POSTGRADUATE STUDENT TRACKING AND MANAGEMENT SYSTEM

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FACULTY OF COMPUTING AND INFORMATICS
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BY

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THIS PROJECT REPORT IS
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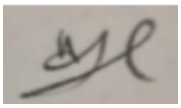

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Abstract

Postgraduate Student Tracking and Management System is a system that is used to manage the graduate student throughout their study journey, tracking their profile and their study progress. In this project, our main objective is to design and develop such a system, called PostConnect. This system helps to ease the postgraduate student tracking and management process handled by the faculty, panel and supervisors. There is much work and planning tasks to be carried out prior to the system development. To do so, I have prepared an interim report to highlight the works that I have carried out. This report consists of 6 chapters. Each of the chapters serves different purposes and provides the picture of the design of the system from different perspectives. From identifying the problem statements that motivates the development of this system for the project to building a prototype for the system. To show a clearer picture of the system design, the report contains numbers of figures and tables such as Use Case Diagram, Use Case Description Table, Context Diagram, Entity Relationship Diagram and many more, to provide better illustration of the system general picture. In the end, it found that the content inside this report is sufficient enough to provide a clearer picture and better understanding in developing the system during the FYP2. In the conclusion, as for the Final Year Project - Part 2 (FYP2) plan. The future plans completed in FYP2 will mainly transform what has been specified inside this interim report into the real working system.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

1.0 Introduction

Throughout the postgraduate student study journey, tracking of their profile and their study progress required much effort and time. In order for the postgraduate student to complete their study, they are expected to conduct research related to their course. The postgraduate study process involves a lot of interaction between student and supervisor (Mokhtar et al., 2022), processes include research outputs submission and acceptance, proposal defence, work completion defence and many more. It is undeniable that many students, especially the newcomer students, will get lost easily throughout this study process and hence, result in their delay of graduation from study. To make it worse, some of them even choose to withdraw from their study as they have spent so much time and cost on study and yet they eventually are still unable to complete their study on time. On the other hand, it is to be noted that some of the existing postgraduate students tracking mechanisms in some universities still require manual workforces to key in student's data and to track the student's progress. The lack of systematic monitoring mechanisms for postgraduate students caused the process and the amount of time that the supervisor needs to spend on managing and tracking their students is very tedious. Therefore, this issue gives rise to the difficulty among the supervisor to monitor each student's progress to know their latest progress in their research, and eventually failed to guide their student to complete their studies on time. To overcome this issue, a postgraduate tracking and management system named PostConnect is proposed. The proposed system will replace the previously

mentioned old mechanism's student management and tracking system and to help students to graduate on time with better management on the study progress. Next, also to ease the tracking and management process handled by the faculty, panel and supervisors.

1.1 Problem Statements

There are a few issues that arise, due to the absence of an automatic postgraduate student tracking and management system.

The following issues are :

- Much effort and time is needed by the faculty and supervisors to manually maintain and track the postgraduate student profile and study progress towards graduation.
- A lot of complex processes and steps are involved in postgraduate study, and the lack of guidance and instruction cause the postgraduate students to get lost easily throughout the postgraduate study process.
- The lack of commitment to the study among the students, causing them to have poor management skills on their study progress and eventually prolong the time to graduate from the study.

1.2 Objectives

- To design and develop a postgraduate tracking and management system.
- To visualise the data of student profiles and their progress in the studies with reports.
- To ease the tracking and management process handled by the faculty, panel and supervisors

1.3 Scope

PostConnect is developed and will be implemented for Multimedia University. The postgraduate studies department of the university, particularly, Faculty of Computing and Informatics will be using this system. The general functionalities of the PostConnect system is to assist students, particularly the student from postgraduate study to graduate on time with better management on the study progress. To further elaborate it, the main features of the PostConnect system that help to achieve the objectives includes but not limited to research proposal defence monitoring, supervision monitoring, progress monitoring, work completion defence monitoring, candidature monitoring and student data dashboard. The use of research proposal defence monitoring and work completion defence monitoring features are used by the Supervisor to monitor their students particularly in their progress and performance when it comes to coursework matters. Next, the progress monitoring feature shows the list and the details of the half-year progress reports which are submitted by the student. Moreover, the candidature monitoring feature deals with the monitoring of the student's course study duration. On the other hand, the supervision monitoring feature is used by the Faculty for assigning the supervisor to students. The last core feature of

the system is the student data report, where it visualises the data about student's progress in the form of a table. In this era of technologies, it is undeniable to say that a management and tracking process is no longer like it used to be in the past. During the past, people tended to record down data using handwritten on a piece of paper. This slow going process of tracking and management is outdated and inefficient. For instance, much effort and time is needed to manually maintain and track the postgraduate student profile and study progress towards graduation. Thus, this system is developed, so that the tracking and management process handled by the Faculty, Panel and Supervisors can be easier. Next, there are multiple types of stakeholder involved in the system, one of the stakeholders is the Faculty. The Faculty is responsible for controlling the system. He/She has the highest authority level over the system including registering the Supervisor and student into the system, Supervisor allocation, control over the submission portal and so on. The next stakeholder of the system is the Supervisor. The system allows the Supervisor to visualise the student profile and their progress in the studies and allow the Supervisor to come out with the schemes based on the available data in order to help their students to achieve in their academics. Moreover, the student would also be one of the stakeholders. Besides being monitored by their Supervisor and the Faculty, they use the system tracking features as an indicator to plan out their study and manage their study progress better so that they can graduate from the study on time. Last but not least, the stakeholder of the system is Panel. Panel uses the system to evaluate the study performance of the postgraduate students throughout their study.

