelenturan Dalam Penjanaan Nilai Keliatan Patah Seramik Alumina. *Journal Institute of Materials Malaysia* 1(2): 51-66. **Electronic Reference Materials:** Last Name, Initials. (Date). Title Of Article. *Title Of Periodical*, Volume Number, From Url.[Date] Clark, J.K. 2009. Humidity Sensor. Journal of Physics 2 (2): 9-13. http://www.cit.edu/phys/sensor.html [20 July 2009]

ITEMS	DESCRIPTION
	Articles / News In Newspapers Last Name, Initials. Year. Title Of Article. *Name of Newspaper*. Retrieved Url., Day, Month) Gunasegaran, P. 2006. Overworked Students: Give The Kids Chance To Relax. *New Straits Times*, 21 February. **Articles / News In Newspapers (Writer's Name Not Given)** Last Name, Initials. Year. Title Of Article. *Name of Newspaper*. Retrieved Url., Day, Month) Anon. 2007. MUET Gets a Fresh Look. *The Star*, 16 March. Anon. 2007. When Does Your Brain Stop Making New Neurons. *Newsweek*, 2nd July: 74-77 For more examples refer: Publication Manual of the American Psychological Association, Seventh Edition (2020) **https://apastyle.apa.org/products/publication-manual-7th-edition**

Note: Contents may amend according to the project needs and suitability

7.0 ASSESSMENT AND RUBRICS

This chapter describes the assessment rubrics for Game Project course, Diploma in Information Technology (Digital Technology). It provides a comprehensive and complete set of criteria used to assess students' specific task based on a list of performance levels to measure its quality. The course assessment rubrics are:

a) Pitch Document (15%)
b) Game Progress Demonstration 1 (10%)
c) Game Progress Demonstration 2 (10%)
d) Game Progress Demonstration 3 (10%)
e) Log Book (5%)
f) Technical Report (20%)
g) Project Presentation (30%)

ASSESSMENT RUBRICS

A. PITCH DOCUMENT (15%)
B. GAME PROGRESS DEMONSTRATION 1 (10%)
C. GAME PROGRESS DEMONSTRATION 2 (10%)
D. GAME PROGRESS DEMONSTRATION 3 (10%)
E. LOG BOOK (5%)
F. TECHNICAL REPORT (20%)
G. PROJECT PRESENTATION (30%)

PITCH DOCUMENT

(15%)

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

ASPECT	PITCH DOCUMENT SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
ENTREPRENEURIAL SKILLS								
Entrepreneurial Opportunity								
Scope	Able to mobilise the idea to become opportunity according to the business strategy and fulfil the customer needs.	Business idea is clear and fulfils the customer needs.	Business idea is clear but does not fulfil the realistic customer needs.	Has unclear entrepreneurial idea for value adding/ solving customer needs and is not relevant to customer needs.	No entrepreneurial idea for value adding/ solving customer needs.			
Platform	Able to mobilise the idea to become opportunity according to the business strategy and fulfil the customer needs.	Business idea is clear and fulfils the customer needs.	Business idea is clear but does not fulfil the realistic customer needs.	Has unclear entrepreneurial idea for value adding/ solving customer needs and is not relevant to customer needs.	No entrepreneurial idea for value adding/solving customer needs.			

ASPECT	PITCH DOCUMENT SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
ENTREPRENEURIAL SKILLS								
Entrepreneurial Opportunity								
Game Description	Able to mobilise the idea to become opportunity according to the business strategy and fulfil the customer needs.	Business idea is clear and fulfils the customer needs.	Business idea is clear but does not fulfil the realistic customer needs.	Has unclear entrepreneurial idea for value adding/ solving customer needs and is not relevant to customer needs.	No entrepreneurial idea for value adding/ solving customer needs.			
Game Significance	Able to mobilise the idea to become opportunity according to the business strategy and fulfil the customer needs.	Business idea is clear and fulfils the customer needs.	Business idea is clear but does not fulfil the realistic customer needs.	Has unclear entrepreneurial idea for value adding/ solving customer needs and is not relevant to customer needs.	No entrepreneurial idea for value adding/ solving customer needs.			
Achievement and Perseverance								
Problem Statement Objective	Has clear, realistic and high entrepreneurial goal.	Has clear and realistic but easily achievable entrepreneurial goal.	Has clear goal, but the entrepreneurial goal is unrealistic.	Has unclear entrepreneurial goal and effort.	Does not have an entrepreneurial goal and no effort.			
Internal Locus of Control								
Game description: a) Storyline b) Genre c)Motivation/reward d) Character e) Assets f) Conclusion	Has the eagerness to influence others to develop a business network based on the entrepreneurial opinion/ idea.	Take own initiative to develop something from the entrepreneurial opinion/ idea.	Able to convince others with the entrepreneurial opinion/ idea.	Dare to take a stand and express entrepreneurial opinion/ idea.	Unable to take a stand and express entrepreneurial opinion/ idea.			

