
SECJ2203: Software Engineering

---

# Project Proposal

One Touch FYP System

29 April 2022

School of Computing, Faculty of Engineering

Prepared by: <DRAMA QUEEN>

| | |
|---|---|
| Felicia Chin Hui Fen | A20EC0037 |
| Goh Yitian | A20EC0038 |
| Gui Yu Xuan | A20EC0039 |

# Table of Contents

# 1. Introduction

## 1.1. The Goal

One Touch FYP System is a platform that allows different users, such as undergraduate students, supervisors and committees of the School of Computer to communicate and share tasks or information about final year projects. The final year project is important to final year students as it will serve as a guide to help students define their career paths and demonstrate how students can use their knowledge and skills to solve problems.

The main goal of the proposed system, the One Touch FYP System developed by the authors, is to simplify the communication and interaction between users. The authors came up with this idea because the current systems do not allow users to communicate effectively. Users need to complete tasks through different platforms, such as online meeting platforms for project presentation, Google Forms to submit reports, and messaging platforms for different users to communicate. However, the proposed system is able to solve the problems of the current system. The proposed system adds platforms with different functions to facilitate each user to perform different tasks, such as meeting platform, submission platform and evaluation platform. This means that users are allowed to complete all the tasks on One Touch FYP System.

The objectives of the proposed system are:

- To create a platform that is able to save users time and ease the use of users.
- To ease the process of finding supervisor by students
- To simplify the process of communication and interaction between users
- To improve the efficiency of the project submission and evaluation process

## 1.2. The Scope

### I. Technology to be Used to Develop The System

We will use some software to do this project.

Firstly, we used the ClickUp software (https://www.clickup.com/) to draw the gantt chart to show our timeline of doing this project. Besides that, we will use the invision software (https://www.invisionapp.com/) to do the prototype. In addition, in this project we will use a lucid chart (https://www.lucidchart.com/) to create a class diagram. Moreover, in this project, we will use SQL (https://livesql.oracle.com/apex) and Oracle Apex (https://iacademy.oracle.com/) to develop the system.

### II. Software Products Module & Functions

| **Modules** | **Functions** |
|---|---|
| 1. Forum | -Administrator will share some information such as news, PSM calendar, PSM presentation schedule and list of lecturers and their area of expertise in these forum for students<br>-Students able to comment and discuss with others |
| 2. Student Care (Customer Service) | -Administrator act as customer services to answer student's question about the system |
| 3. Registration | -Students, supervisors, coordinators and evaluators can register themselves in the system |

| | |
|---|---|
| 4. Project platform | -Include meeting platform, submission platform, Form platform and evaluation platform.<br>-Meeting platform<br>● Coordinator brief on suitable topics, lecturer and his/her area<br>● Administrator interview with students once project proposal is submitted<br>● Student meeting with supervisor to discuss the project<br>● Student presentation at this platform<br>-Submission platform<br>● Student submit their project proposal form<br>● Student submit the meeting logbook<br>● Student submit Project evaluation form, draft report submission form, report<br>● Every submission form will contain a feedback section for student to know the comment made by evaluators<br>● Student submit changing project title form if wish to change title<br>-Form Platform<br>● Project Proposal Form<br>● Meeting logbook<br>● Project Evaluation Form<br>● Draft Report Submission Form<br>● Changing Project Title Form |

| | |
|---|---|
| | -Evaluation Platform (only appear in evaluator mode)<br>● Evaluators will receive student PSM Report and made the evaluation |
| 5. Chatbox | -Enable student to find and communicate with supervisor (asking whether can be their supervisor for project)<br>-Chat within student with supervisor, student with evaluator |
| 6. Calendar (Notification) | -Mark the important date and alert the students |

*Table 1: Software products module and its functions*

**III. Key Services/activities that will be Performed During System Development**

The key activities will be performed during system development are software specification, software design and implementation, and software validation.

Before starting to develop the system, we need to study the user and system requirements. By interviewing with the stakeholders, we will know the functional and non-functional requirements of the users and implement it in our new system. After that, we need to prepare the project proposal based on the requirements and specification.

Then, we will design the blueprint and the prototype of the system. We will test the prototype and fix the errors in this phase. After debugging and fixing all the errors, we will finalise the design and demo it to the stakeholders.

### 1.3. Project Duration

After discussion and prediction, we will spend about 65 days to complete our project. Our project will be divided into 6 phases.

The 6 phases included the Requirement Specification phase, which will take 13 days, Component Analysis phase for 5 days, Requirement Modification phase for 23 days, System Design and Reuse phase for 9 days, Development and Integration phase for 13 days and System Documentation for 2 days.