Chapter 2: Background Study / Literature Review

2.0 Introduction

In the era of emerging technology, the way of managing and tracking a record is different from the past. In the past, one of the mechanisms to keep a record was by hand writing the list of records on a piece of paper. People found out that this mechanism of tracking and keeping records generates a lot of issues including but not limited to the slow going process of noting down the record manually by hand writing, difficulties in tracing back to the previous noted record from the log book by scanning line by line of the list, and many more. Thanks to the existence of online systems nowadays, data management and tracking has become a lot easier than it used to be in the past. To further elaborate on this, the management and tracking systems are widely used in many industries and fields such as banking, manufacturing, medical, logistic fields and many more. These systems help to ease the business operation by allowing the data management and tracking process to be done in a more efficient and systematic manner. Some features possessed in such systems for example, an analytic feature that helps to visualise and analyse data from the database, one click data monitoring and so on, mean to become a preferred choice by business operation over the manual way's tracking method as stated above. In the same way, a university also does need a system to maintain and track the postgraduate student profile and study progress towards graduation. This system should be able to help students to graduate on time with better management on study progress. Therefore this paper will propose and develop a postgraduate management and tracking system, namely PostConnect. First of all, this paper will cover the general concept of postgraduate tracking and management systems. In this section, there will be a cover on the basic components of

the system, type of the system role and many more. Next, the type of technologies used to develop the related system will be covered in this paper as well. A walkthrough of the example of the existing system will be discussed in this paper. To further elaborate on this, there are 4 existing related systems that will be discussed including POSTRACKER, Graduate Information Management System (GIMS), Postgraduate Management Model at Universities with Geosciences and Environmental and E-Logbook System for Postgraduate Research Students (EPRES). Furthermore, this paper will go through the comparison of existing systems with PostConnect in terms of the system functionalities. Finally the last part of the paper will be covering the conclusion. This section will cover the advantages of the system implementation and so on.

2.1 Postgraduate Tracking and Management

A tracking and management system is known as a system which is used for managing the object or person, as well as allowing the system user to record and follow the progress of their target. It is undeniable to say that, an old school way of manual tracking mechanism such as keeping a hand-written record book for the tracking purposes, is a very tedious process for a person to monitor the progress of something. Therefore, a tracking mechanism with the automation elements is must to implement into any system including an university system, in order to ensure the business efficiency. The motivation for proposing PostConnect is to ease the process of managing the postgraduate students by the administration and supervisor, as well as to help the student to graduate on time. First of all, similar to the existing postgraduate tracking system, system PostConnect contains more than one type of user with different authority levels. The type of user in our case is ‘Faculty’, ‘Supervisor’,

‘Panel’ and ‘Student’. On the other side, The existing postgraduate tracking and management system is made up from a few different modules and components. One of the main modules that can be noticed from these systems is the information management module. This module includes but is not limited to the components such as basic profile information of the students, research working titles, defence research proposal information, work completion defence, progress monitoring and many more. Similarly, in our proposed system PostConnect, these components also exist to act as one of the core functionality of the system. Since our system will fall into the control of 3 types of user with different authority levels, these system components that contain the information of the student will be visible to the user type, ‘Supervisor’. Whereas, the user type, ‘Faculty’ and ‘Panel’ are able to take full control of managing the study journey of all postgraduate students. In order to increase the efficiency of the tracking and management process, the student’s progress from every aspect will be monitored from time to time in order to ensure they can graduate on time. If the student is detected and found to be “off-track” from the study, they will be carefully observed. For instance, every student must submit a half-yearly progress report or present his progress report in a research colloquium twice a year as part of the progress monitoring. If one of the students is detected and fails to do so, he/she will receive a fail grade and eventually will be terminated from the study if they receive a fail grade for 3 consecutive times.

2.2 Technologies Used

There are many ways and different technology stacks can be used to develop a postgraduate management and tracking system. One of the studies shows that the system can be developed by adopting the Spring framework with three-tier MVC

architecture design. This framework is highly configurable. Through the development of the system using the Spring framework, the overall system architecture, database design is carried out and some of the problems in detailed design are able to be solved as well. Besides, few other main technologies that are being adapted by the system include Bootstrap, JQUERY, JSP. (Yu, 2017). Similarly, Xia et al. (2021) has proposed the system to be built on top of the MVC architecture design. The study shows that the popular Spring Boot framework is used for the back-end, while the Vue framework is used for the front-end development. The time needed to spend on configuring the XML files can be saved up by using the Spring Boot framework. Thus, the system environment is built and is set up quickly. On the other side, the front -end framework Vue uses AJAX to communicate with the back-end for the data storing and data passing. Next, in the paper written by Mokhtar et.al (2022) where he proposed that the system can be built on another different web-based architecture. The technology the author uses includes PHP and HTML are used to develop the system, while the system's database is built using MySQL.