ASPECT	PITCH DOCUMENT SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PERSONAL SKILLS								
Delegation of work								
Team Task	Work was divided excellently amongst group members.	Work was divided well amongst group members.	Work was divided satisfactorily amongst group members.	Work was divided minimally amongst group members.	Work was not divided equally. Only few members are doing the work while others are ignored.			
ENTREPRENEURIAL SKILLS								
Entrepreneurial Opportunity								
Decision Making								
Storyboard Flowchart	Able to make a very good decision based on excellent understanding of the situation and available options.	Able to make a good decision based on good understanding of the situation and available options.	Satisfactory attempts to make decisions and satisfactory understanding of the situation and available options.	Tries to make decision by understanding the situation. Decision made is based on limited understanding of the situation and available options.	No attempt to make decision. Do not understand the situation and relate with options that are available.			
Time Management								
Gantt Chart	Completes tasks ahead of schedule by creating a plan and scheduling time to complete the work.	Completes work on time by taking advantage of the time provided and by using time management skills.	Occasionally completes work on time. Tries to manage time.	Rarely completes work on time. Not able to manage time well.	No attempt to complete work on time. Not able to manage time.			
					Total Score			
					Pitch Document Formula = (Total Score/ 45 * 15)			

☐	SUPERVISOR
☐	EXTERNAL ASSESOR
☐	INTERNAL ASSESSOR

GAME PROGRESS DEMONSTRATION 1
(10%)

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

ASPECT	GAME PROGRESS DEMONSTRATION 1 SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Design, organization and layout	Construct and organize a very good design and layout of the game.	Construct and organize a good design and layout of the game.	Construct and organize a moderate design and layout of the game.	Construct and organize a poor design and layout of the game.	Construct and organize a very poor design and layout of the game.			
Game synopsis and storyline	Prepare a very good game synopsis and a coherent storyline.	Prepare a good game synopsis and a coherent storyline.	Prepare a moderate game synopsis and a coherent storyline.	Prepare a poor game synopsis and an incoherent storyline.	Prepare a very poor game synopsis and an incoherent storyline.			

ASPECT	GAME PROGRESS DEMONSTRATION 1 SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Project Progress (30% complete)	Progress is beyond expectations with respect to plan.	Progress is highly satisfactory with respect to plan.	Progress is mostly satisfactory with respect to plan.	Progress is not quite satisfactory with respect to plan.	Progress is not satisfactory with respect to plan.			
Genre	Choose a very appropriate genre.	Choose an appropriate genre.	Choose a moderately appropriate genre.	Choose an inappropriate genre.	Choose a very inappropriate genre.			
Motivation/ reward	Choose a very appropriate motivation/ reward	Choose an appropriate motivation/ reward.	Choose a moderately appropriate motivation/ reward.	Choose an inappropriate motivation/ reward.	Choose a very inappropriate motivation/ reward.			
Character	Able to sketch and build a very good character related to the game.	Able to sketch and build a good character related to the game.	Able to sketch and build a moderate character related to the game.	Able to sketch and build a poor character related to the game.	Able to sketch and build a very poor character related to the game.			
Assets	Able to sketch and build a very good assets related to the game.	Able to sketch and build a good asset related to the game.	Able to sketch and build a moderate asset related to the game.	Able to sketch and build a poor asset related to the game.	Able to sketch and build a very poor assets related to the game.			
Understand and respond to questions	Able to fully understand and respond to questions very well.	Able to 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.	Not able to understand and respond to a question.			
					Total Score			
					Game Progress Demonstration 1 Formula = (Total Score/ 40 * 10)			

☐	SUPERVISOR
☐	EXTERNAL ASSESOR
☐	INTERNAL ASSESSOR

GAME PROGRESS DEMONSTRATION 2

(10%)

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

ASPECT	GAME PROGRESS DEMONSTRATION 2 SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Design, organization and layout	Construct and organize a very good design and layout of the game.	Construct and organize a good design and layout of the game.	Construct and organize a moderate design and layout of the game.	Construct and organize a poor design and layout of the game.	Construct and organize a very poor design and layout of the game.			

