FINAL YEAR PROJECT (PTA)

REPORT WRITING GUIDELINE

Faculty of Computer Systems and Software Engineering
University Malaysia Pahang

INTRODUCTION

This course (FINAL YEAR PROJECT I/II) aims to give chances for the student to practice and apply their knowledge and skills that they gain during their study in the university. Student will learn to identify problem, analyze the problem, give general solution, collect the required data regarding specific solution and do research on the solution. Finally, student will be able to produce proposal/report and solve the problem identified. During the course, student will be supervised by their supervisor in order to guide and monitor the students' project progress and to ensure that they can achieve the course objective.

The outcome of FINAL YEAR PROJECT I

i. CO1 - Design a solution based on specific problem by following the principle of software development process.
ii. CO2 - Organise the solution and use appropriate tools in the development of the solution
iii. CO3 - Demonstrate good communication and presentation skills.
iv. CO4 - Demonstrate student professional values and responsibility throughout the project completion.

The outcome of FINAL YEAR PROJECT II

i. CO1 - Develop the solution based on the approved proposal (PTAI) which comply with the principles of system development process.
ii. CO2 - Organise an appropriate unit testing and user acceptance test (UAT) for the proposed solution.
iii. CO3 - Demonstrate good communication and presentation skills.
iv. CO4 - Demonstrate student professional values and responsibility throughout the project completion

Generally, a PTA project requires each student to come out with a system that has at least CRUD functions – CREATE, RETRIEVE, UPDATE and DELETE. Student need to develop a functional system that contain INPUT (user input data), PROCESS (update, delete, search or apply technique/algorithm), OUTPUT (view output data), involve DATABASE operation (perform specific function such as INSERT, DELETE, UPDATE, SEARCH) and Conduct FUNCTIONAL TEST / USER ACCEPTANCE TEST.

Example of title: ***Online Breakfast Takeaways and Delivery***

REPORT CONTENT

The content arrangement of PTA report is based on the Table 1 as follows:

	Final Year Project	
	PTA1	**PTA2**
Abstract	/	**/**
Chapter 1: Introduction	/	**/**
Chapter 2: Review of Existing Systems	/	**/**
Chapter 3: Methodology	/	**/**
Chapter 4: Implementation, and Testing		**/**
Chapter 5: Conclusion*	**/***	**/**

* conclusion is optional for PTA I

CHAPTER 1: INTRODUCTION

1.1 Background of Study

This part contains the overview/general description of project. For example, if the project title is *Online Breakfast Takeaways and Delivery,* the student may write about some existing applications/systems that can be closely related to the proposed system such as Pizza Delivery, McDonalds etc.

In the case of the proposed system is totally new (no existing similar systems), the background of study can be focused on the manual approach of the particular process. For example, the background of study can begin with a sentence like :-

Example:

Morning is the most hectic time in a day of especially career women with families. They need to divide times very efficiently to ensure that their children are ready for schools, husband's shirts and pants ironed, breakfast prepared, and they themselves are ready to workplace. This hectic lifestyle of a career woman has resulted in decreasing quality of life, which one of the examples is children having unhealthy breakfast. Furthermore, the available takeaway deliveries are mostly provided by fast food companies.

1.2 Problem Statement/Motivation of Project

Problem statement (this sub-topic can also be named as **Motivation of Project**) states the problem of the current/existing system (or manual approach if the proposed system is totally new) that then leads to the proposal of the solution (system). This part does not need to be in a long paragraph i.e. maximum three sentences ideally. As an example, a problem statement can be something like:-

Example 1:

Career women with families usually are busy and have less time to provide healthy breakfast for their families. Furthermore, there is no existing online system available for breakfast takeaways.

Example 2:

Manual ordering system in a busy restaurant is not efficient especially in peak times. Problems such as missing order, delayed food, long queue for seating can affect the sales due to the inefficiency of the restaurant operation.

1.3 Aim and Objectives

Aim is formulated in one sentence whilst objectives can be of two or three sentences (bullet points or numbered). 'Aim' is basically what to achieve out of the project. The objectives are the breakdown of the tasks in order to achieve the one aim. Objectives have to be measurable i.e. something that can be clearly defined as completed or not completed. All objectives must be accomplished.

Example:

Aim: *To develop an online system that can help in ordering and delivery of breakfast to be used by restaurants or breakfast stalls.*

Objectives:

- *To design a database for breakfast menu (food and beverages)*
- *To design a GUI for the system….*

1.4 Scope of project

Scope of project defines the focus area of the subject matter.

Example:

This system only serves Malaysian breakfast menu and is specifically for five branches of Restaurant ABC in Gambang.

1.5 Significance of the project

This part explains the important of your project whether your project is beneficial to society, improve the performance of the previous project/system, solve the problem in previous project/system.

Chapter 2: REVIEW OF EXISTING SYSTEMS

This chapter gives information about the study of the project. It includes the description of the existing problem or the solution perform by other studies. The proposed study should answer: “What, Why, How” and the comparison can be shown into table form. This chapter should compare THREE of existing system and analysis review of the comparison should be discussed in this chapter. This chapter also need to explain in detail of the technique, method, tools or technology that can be adapted into the proposed project.

Source of references should be included in this chapter. The sources can be come from book, journal, conference paper, magazine, thesis or website. All references should be recorded to identify the copyright and originality of the thesis.