2.3 Examples of Existing Systems

2.3.1 POSTRACKER

POSTRACKER is developed by Hasnan et al. (2015), it is a postgraduate student management and tracking system that is being handled by the administrators of the Postgraduate Department, Faculty of Accountancy for managing their students. The system includes the following features: registration data, research working titles, supervisor(s), Defence Research Proposal (DRP), student progress to date, viva voce, examiners, and deadlines for correction (after viva voce). The system consists of a few sub modules as shown in Table 1.0. Besides, the system will send ‘alerts' to notify if the students are achieving their academic goals, as well as to notify those students who are not progressing well and found to be “off-track” from the studies. The notable contribution of this system has begun to show effective results ever since its deployment. The improvements include the reduction in the percentage of students to be scheduled for the Defence Research Proposal (DRP), reduction in waiting time for students going for viva voce as well as reduction in time for the supervisor nomination process. Besides, this system also helps to promote the four-year Graduate On Time (GOT) emphasised by the Malaysia government.

Table 1.0. Sub-Module of POSTRACKER

	Sub-Module of POSTRACKER

	Doctor of Philosophy (Ph.D.) Student Tracking
	Master of Education (M.Ed.) Student Tracking
	Defence Research Proposal (DRP) Schedule Tracking
	Viva Voce Schedule Tracking
	Submission of Correction Tracking

2.3.2 Graduate Information Management System Based on Spring

According to Yu (2017), Graduate Information Management System (GIMS) is broken down into a few sub modules. The first sub module will be the user management module. This module is responsible for managing the user information, such as the administrator role to log in, teacher role to login the system and so on. Next, the system is made up from the student management sub module. This sub module provides the functionality to add student's basic information, manipulate all the information of the student, including view, update and delete the information, sorting, paging and information export. Furthermore, the information management sub module deals with the functionality to show the information of students such as their proposal defence information, the information of the paper, thesis title and so on. In addition, the main function of the system can be divided into five modules, which these modules are made up from the sub modules as stated above, as shown in Figure 1.0.

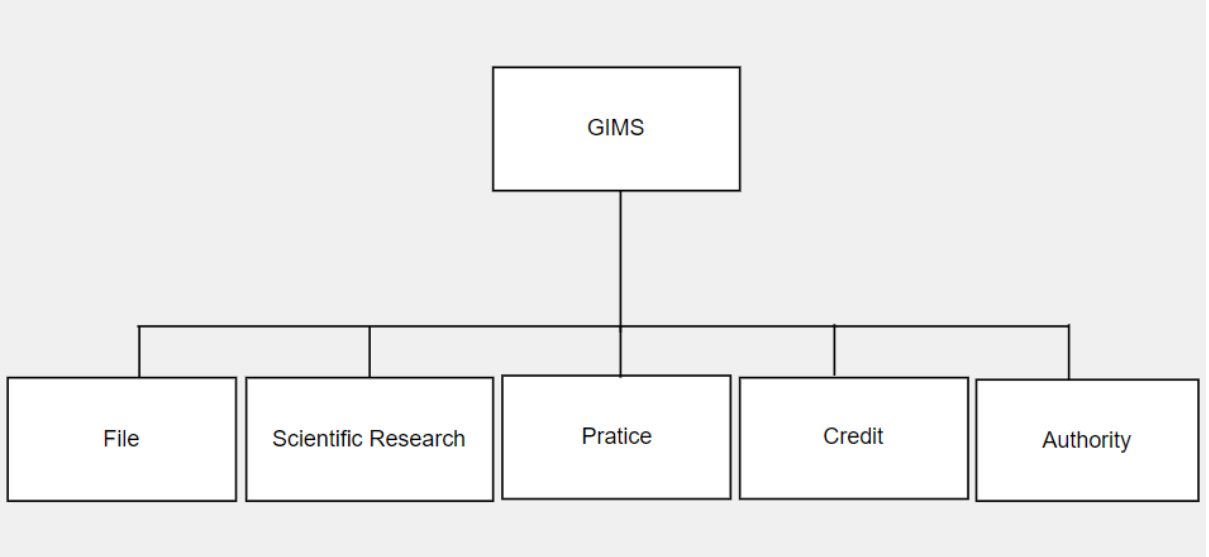

Figure 1.0. System function diagram of GIMS

Graduate information management system is built on the top of the Spring MVC layer. The system is divided into 3 layers, which is Control, View and Model. Last but not least, one of the major contributions of the system is that some problems in the detailed design of one system can finally be solved through the development of the postgraduate information system by using the Spring framework thanks to its architecture.

2.3.3 Postgraduate Management Model at Universities with Geosciences and Environmental

The system that Xia et al. (2021) developed mainly includes 8 major modules. The following modules are enrollment management, discipline assessment, student status management, course management, collaboration management, reward and punishment management, degree management, results management, and data analysis. Each of the system modules provide different features from one another. For instance, enrollment management deals with student registration and student examinations. The academic

registration management module deals with the transfer of supervisor, leaves of absence, suspensions of study and so on. On the other hand, the training management module is responsible for dealing with a student's grade, thesis proposal, mid-term assessment and so on.