ASPECT	GAME PROGRESS DEMONSTRATION 2 SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Project Progress (60% complete)	Progress is beyond expectations with respect to plan.	Progress is highly satisfactory with respect to plan.	Progress is mostly satisfactory with respect to plan.	Progress is not quite satisfactory with respect to plan.	Progress is not satisfactory with respect to plan.			
Alpha Testing	Perform a very thorough testing on functionality.	Perform a thorough testing on functionality.	Perform a moderate testing on functionality.	Perform a poor testing on functionality.	Perform a very poor testing on functionality.			
	All bugs identified are fixed.	Nearly all bugs identified are fixed.	Most bugs identified are fixed.	Some bugs identified are fixed.	A few bugs identified are fixed.			
Motivation/reward	Choose a very appropriate motivation/ reward.	Choose an appropriate motivation/ reward.	Choose a moderately appropriate motivation/ reward.	Choose an inappropriate motivation/ reward.	Choose a very inappropriate motivation/ reward.			
Character	Able to sketch and build a very good character related to the game.	Able to sketch and build a good character related to the game.	Able to sketch and build a moderate character related to the game.	Able to sketch and build a poor character related to the game.	Able to sketch and build a very poor character related to the game.			
Assets	Able to sketch and build a very good assets related to the game.	Able to sketch and build a good asset related to the game.	Able to sketch and build a moderate asset related to the game.	Able to sketch and build a poor asset related to the game.	Able to sketch and build a very poor asset related to the game.			
Audio	Choose audio that suits the genre very well.	Choose audio that suits the genre well.	Choose audio that moderately suits the genre.	Choose audio that poorly suits the genre.	Choose audio that very poorly suits the genre.			

ASPECT	GAME PROGRESS DEMONSTRATION 2 SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Gameplay	Construct a realistic gameplay and very easily figured out by the user.	Construct a great gameplay and easily figured out by the user.	Construct a quite unrealistic gameplay and at times cannot be figured out by the user.	Construct an unrealistic gameplay and cannot be figured out.	Construct a poorly designed gameplay and almost impossible to play.			
Respond to questions	Respond to questions very well.	Respond to questions well.	Respond to questions satisfactorily.	Respond to questions quite unclearly.	Respond to question unclearly.			
					Total Score			
					Game Progress Demonstration 2 Formula = (Total Score/ 50 * 10)			

☐	SUPERVISOR
☐	EXTERNAL ASSESOR
☐	INTERNAL ASSESSOR

GAME PROGRESS DEMONSTRATION 3

(10%)

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

ASPECT	**GAME PROGRESS DEMONSTRATION 3 SCORE**					**STUDENT SCORE**		
	Very Good (5)	**Good (4)**	**Fair (3)**	**Weak (2)**	**Very Weak (1)**	**1**	**2**	**3**
PRACTICAL SKILLS								
Design, organization and layout	Construct and organize a very good design and layout of the game.	Construct and organize a good design and layout of the game.	Construct and organize a moderate design and layout of the game.	Construct and organize a poor design and layout of the game.	Construct and organize a very poor design and layout of the game.			

ASPECT	GAME PROGRESS DEMONSTRATION 3 SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Project Progress (90% complete)	Progress is beyond expectation with respect to plan.	Progress is highly satisfactory with respect to plan.	Progress is mostly satisfactory with respect to plan.	Progress is not quite satisfactory with respect to plan.	Progress is not satisfactory with respect to plan.			
Beta Testing	Perform a very thorough reliability and performance testing along with the application stability.	Perform a thorough reliability and performance testing along with the application stability.	Perform a moderate reliability and performance testing along with the application stability.	Perform a poor reliability and performance testing along with the application stability.	Perform a very poor reliability and performance testing along with the application stability.			
	All bugs identified are fixed.	Nearly all bugs identified are fixed.	Most bugs identified are fixed.	Some bugs identified are fixed.	A few bugs identified are fixed.			
Construction and functionally	Effectively describe how the system is constructed and how it functions.	Frequently describe how the system is constructed and how it functions.	Occasionally describe how the system is constructed and how it functions.	Minimal attempts are made to describe how the system is constructed and how it functions.	Very minimal attempts are made to describe how the system is constructed and how it functions.			
Originality	Product is 100% - 90% original.	Almost 89% - 71% product is original.	Almost 70% - 50% product is original.	Product is less than 50% original.	Product is less 10% original.			
Creativity	Show an excellent idea, creative and inventive.	Show good ideas, creative and inventive.	Show moderate ideas, creative and inventive.	Show lack of ideas, creativity and invention.	Show very little ideas, creativity and invention.			