CHAPTER 3: METHODOLOGY

This chapter about the discussion in detail of the methodology/approach of PTA. This chapter should cover the software development life cycle (SLDC). This chapter should explain in detail of the activity in SDLC / Work Breakdown Structure (WBS) of the project, system/user requirement. ~~the proposed design (including Entity Relationship Diagram (ERD), storyboard)~~, System design/modelling (for oop : use case diagram, activity diagram, structured : dfd, context diagram, system flow). Database design (ERD/class diagram), interface design (dialog diagram/storyboard), planning for Implementation & Testing (planning for Implementation & Testing for PTA I only) and Gantt Chart.

3.1 SDLC/WBS

This part discuss regarding the phase of SDLC/WBC involves in this project. The student must clearly describe the activities in each phase of SDLC/WBC that related to the project.

3.2 System requirement

This part consists of the hardware and software requirements. The student must specify clearly what hardware and software used in developing the system and justification of the chosen hardware and software.

3.3 User requirement

User requirement can be obtained from interview with users, comparison of existing systems, or observations of the particular process in manual system. It should contain the list of the functions needed *(login, registration, menu update, order update etc.)* according to the target user.

3.4 Proposed Design

This part includes the design of the system and ERD/Storyboard. The design of the system need to show the flowchart of the system, context diagram/use case diagram/ERD/storyboard.

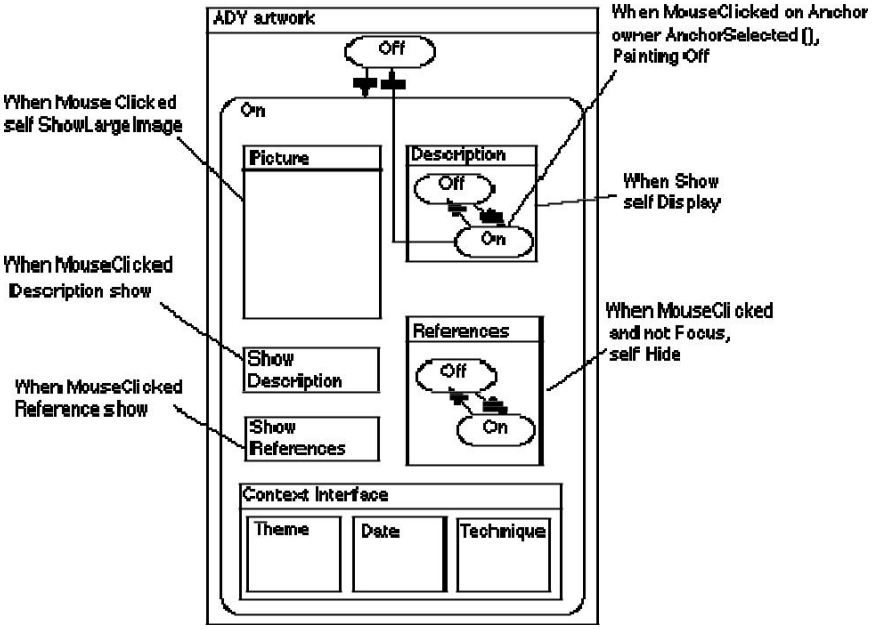
3.5 Database design

This part explains the process of creating the database. The student should specify all the data and tables involved in the database of the system. If the tables have relation to each other, the link of the tables should be mentioned. The student must also state specifically which function in the system will access the particular data.

3.6 Interface design

In this part, the student must provide the interface involved in the entire system, complete with the GUI elements (button, menu, sub-menu,) and their functions, and also the link/sequence between the interfaces.

Example:



3.7 Planning for Implementation & Testing

This part is only for PTA I. This part should tell the planning on how to design the User Acceptance Test (UAT) form according to the requirement of the system.

3.8 Gantt Chart

A Gantt chart show the track of development activities from start until the completion of the project. The chart for PTA I show the estimation duration of the activities in PTA I. The actual duration of activities should be shown in PTA II report. The Gantt Chart must show the project activities, **NOT** the chapter of report writing. TO develop a Gantt chart, please use a specific tool such as Microsoft Project.

CHAPTER 4: IMPLEMENTATION AND TESTING

4.1 Implementation

In implementation part, the student should explain the process and method to develop and deploy the system. Among the contents are: - coding phase, any related settings and the installation of the system to server (if relevant).

4.2 User manual

User manual provides the guide for user to use the completed system. This part consists of step-by-step instruction that is presented by screenshots and explanation.

4.3 User Acceptance Test (UAT)

In UAT, the student has to design the UAT form according to the developed system. At least one user has to be chosen to complete this test. The chosen user will go through each of the instructions in the user manual (4.2). Any errors or problems found by the user must be noted in this form. The form is also needs to be signed by the user after the test is finished. The following figure shows the example of UAT form.

Example of UAT form:

No.	Module	Activities	Status		Comments
1.	Login	User registration	Yes ☒	No ☐	
2.		User login	Yes ☒	No ☐	
3.		User logout	Yes ☒	No ☐	
4.		Password retrieval	Yes ☐	No ☒	Not working
5.	Food order	Choose menu	Yes ☒	No ☐	
6.		Calculate price	Yes ☐	No ☒	Incorrect price shown..
7.	…	…	Yes ☒	No ☐	
8.	…	…			
		…			
		…			

This test has been performed by:

Name : _____

Signature : _____

Date : _____

Chapter 5: Conclusion

5.1 Conclusion

Conclusion summarises the project as a whole. The student must reflect the aim and objectives stated earlier in Chapter 1 (whether or not every objective has been accomplished and the aim has been achieved). If there is any error found in the testing phase (Chapter 4), the errors should be mentioned as well.

5.2 Recommendation

This final part contains the recommendation of how to solve the errors found in Chapter 4 (4.3). In the case of no errors found, the recommendation will be on how to improve/upgrade/enhance the system in the future.