Through the careful analysis of the specific aspects of potential software architecture solutions, as well as the system needs of such universities. The system is chosen to be built on top of the Spring Boot framework for the back-end of the system and using the Vue framework to build the front-end of the system. The system was layered with MVC design and mainly included a business logic layer, view layer, data persistence layer and the control layer. Spring Boot framework is chosen to be the back-end framework due to the reason that it saves time in configuring the XML files, and thus quickly builds an environment. The data of the system is passed back and forth from the front-end of the system to the control layer using the AJAX requests in the front-end. Last but not least, one of the main contributions that this system has contributed is that the online teaching and remote management of postgraduates is able to be promoted orderly when all the colleges and universities remain closed during the preventive and control period of pandemics.

2.3.4 E-Logbook System for Postgraduate Research Student

E-Logbook System for Postgraduate Research Students (EPRES) is a system designed for postgraduate students by Mokhtar et.al (2022). It is a web-based system that can be used to track the postgraduate student’s activities throughout their study. The system can track the time spent of the student on the meeting with their supervisors regarding the progress updating. It will send notification to those students who are not achieving the sufficient amount of meeting hours for each month. Furthermore, this system will

help the supervisors in monitoring their student progress throughout the course. On the other hand, the administrator of the system is able to control the access of the student and supervisor to the system. Finally, yet importantly, one of the contributions of the EPRES System is that it has replaced the manual way of tracking student's progress using manual logbooks by introducing an automatic systematic monitoring system. This system is beneficial to supervisors and postgraduate officers for managing and supervising their student's research activities. This can ensure that the student can complete their research within the stipulated time. Figure 2.0 provides the overview of the functionalities that are provided by the system.

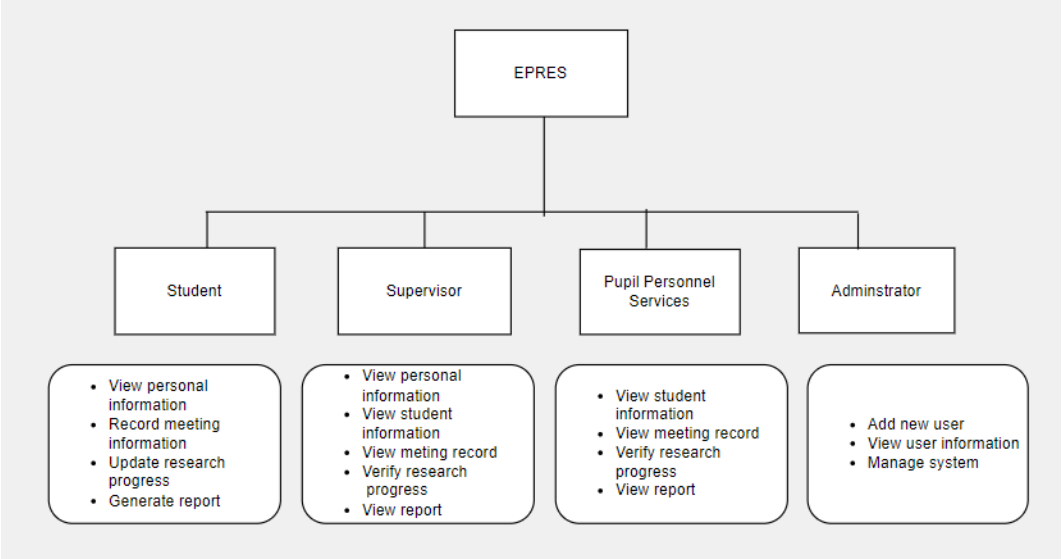

Figure 2.0. Overview of EPRES System

2.4 Comparison of Existing System / Related Works

Monitoring is defined as the tracking and the observation of the activities of users. This process can be done in a systematic way through the use of software application systems. A series of patterns could be analysed from the gathered data during the monitoring process. These analysed data can be later used for critical decision making in business operations. Nowadays, there are many universities out there making use of the systems for managing and monitoring their student's academic progress. The management and monitoring system is being widely incorporated by many universities into all sorts of education levels including certificate, diploma and undergraduate and postgraduate studies. Different varieties of systems will offer different system functionalities. Table 2.0 below shows the comparison of existing system's features in contrast to my system, PostConnect.

Table 2.0. Comparison of Features of Systems

System Features	POSTRACKER	Graduate Information Management System Based on Spring (GIMS)	Postgraduate Management Model at Universities with Geosciences and Environmental	E-Logbook System for Postgraduate Research Student (EPRES)	PostConnect (my system)
Research Proposal Defence Monitoring	X	X	X		X
Supervision Monitoring	X		X		X
Progress Monitoring	X	X	X	X	X
Work Completion Defence Monitoring					X
Candidature Monitoring					X
Student Data		X			X

Report					

2.5 Conclusion

In conclusion, like any other type of management and tracking system, an implementation of postgraduate management and tracking system is a must, in order to increase the efficiency of managing the student. The studies show that manually monitoring the progress of postgraduate students is a challenging task, and is often very difficult to track the “off-track” student. There are a few contributions of the system that were contributed to the studies including some problems in the detailed design are solved, the system is used to cope with the new conditions during the pandemic prevention and many more. The researchers propose several technologies to build the system including, using Bootstrap, JQUERY, JSP, Spring, Vue and so on. On the other hand, two studies propose that MVC can be used as the system architecture for the system. The system which is based on this architecture will split it’s design into three levels which is Model, View and Controller. After all, the proposed system by the researchers, not only will replace the mechanism of manual monitoring of the postgraduate student’s progress but also helps students to graduate on time with better management on the study progress.