ASPECT	GAME PROGRESS DEMONSTRATION 3 SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Audio	Choose audio that suits the genre very well.	Choose audio that suits the genre well.	Choose audio that moderately suits the genre.	Choose audio that poorly suits the genre.	Choose audio that very poorly suits the genre.			
Gameplay	Construct an immersive gameplay and very easily figured out by the user.	Construct a great gameplay and easily figured out by the user.	Construct an enjoyable gameplay and easily figured out by the user.	Construct a bored gameplay but still figured out by the user.	Construct a disinterested gameplay and cannot be figured out.			
Respond to questions	Respond to questions very well.	Respond to questions well.	Respond to questions satisfactorily.	Respond to questions quite unclearly.	Respond to question unclearly.			
					Total Score			
					Game Progress Demonstration 3 Formula = (Total Score/ 50 * 10)			

LOG BOOK
(5%)

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

ASPECT	**LOG BOOK SCORE**					**STUDENT SCORE**		
	Very Good (5)	**Good (4)**	**Fair (3)**	**Weak (2)**	**Very Weak (1)**	**1**	**2**	**3**
ETHICS AND PROFESSIONALISM								
Progress report	Write a detailed progress report.	Write a detailed progress report with some missing point.	Write a moderately detailed progress report with some missing point.	Write an insufficient progress report.	Write a poor progress report.			
	Write the progress that are ahead of the planning already stated in the Gantt chart.	Write the progress that are corresponding to the planning already stated in the Gantt chart.	Write the progress that are somewhat follows the planning already stated in the Gantt chart.	Write the progress that are slightly behind the planning already stated in the Gantt chart.	Write the progress that are behind the planning already stated in the Gantt chart.			

ASPECT	LOG BOOK SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
ETHICS AND PROFESSIONALISM								
Task suggestion	Write a detailed task suggestion.	Write a detailed task suggestion with some missing point.	Write a moderately detailed task suggestion with some missing point.	Write an insufficient task suggestion.	Write a poor task suggestion.			
	Write the suggestion that are ahead of the planning already stated in the Gantt chart.	Write the suggestion that are corresponding to the planning already stated in the Gantt chart.	Write the suggestion that are somewhat follows the planning already stated in the Gantt chart.	Write the suggestion that are slightly behind the planning already stated in the Gantt chart.	Write the suggestion that are behind the planning already stated in the Gantt chart.			
Punctuality (Log Book submission)	Always practise excellent timeliness.	Practise a satisfactory timeliness.	Practise a moderate timeliness.	Practise a poor timeliness.	Practise a very poor timeliness.			
Integrity	Always write the logbook with trust, honesty, sincerity and transparency.	Write most part of the logbook with trust, honesty, sincerity and transparency.	Write the logbook with acceptable trust, honesty, sincerity and transparency.	Write the logbook with limited trust, honesty, sincerity and transparency.	Write the logbook with lack of trust, honesty, sincerity and transparency.			
Verification	Completed 100% of the supervisor's verification.	Completed 75% of the supervisor's verification.	Completed 50% of the supervisor's verification.	Completed 25% of the supervisor's verification.	Completed less than 25% of the supervisor's verification.			
					Total Score			
					Log Book Formula = (Total Score/ 35 * 5)			

TECHNICAL REPORT
(20%)

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

ASPECT	SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
LEADERSHIP								
Effective leadership	High ability to lead effectively self and/ or others towards goal achievement.	Able to lead effectively self and/ or others towards goal achievement.	Able to lead self and/ or others towards goal achievement with some effect and require minor improvements.	Able to lead self and/ or others towards goal achievement but with limited effect and require further improvements.	Able to lead self and/ or others towards goal achievement but with little effect and require major improvements.			

ASPECT	SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
LEADERSHIP								
Knowledge and skills in leadership	Very clear evidence of knowledge and understanding demonstrated in the report.	Able to demonstrate knowledge and understanding in the report well.	Able to demonstrate knowledge and understanding in the report and require minor improvements.	Able to demonstrate knowledge and understanding in the report but require some improvements.	Able to demonstrate knowledge and understanding in the report but require major improvements.			
AUTONOMY								
Self-confidence	Always display self-confidence.	Frequently demonstrate self-confidence.	Sometimes demonstrate self-confidence.	Limited self-confidence in doing a task.	Very limited self-confidence in doing a task.			
Self-evaluation	Evaluate efficiently the progress and work quality of the final report.	Evaluate satisfactorily the progress and work quality of the final report.	Evaluate moderately the progress and work quality of the final report.	Evaluate poorly the progress and work quality of the final report.	Evaluate very poorly the progress and work quality of the final report.			
Engaging and managing	Outstandingly follow the process provided to select reliable resources based on task requirement or suggested criteria.	Closely follow the process provided to select reliable resources based on task requirement or suggested criteria.	Fairly follow the process provided to select reliable resources based on task requirement or suggested criteria.	Poorly follow the process provided to select reliable resources based on task requirement or suggested criteria.	Very poorly follow the process provided to select reliable resources based on task requirement or suggested criteria.			