## 2. Software Process Model

### 2.1. Software Process Model Goal

A software process model is a simplified representation of a software process, or it can be defined as an abstraction of the actual process. Each model can represent a process from a different point of view [1]. The goal of a software process model is to provide a roadmap for managing and coordinating tasks during software development. It assists the developer in achieving the developer's goals and end product in a more effective and efficient manner [2]. The developer will be able to save money, time, and effort while developing the software in this manner. The software development process will be able to be completed more efficiently and quickly with the help of the software process model.

## 2.2. Software Process Model Chosen and Justification

A reuse-oriented software engineering process model has been chosen to develop the proposed system. Our group has limited time to develop new systems that can meet stakeholder requirements. Therefore, in order to effectively solve the problem of the current system and optimise it on the existing basis, the reuse oriented model is the best choice.

By using this model, our group was able to complete the project within a specific deadline. By identifying issues with the current system and understanding how the current system works, our group can modify the current system to meet new stakeholder requirements. Our group was then able to integrate the modified parts into the new system.

Our group chose this model based on a few specs. First, a reuse-oriented software engineering model can save development costs. Lowering costs will help deliver items to Universiti Teknologi Malaysia at a cheaper price and increase its profits. Next, by using a reuse-oriented software engineering model, our team was able to reduce the margin of error and thus indirectly reduce risk. Third, reuse the existing systems to integrate new systems able to save time and effort, because our team just identifies current problems, analyzes new requirements, provides solutions and proposes systems. [3]

## 2.3. Software Model Illustration

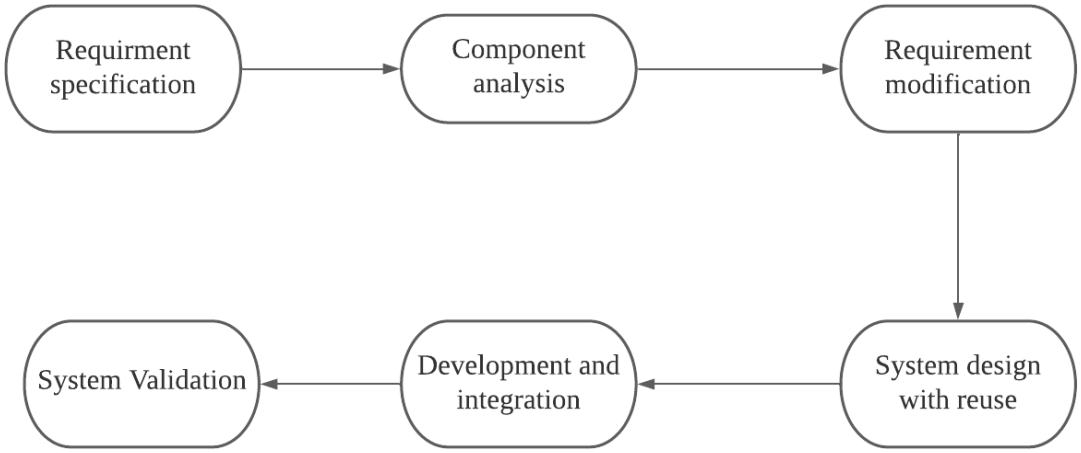


*Figure 1: Reuse-oriented software engineering model illustration*

## 2.4. Software Process Model Detail Activities and Gantt Chart

| Phase | Details Activity | Duration (Days) | Start Date | End Date |
|---|---|---|---|---|
| Requirement Specification | Gather the information of the user requirements | 2 | 17/4 | 18/4 |
| | Identify the issues of the current system and understand the workflow | 2 | 19/4 | 20/4 |
| | Propose the new system | 6 | 21/4 | 26/4 |
| | Prepare the project proposal | 3 | 27/4 | 29/4 |

| | | | | |
|---|---|---|---|---|
| Component Analysis | Recognize the reusable components | 5 | 30/4 | 4/5 |
| Requirement Modification | Analyse the requirement | 8 | 5/5 | 12/5 |
| | Modify the current components | 8 | 13/5 | 20/5 |
| | Determine the business rule | 5 | 21/5 | 25/5 |
| | Prepare the report | 2 | 26/5 | 27/5 |
| System Design and Reuse | Design the blueprint of the proposed system | 5 | 28/5 | 1/6 |
| | Design the prototype of the system | 4 | 2/6 | 5/6 |
| Development and Integration | Test the prototype | 3 | 6/6 | 8/6 |
| | Fix the errors and beautify | 5 | 6/6 | 10/6 |
| | Demo and finalise the prototype | 5 | 11/6 | 15/6 |
| System Documentation | Documentation report | 2 | 16/6 | 17/6 |