Chapter 3: Methodology

3.0 Introduction

The Software Development Life Cycle (SDLC) model that will be employed for this system development project is the Iterative Model. This technique begins with a tiny portion of the software requirements and incrementally improves the emerging versions until the entire system is realised. Each iteration involves design changes and the introduction of new functional capabilities. The basic idea behind this strategy is to develop a system in smaller increments by repeating cycles (iterative). As demonstrated in Figure 3.0, it provides an overview of the model's process flow.

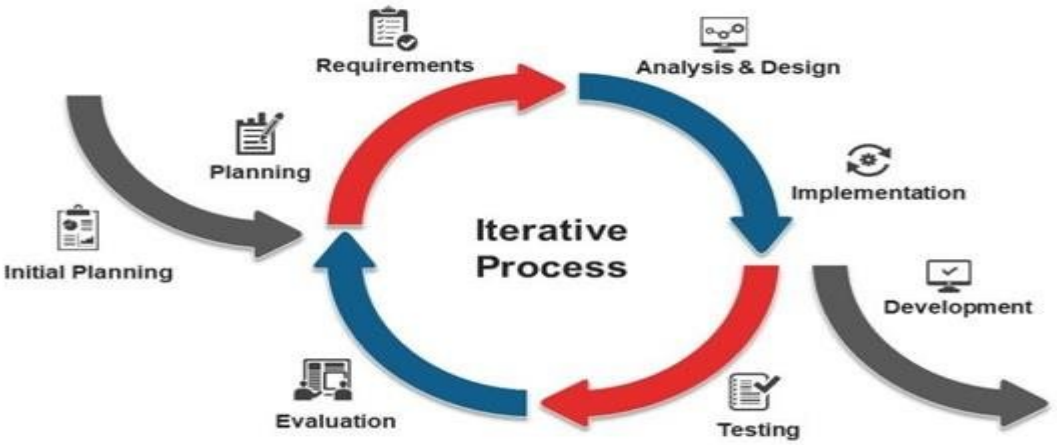

Figure 3.0. Overview of Iterative Model Process Flow

3.1 Phases

Phase 1 - Planning

Planning is the most fundamental phase of this SDLC model. In the planning phase, the goals of the project will be determined and establishing a high level plan for the project. One of the activities will be to identify the big picture of the project. We run through this activity by determining the problem statements of the current existing system, eventually leading to the development of the system. Moreover, the objectives of the system as well as the scope of the project from the perspective of the target stakeholders, assumptions of the system, system main functions and so on. Next activity in this phase will be the creation of the project plan. The plan includes the details of the project's big picture as mentioned above. We will use an online software to make a Gantt Chart to keep track of the time period for the completion of the project plan.

Phase 2 - Requirements

During this phase, requirements analysis is done prior to the development of the system. There are numerous activities that will be carried out in this phase including but not limited to collecting the functional requirements, nonfunctional requirements as well as system requirements of the system. Some of these requirements will be collected from the process where some background studies of the existing system are performed. Soon after, the requirements will be then collected as a source of reference for the requirements analysis of the system and come out with most of the requirements specifically to the system by referring to the source. Another source we will be using as part of the requirements analysis will be from the postgraduate handbook by Multimedia University. Finally, the system requirements will later be written down as a part of the proposed solution into a report based on the certain SRS format.

Phase 3 - Design

In the design phase, one of the main activities will be carried out by modelling the system's behaviour, business processes and system structure. We will start off by drawing the UML diagram in order to help visualise the system we are going to build. The type of diagrams will be included such as Package Diagram, Context Diagram, Use Case Diagram together with the Use Case Description Table (UCDT) and Flowchart. Next activity will be to design the database of the system, we will map out the business rules of the system as well as draw the Entity Relationship Diagram (ERD). In addition to that, we will specify the data dictionary for the database in a form of table. Last activity to be conducted in this phase is designing the prototype of the system. The process will be done using a software called Figma..

Phase 4 - Implementation

Moving on to this phase, the process of constructing the database and actual code to finish the system according to the specifications may begin. The whole system will be built on the top of a JavaScript technology stack called MERN Stack. This stack consists of MongoDB, Express.js, React and Node.js. This phase will start off by building the server and a database for the system. MongoDB will be used as the system's database, and the server will be built on the top of Express.js. On the other hand, the front-end development of the system will be built using the React Framework. In addition to that, some CSS frameworks such as Bootstrap and Tailwind CSS will be considered during the development. To test the validity of API endpoints passing from the back-end side to the front-end side, a tool called Postman will be used. Last but not least, the integrated development environment for this system development project is Visual Studio Code as well as Github will be used as the version control repository for the project.

Phase 5 - Testing

After the implementation is done, a series of activities will be covered to check the system for errors, bugs and verify the system's functionalities to see if they adhere to its specifications. The first activity executed during this phase would be writing the test cases. The test cases are written on a standard template containing certain standard fields such as test title, descriptions, test steps, test data, expected result , actual result, status, etc. Next activity would be the execution of the written test cases. There are several testing techniques that will be covered during this phase. One of the techniques used is end to end testing, it tests the application's workflow from beginning to end. Next, functional testing will be covered to check if the system is doing exactly what it's supposed to be doing. Moreover, non functional testing is to verify if the system

adheres to it's non functional requirements. Besides, black box and white box testing will be also covered as part of the testing. All the outcomes from the testing process will be noted down into the test case plan.