ASPECT	SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
LEADERSHIP								
RESPONSIBILITY								
Contribution to the group	Very responsible and always take the initiative to be engaged in the group.	Responsible and always take the initiative to be engaged in the group.	Satisfactorily responsible and taking initiative to be engaged in the group.	Take the initiative to be engaged in the group when requested.	Lack of initiative and is not interested to be engaged in the group.			
Rational attitude towards a diversity of values and/ or beliefs	Highly concern and considerate towards the diversity of values and/ or beliefs, as well as the group wellness.	Concern and considerate towards the diversity of values and/ or beliefs, as well as the group wellness.	Moderately concern and considerate towards the diversity of values and/ or beliefs, as well as the group wellness.	Little concern and consideration towards the diversity of values and/ or beliefs, as well as the group wellness.	Very little concern and considerate towards the diversity of values and/ or beliefs, as well as the group wellness.			
Sharing of responsibilities	Excellent sharing of responsibilities with every group member.	Often exhibit sharing of responsibilities.	Share responsibility for the common good.	Lack in sharing responsibility for the common good.	Very poor in sharing responsibility for the common good.			
Collaboration and cooperation	Able to maintain high level of collaboration and cooperation in the group.	Able to maintain good level of collaboration and cooperation in the group.	Able to maintain average level of collaboration and cooperation in the group.	Able to maintain insufficient level of collaboration and cooperation in the group.	Able to maintain very low level of collaboration and cooperation in the group.			

ASPECT	SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
LEADERSHIP								
RESPONSIBILITY								
Final report presented with evidence	Proficient evidence shown that report presented is supported by data collection from articles, reports, or experience.	Moderate evidence shown that report presented is supported by data collection from articles, reports, or experience.	Some evidence shown that report presented is supported by data collection from articles, reports, or experience.	Less evidence shown that report presented is supported by data collection from articles, reports, or experience.	Lack of evidence shown that report presented is supported by data collection from articles, reports, or experience.			
					Total Score			
					Technical Report Formula = (Total Score/ 50 * 20)			

☐	SUPERVISOR
☐	EXTERNAL ASSESOR
☐	INTERNAL ASSESSOR

PROJECT PRESENTATION
(30%)

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

ASPECT	PROJECT PRESENTATION SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Design, organization and layout	Construct and organize a very good design and layout of the game.	Construct and organize a good design and layout of the game.	Construct and organize a moderate design and layout of the game.	Construct and organize a poor design and layout of the game.	Construct and organize a very poor design and layout of the game.			

ASPECT	PROJECT PRESENTATION SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Construction and functionally	Effectively describe how the system is constructed and how it functions.	Frequently describe how the system is constructed and how it functions.	Occasionally describe how the system is constructed and how it functions.	Minimal attempts are made to describe how the system is constructed and how it functions.	Very minimal attempts are made to describe how the system is constructed and how it functions.			
Originality	Product is 100% - 90% original.	Almost 89% - 71% product is original.	Almost 70% - 50% product is original.	Product is less than 50% original.	Product is less than 10% original.			
Creativity a) Product	Show an excellent idea, creative and inventive.	Show good ideas, creative and inventive.	Show moderate ideas, creative and inventive.	Show lack of ideas, creativity and invention.	Show minimum of ideas, creativity and invention.			
Creativity b) Poster	Display an exceptionally attractive in terms of design, layout and neatness.	Display an attractive in terms of design, layout and neatness.	Display an acceptably attractive in terms of design, layout and neatness.	Display an acceptably attractive though a bit messy in terms of design, layout and neatness.	Display a distractingly messy and not attractive in terms of design, layout and neatness.			
Audio	Choose audio that suits the genre very well.	Choose audio that suits the genre well.	Choose audio that moderately suits the genre.	Choose audio that poorly suits the genre.	Choose audio that very poorly suits the genre.			

ASPECT	PROJECT PRESENTATION SCORE					STUDENT SCORE		
	Very Good (5)	Good (4)	Fair (3)	Weak (2)	Very Weak (1)	1	2	3
PRACTICAL SKILLS								
Gameplay	Construct an immersive gameplay and very easily figured out by the user.	Construct a great gameplay and easily figured out by the user.	Construct an enjoyable gameplay and easily figured out by the user.	Construct a bored gameplay but still figured out by the user.	Construct a disinterested gameplay and cannot be figured out by the user.			
Project Completion	Project is fully completed, achieve the objectives and beyond expectations.	Project is fully completed and achieve the objectives.	Project is almost completed and achieve some of the objectives.	Project is slightly completed and achieve some of the objectives.	Project is slightly completed and does not achieve the objectives.			
Respond to questions	Respond to questions very well.	Respond to questions well.	Respond to questions satisfactorily.	Respond to questions quite unclearly.	Respond to questions unclearly.			
					Total Score			
					Project Presentation Formula = (Total Score/ 45 * 30)			