*Table 2: Software process model detail activities*

Gantt Chart: https://app.clickup.com/25555781/v/l/4-26217535-1

Note that: FF = Felicia Chin Hui Fen

YG = Goh Yitian

Y = Gui Yu Xuan

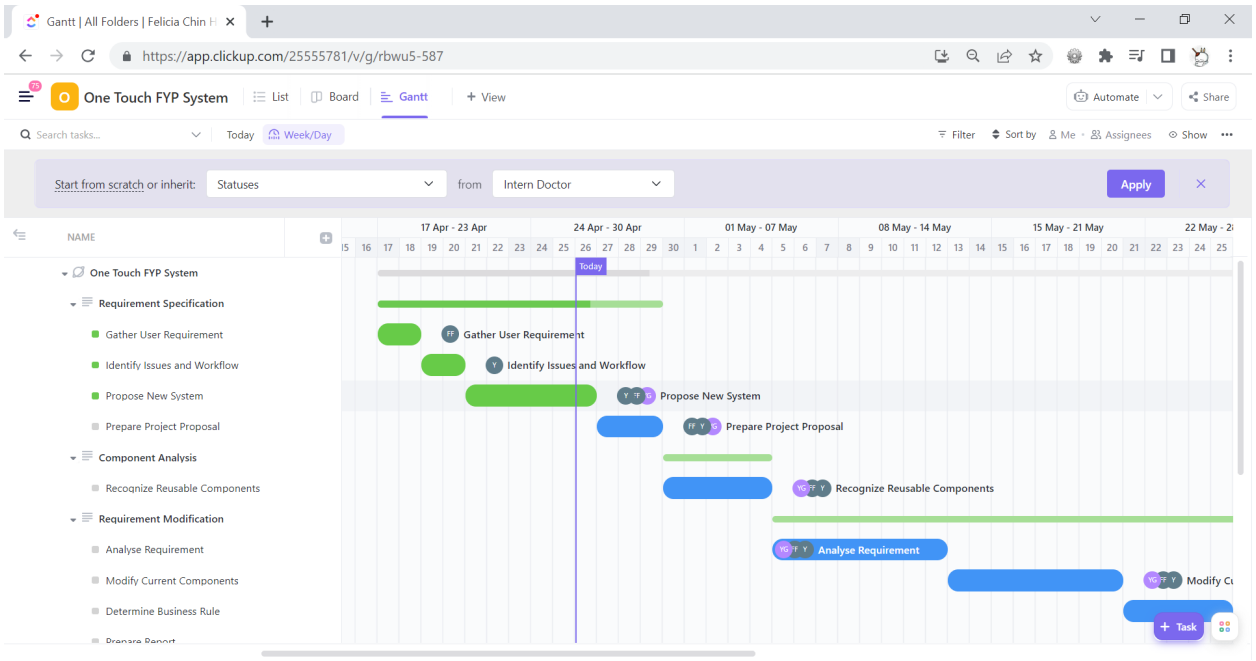


*Figure 2: Gantt chart of the project (part 1)*

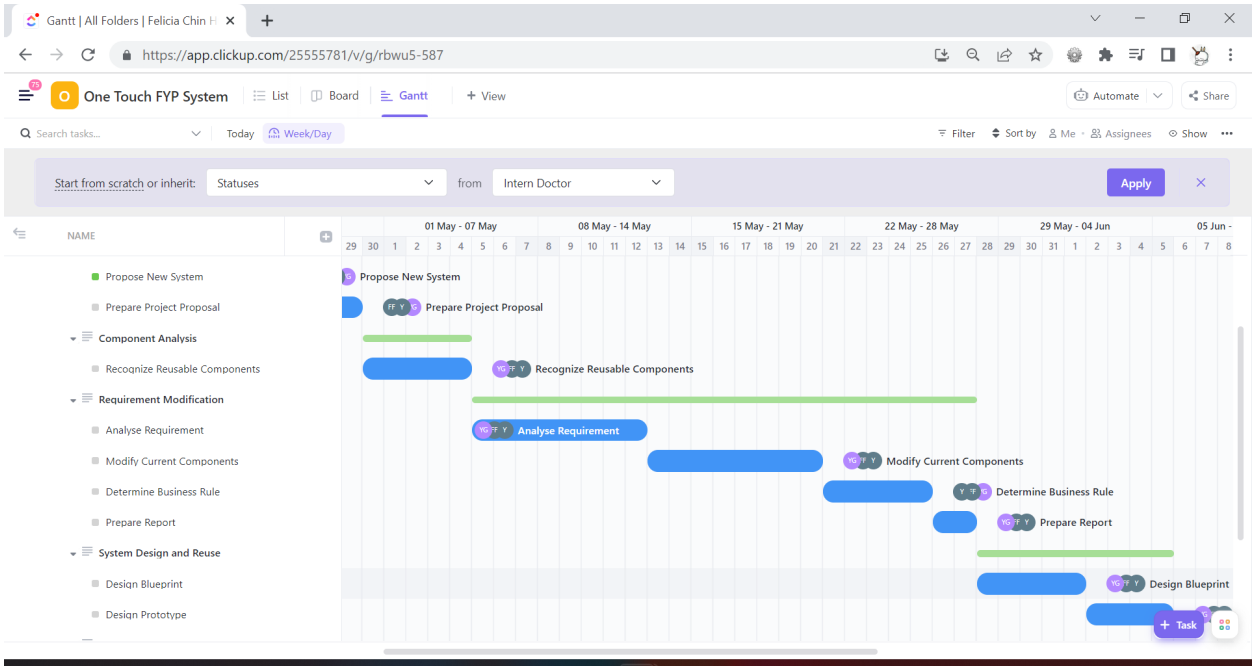


*Figure 3: Gantt chart of the project (part 2)*

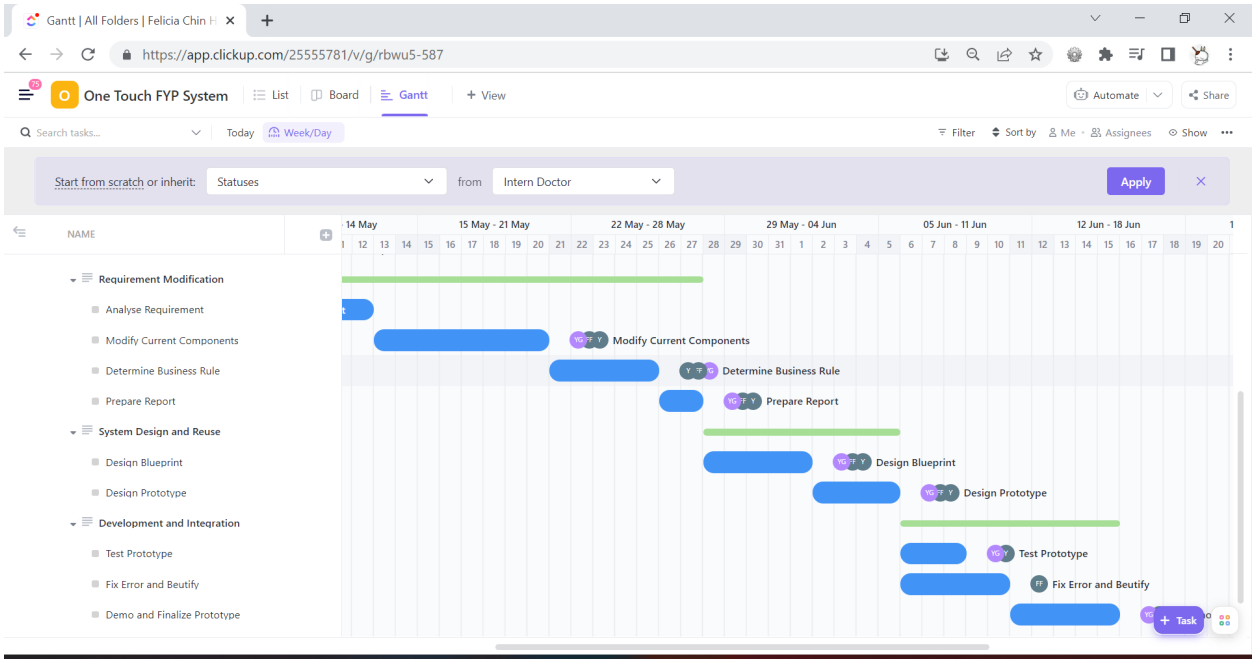


*Figure 4: Gantt chart of the project (part 3)*

# 3. REFERENCES

[1] O. Elgabry. "Software Engineering — Software Process and Software Process Models (Part 2)." https://medium.com/omarelgabrys-blog/software-engineering-software-process-and-software-process-models-part-2-4a9d06213fdc (accessed 23 April, 2022).

[2] M. Sulemani. "What is a software process model? Top 7 models explained." https://www.educative.io/blog/software-process-model-types (accessed 23 April, 2022).

[3] SoftSchema. “Reuse-oriented Model of Software Development.” https://softschema.com/reuse-oriented-model-of-software-development/ (accessed 23 April 2022).