Phase 6 - Evaluation

In order to evaluate the system, me, as the developer of the system and a few stakeholders will be examining the system to see if the outcomes satisfy its nonfunctional requirements. First and foremost, a several number of users will be asked to use the system for a period of time. Next, questionnaire techniques will be used to collect opinions. Survey forms will be used as a platform to collect the evaluation data from stakeholders. Inside the form, some of the questions regarding the user experience of the system are provided and the scale level from 1-5 can be chosen to indicate their satisfaction towards the usability of the system. Besides, the respondent of the form could also provide feedback on the improvement of the system.

Phase 7 - Deployment

The last phase of this software development life cycle is deployment. The system at this phase will finally be deployed to a real-life environment. To further elaborate on this, the system will be deployed to a cloud server platform known as Heroku using Git.

Chapter 4: Proposed Solution

4.0 Functional Requirements

4.0.1 Login

R1: The system should be able to ensure the User can log into the system.

4.0.2 Register

R2: The system should be able to grant the Faculty the privilege to register the user account for the supervisor and the student and the panel.

4.0.3 Logout

R3: The system should be able to ensure the User can logout from the system.

4.0.4 User Profile

R4: The system should be able to provide an interface that shows the brief information of a user account to the User.

R5: The system shall only allow the Faculty to edit the information of supervisor and student's profile.

4.0.5 Research Proposal Defence Monitoring

R6: The system should be able to open a portal for the Student to request for the application research proposal defence.

R7: The system should be able to display for the Faculty with the list that contains the request application of research proposal defence from students.

R8: The system should be able to let the Faculty select the date and venue for the research proposal defence and approve or reject the request application of research proposal defence from students.

R9: The system should be able to grant the Panel the privilege to evaluate the result of the proposal by assigning the grade ‘Unsatisfactory (US)’ or ‘Satisfactory (S)’.

R10: The system should be able to grant the Supervisor the privilege to view the research proposal defence result of the student under his/her supervision.

4.0.6 Supervision Monitoring

R11: The system should be able to grant the Faculty the privilege to assign the supervisor to supervise the number of students based on his/her academic position.

R12: The system shall allow the Supervisor to choose the student under his/her supervision.

4.0.7 Progress Monitoring

R13: The system should be able to open a submission for the Student to submit the half-yearly progress report.

R14: The system should be able to grant the Panel the privilege to evaluate the result of the progress report by assigning the grade ‘Unsatisfactory (US)’ or ‘Satisfactory (S)’.

R15: When the student fails to present in the half-yearly research report, the system shall assign ‘Unsatisfactory’ (US) grade to the student and vice versa.

R16: The system should be able to grant the Supervisor the privilege to view the progress monitoring result of the student under his/her supervision.

4.0.8 Candidature Monitoring

R17: The system should be able to grant the Faculty the privilege to cease the status of students that exceed the maximum period of study for the programme and students who have poor performance throughout the study period.

R18: The system shall terminate the student from studies if it detects that he/she received the grade 'Unsatisfactory (US)' for the result of the research proposal defence or half-yearly report or work completion defence for more than 3 consecutive times.

4.0.9 Work Completion Defence

R19: The system should be able to open a portal for the Student to request for the application work completion defence after he/she has passed the research proposal defence.

R20: The system should be able to display for the Faculty with the list that contains the request application of work completion defence from students.

R21: The system should be able to let the faculty select the date and venue for the work completion defence and approve or reject the request application of work completion defence from students.

R22: The system should be able to grant the Panel the privilege to evaluate the result of the work completion by assigning the grade 'Unsatisfactory (US)' or 'Satisfactory (S)'.

R23: The system should be able to grant the Supervisor the privilege to view the work completion defence result of the student under his/her supervision.

4.0.10 Student Data Report

R24: The system should be able to provide the Supervisor with a report that

shows the details about the study performance such as of the postgraduate student that is under his/her supervision .

R25: The system should be able to provide the Faculty with a report that shows the details about the study performance of all postgraduate students.

4.1 Non Functional Requirements

R1: The system should be able to provide a user-friendly interface in order to increase the efficiency of the tracking and management process handled by the administrator and supervisors.

4.2 System Requirements

- Hardware: A laptop with the specifications of Intel(R) Core(TM) i5-8265U CPU @ 1.80 GHz, 8 GB RAM and Windows 11 Home
- Software: MongoDB, Express.js, React, Node.js, Bootstrap, Visual Studio Code, GitHub, Postman, Figma, Heroku