8.0 REFERENCES

Bahagian Instruksional dan Pembelajaran Digital, Jabatan Pendidikan Politeknik dan Kolej Komuniti (2021). *Buku Panduan Pelaksanaan Projek Pelajar (Program Diploma) Politeknik Malaysia, Kementerian Pengajian Tinggi.*

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APPENDIXES

APPENDIX A: PROJECT REGISTRATION FORM

APPENDIX B: PROJECT TITLE AMENDMENT FORM

APPENDIX C: PROJECT INVENTORY FORM

APPENDIX D: LOG BOOK

APPENDIX E: FORMAT FOR TECHNICAL REPORT

APPENDIX A: PROJECT REGISTRATION FORM

PROJECT REGISTRATION FORM

Session: _____

SECTION A: PROJECT TEAM			
Student 1			
Name			
Registration No.			
I/C No.		Phone No.	
Class		E-Mail	
Student 2			
Name			
Registration No.			
I/C No.		Phone No.	
Class		E-Mail	
Student 3			
Name			
Registration No.			
I/C No.		Phone No.	
Class		E-Mail	

SECTION B: PROJECT INFORMATION	
Proposed Title	
Problem Statements	
Project Objectives	
Project Scope	
Requirement Specification	
Supervisor Name	

* Attach project sketch & project implementation flowchart (if necessary)

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

APPENDIX B: PROJECT TITLE AMENDMENT FORM

PROJECT TITLE AMENDMENT FORM

Session: _____

SECTION A: PROJECT TEAM			
Student 1			
Name			
Registration No.			
I/C No.		Phone No.	
Class		E-Mail	
Student 2			
Name			
Registration No.			
I/C No.		Phone No.	
Class		E-Mail	
Student 3			
Name			
Registration No.			
I/C No.		Phone No.	
Class		E-Mail	

SECTION B: PROJECT INFORMATION	
Original Title	
Project Title	
Problem Statements	
Project Objectives	
Project Scope	
Requirement Specification	
Supervisor Name	
Reason for amendment:	

SECTION B: PROJECT INFORMATION	
New Title	
Project Title	
Problem Statements	
Project Objectives	
Project Scope	
Requirement Specification	
Supervisor Name	
Project Description *(please attach a separate sheet if needed)*:	

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

APPENDIX C: PROJECT INVENTORY FORM

POLITEKNIK MALAYSIA
METRO KUALA LUMPUR

PROJECT INVENTORY FORM

ITEM	DETAILS
Program	
Department	
Semester/ Year	
Project Title	
Project Type	Tick "/' where applicable: ☐ Pure Science ☐ Applied Science ☐ Technology and Engineering ☐ Health and Clinical Science ☐ Social Science ☐ Arts and Literature ☐ Cultural and Natural Heritage ☐ Information Technology and Communication
Group Members (Name & Registration No.)	
Supervisor (Name & IC No.)	
Co-Supervisor (Name & IC No.)	
Multi-Disipline	
Collaboration (Industry/ Community)	*State complete information for industry/community that involves the project, role, and impact toward industry.*
Project Objectives	
Project Scope	

ITEM	DETAILS
Student Involvement (referring to scope of study/ project)	
Project Abstract	
Infographics Project	*(attach project outcome)*
Level (if participate any competition)	Department/ Polytechnic/ National/ International
No. Registration Intellectual Property (if any)	

Checked by:	**Verified by:**
…….....	…….....
Signature of Project Course Supervisor	Signature of Project Course Coordinator
Name and Stamp:	Name and Stamp:

APPENDIX D: LOG BOOK

PROFILE
PICTURE

POLITEKNIK
MALAYSIA

GAME PROJECT LOG BOOK

DIPLOMA IN INFORMATION TECHNOLOGY
(DIGITAL TECHNOLOGY)

NAME:

REGISTRATION NUM.:

POLYTECHNIC:

SESSION:

PHONE NUMBER:

E-MAIL:

ADDRESS:

PROJECT TITLE:

SUPERVISOR:

LOG BOOK

This Log Book is used specifically to write the progress of activities and works completed by the students within the project's timeline based on any chosen methodologies. Besides that, it will assess ethics and accountability in engaging society of the student's project. It is one of the requirements in continuous assessment percentage which carries 5% of the total assessment.

LOG BOOK GUIDELINE

1. The Log Book must be submitted to the supervisor during the weekly consultation session to be graded and verified.

2. The Log Book must be handed in to the supervisor along with the technical report for evaluation and grading.

LOG BOOK CONTENTS

1. **Weekly progress report**
   Students need to detail all the progress in this area with the planning already stated in the Gantt chart. Students may include any relevant attachment to support the report.