4.3 Context Diagram

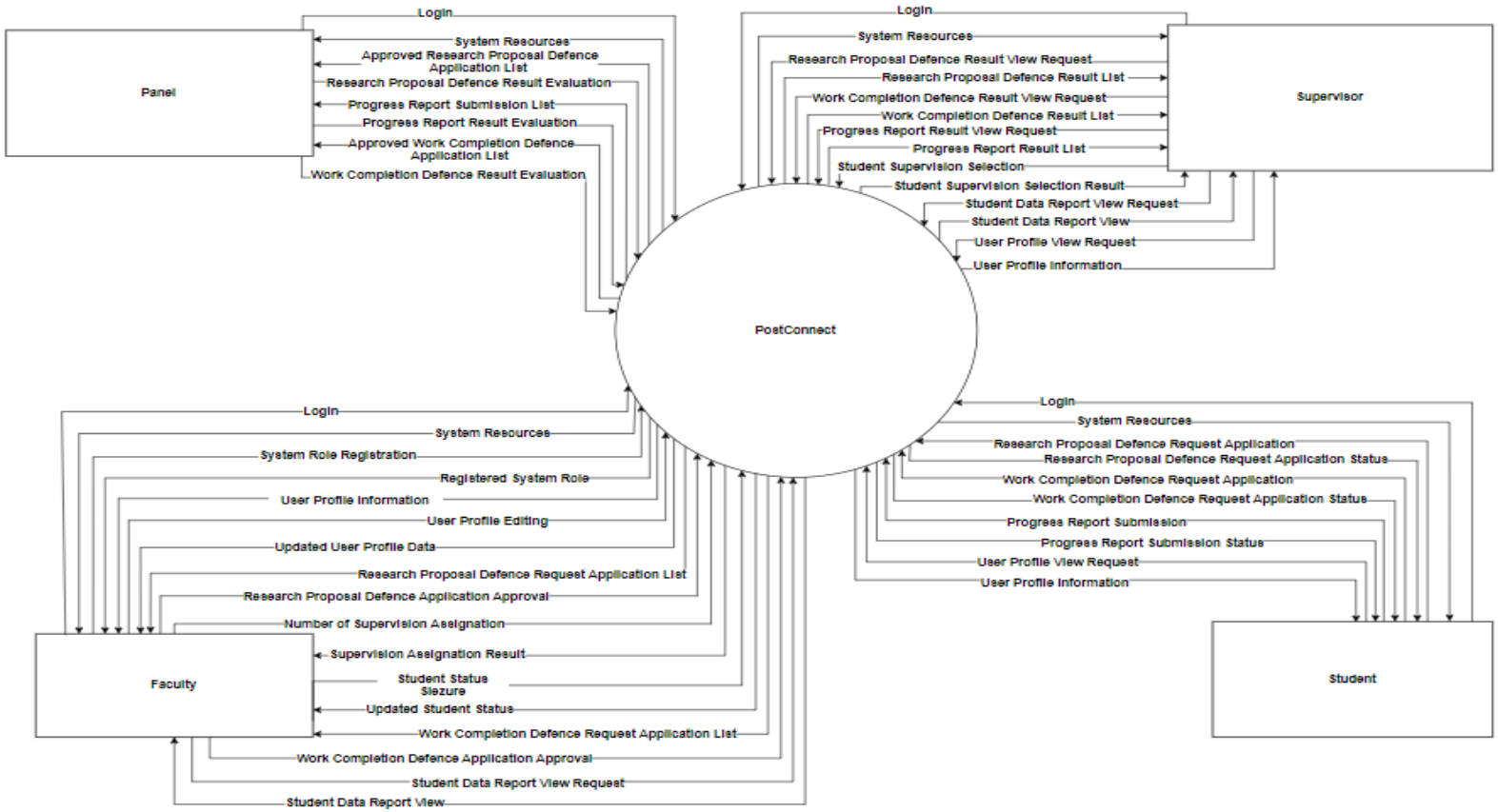

Figure 4.0. Context Diagram for PostConnect

4.4 Use Case Diagram

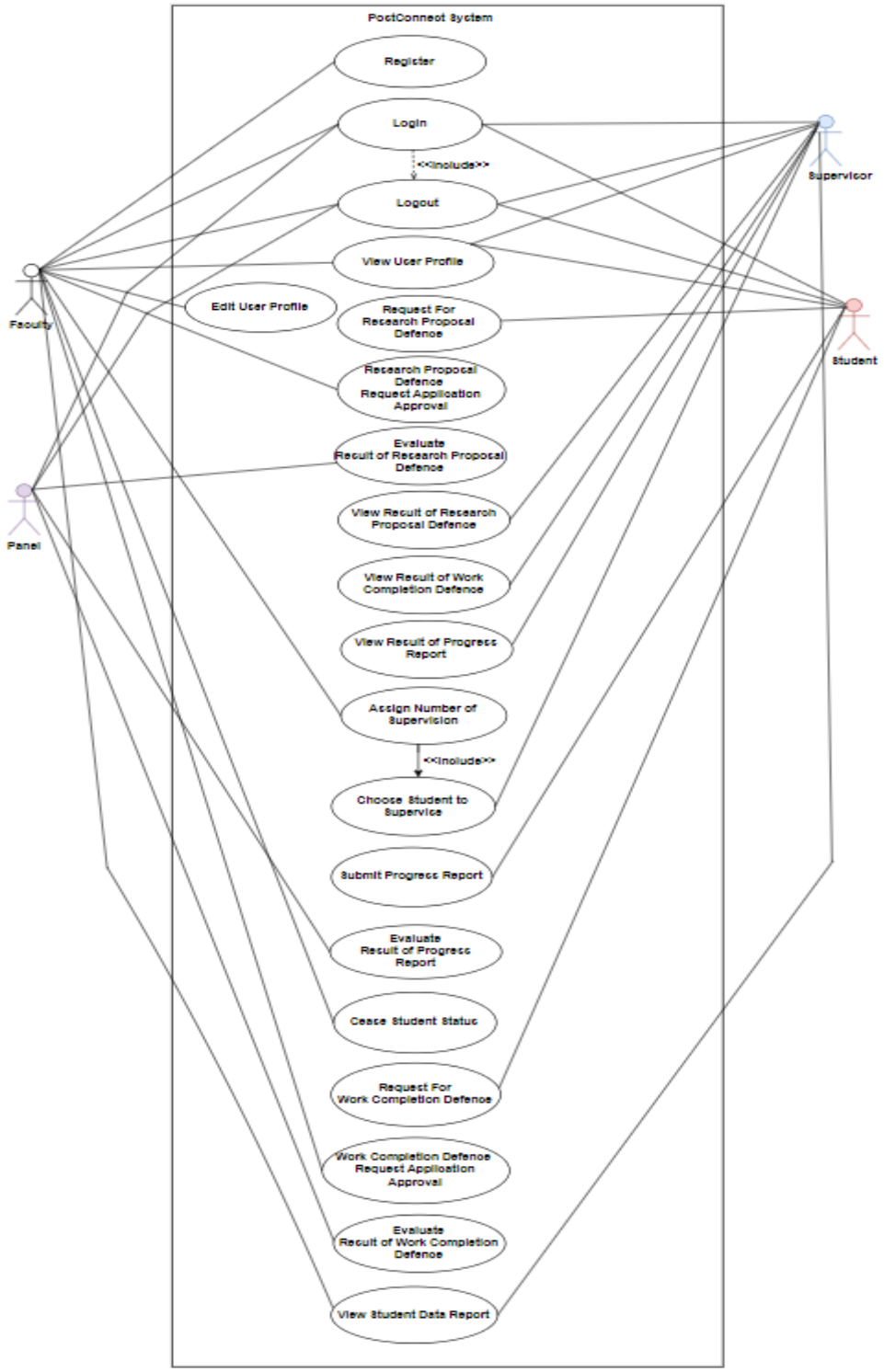

Figure 5.0. - Use Case Diagram for PostConnect

4.5 Use Case Description Table (UCDT)

Table 3.0. Use Case Description Table for Login

Use Case ID:	UC001
Use Case Name:	Login
Created By:	Elton Wong
Date Created:	11-12-2022
Description:	This use case allows the user to login into the system to access the system features that are only for authorised logged in users. The various roles of the system are faculty, supervisor, panel and student. To login to the system, all users have to key in their username and password. If the credentials key in by the users is incorrect, the system will indicate the user to re-enter. Otherwise, the user is logged in successfully and will be directed to the homepage of the system.

Primary Actor:	Faculty, Supervisor, Student, Panel
Secondary Actor:	None
Preconditions:	The system server is up and running.
Postconditions:	The user is able to access the system features that are only for authorised users.
Main Scenario	1. The user lands on the system's landing page. 2. The system will ask the user to select the system role he/she wants to log in as. 3. The user clicks on the 'Proceed' button after selecting the role. 4. The system brings the user to the respective selected role's login page. 5. The system asks for the username and the password to be entered. 6. The user enters the username and the password. 7. The user clicks on the 'Login' button. 8. The system shows a popup message that indicates a successful

	login attempt. 9. The user is authorised. 10. The system directs the user to the homepage of the system. 11. The user is able to access the system features that are only for authorised users.
Alternative Scenario	Not applicable
Exception Scenario	1a. The system indicates login failure.
	1a1. The user clicks on the ‘Login’ button. 1a2. The system informs the users that username or password is not found. 1a3. The system asks the user to re-enter the account details. 1a4. The user clicks on the ‘Login’ button. 1a5. The system shows a popup message that indicates a successful login attempt. 1a6. The user is authorised.