2. **Task suggestion**
   Students need to detail all the planning for the next task based on the Gantt chart include suggestion for improvement.

3. **Supervisors' feedbacks**
   Supervisors give a feedback or comment for the progress and planning report.

LOG BOOK | **WEEKLY REPORT**

WEEK:	1	2	3	4	5	6	7	8	9	10	11	12	13	14
DATE:								**TIME:**						

PROGRESS REPORT

Note: Students need to detail all the progress in this area with the planning already stated in the Gantt chart. Students may include any relevant attachment

TASK SUGGESTION (NEXT MEETING)

Note: Students need to detail all the planning for the next task based on the Gantt chart done.

SUPERVISOR'S FEEDBACK / COMMENT

.....

(SUPERVISOR'S SIGNATURE AND STAMP)

Date:

Note: Supervisors give feedback or comment for the progress and planning report.

APPENDIX E

APPENDIX E: FORMAT FOR TECHNICAL REPORT

- E-1: FRONT COVER FORMAT
- E-2: DECLARATION PAGE FORMAT
- E-3: ACKNOWLEDGEMENT FORMAT
- E-4: TABLE OF CONTENT
- E-5: APPENDICES FORMAT
- E-6: REFERENCE FORMAT

E-1: FRONT COVER FORMAT

2.5 cm top margin

CHAPTER 1

1.5 spacing & double tab enters

INTRODUCTION

1.5 spacing & double tab enters

1.1 Game Overview

1.5 Spacing & single enter

At present, mobile game devices are popular and did not require a lot of time to investment……..

1.5 Spacing & single enter

1.1.1 Mobile Game

Globalization has also affected the…

3.8 cm left margin

2.5 cm right margin

2.5cm bottom

E-2: DECLARATION PAGE FORMAT

2.5 cm

DECLARATION OF AUTHENTICATION AND OWNERSHIP

TITLE : POOL FLAG'S
SESSION : SESSION 1 2021/2022

1. We, **1. MUSTAFA BIN OTHMAN**
2. MOHD BIN IBRAHIM
3. AMINUDDIN BIN OMAR

are the final year students of **Diploma in Information Technology (Digital Technology), Politeknik METrO Kuala Lumpur**, located at **Taman Setiawangsa, Kuala Lumpur** (here after will be referred as 'the Polytechnic').

3.8 cm

2.5 cm

2. We verify that 'this project' and its intellectual properties are our original work without plagiarism from any other sources.

3. We agree to release the project's intellectual properties to the above and said polytechnic in order to fulfil the requirement of being awarded **Diploma in Information Technology (Digital Technology)**.

Prepared by,

a) ALI BIN ABU SHAH) .....
(Identity Card No.: 981129-06-5555)) ALI BIN ABU SHAH

b) MUSTAFA IBRAHIM) .....
(Identity Card No.: 981129-26-3455)) MUSTAFA IBRAHIM

c) AMINUDDIN BIN OMAR) .....
(Identity Card No.: 950129-01-5267)) AMINUDDIN BIN OMAR
at ……..., on ……)

In the presence of,)
(830421-24-5111) as the project) .....
Supervisor on: .....(date)) SULAIMAN BIN ALI

2.5 cm

E-3: ACKNOWLEDGEMENT FORMAT

2.5 cm

2.5 cm

ACKNOWLEDGEMENT ← (*14 point, bold, uppercase)*

2 x 1.5 *spacing*

The author would like to express his/ her sincere appreciation to the supervisor for the guidance and discussion given during the duration of this project implemented

This acknowledge is also given to anyone one who is either directly or indirectly assists in the production of this project.

3.8 cm

2.5 cm

Note:
Only one page

2.5 cm

E-4: TABLE OF FORMAT

2.5 cm

2.5 cm

TABLE OF CONTENTS ← *(14 point, bold, uppercase)*

2 x 1.5 spacing

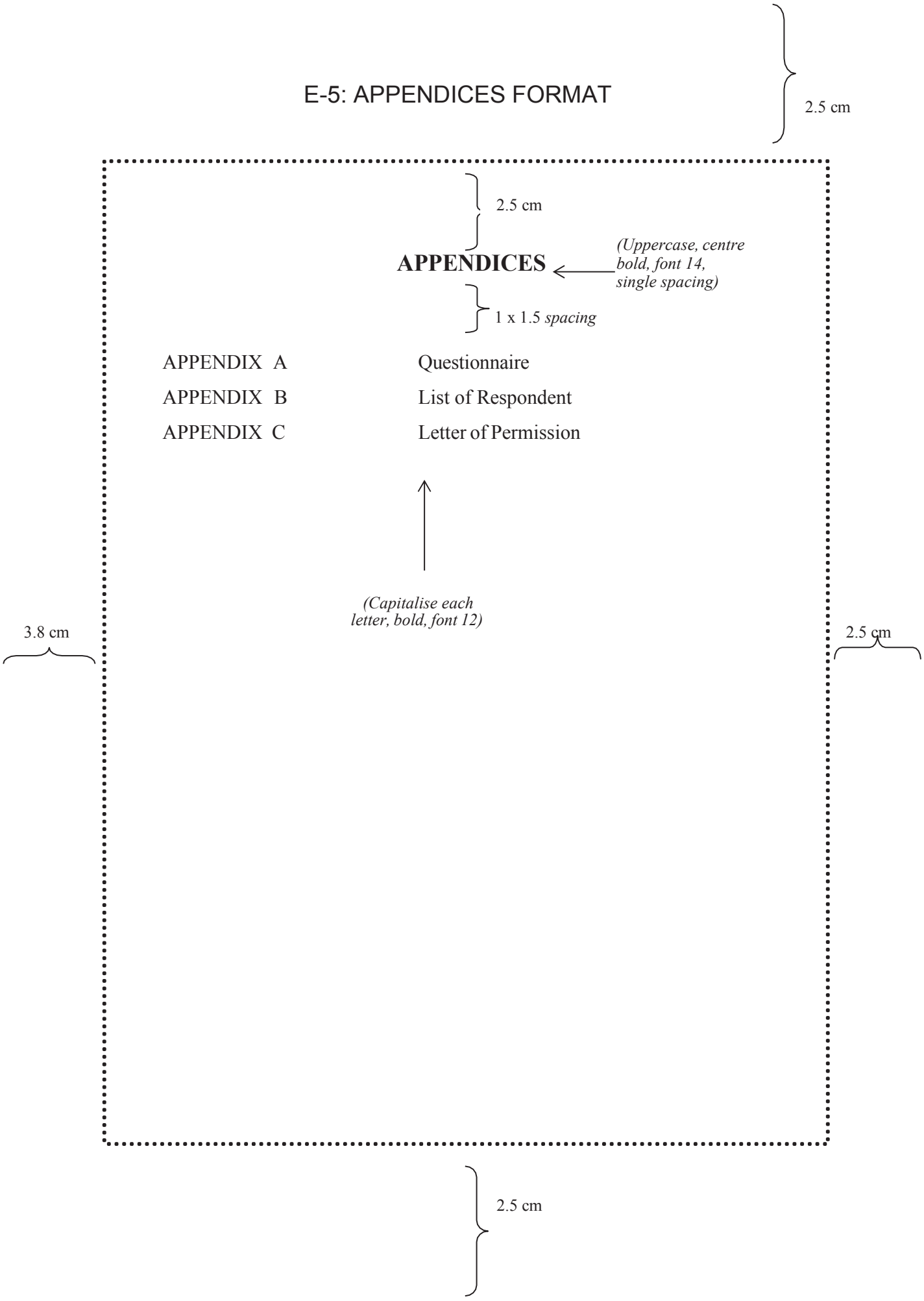
NO	ITEM		PAGE
	DECLARATION OF AUTHENTICATION AND OWNERSHIP	*(12 point, bold, uppercase)*	ii
	ABSTRACT		iii
	TABLE OF CONTENTS		iv
	2 x 1.5 *spacing*		
1	INTRODUCTION *(12 point, bold, uppercase)*		
	1.1 Introduction		1
	1.2 Problem Statement		1
	1.3 Objective		2
	1.4 Scope		2
	1.5 Methodology		3
	1.6 Gantt Chart		4
	(Capitalise each word)		
6	CONCLUSION AND RECOMMENDATION		
	6.1 Conclusion		38
	6.2 Recommendation		39
	2 x 1.5 *spacing*		
	REFERENCES		41
	APPENDICES		43

3.8 cm

2.5 cm

2.5 cm

E-5: APPENDICES FORMAT



E-6: REFERENCE FORMAT (APA 5TH EDITION)

2.5 cm

2.5 cm

REFERENCE ← *(Left align, bold, upper case, font 1*

1 x 1.5 *spacing*

Abdul Rahim, A. H., Muhd Zaimi, A. M., Bachan, S. (2008). Causes of Accidents at Construction sites. *Malaysian Journal of Civil Engineering, 20(2):* 242 - 259.

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(Hanging Indent. Use a hanging indent for the entries longer than one line. Indent 1/2'' from the set margins, after the first line of each entry.)

(12 point, Times New Roman, and 1.5 spacing)

3.8 cm

2.5 cm

2.5 cm

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PROJECT GUIDELINE