Table 4.0. Use Case Description Table for Register

Use Case ID:	UC002
Use Case Name:9	Register
Created By:	Elton Wong
Date Created:	11-12-2022
Description:	This use case allows the faculty to register an user account for the new student and the supervisor. To register an account for the user, the faculty need to key in some of the registration form about the user details including but not limited to username, password, confirm password, age, academic position, sex and many more. If any of the required type form details are yet to be filled in by the user when submitted. The system will send an alert. Otherwise registration is completed successfully, and a new account is created.

Primary Actor:	Faculty
Secondary Actor:	None
Preconditions:	The system server is up and running.
Postconditions:	The student and supervisor is able to log into the system with a new user account.
Main Scenario	1. The faculty lands on the system's homepage 2. The faculty clicks on the 'Role Registration' button. 3. The system displays the selection of system role types to be registered. The role type can be 'Supervisor' or 'Student' 4.The faculty selects the role he/she wishes to register. 5. The system brings the faculty to the registration page. 6. The faculty enters the account details. 7. The faculty clicks on the submit button. 8. The system shows a popup

	message that indicates an account is created. 9. The system directs the faculty to the login page to login.
Alternative Scenario	2a. The faculty wishes to change the system role types to be registered.
	2a1. The faculty clicks on the 'Cancel' button at the bottom of the registration form. 2a2. The system navigates the faculty back to the role selection registration screen.
Exception Scenario	3a. The system indicates registration failure.
	3a1. The system informs the faculty that some required account details are yet to be filled in. 3a2. The system asks the faculty to fill up the missing part. 3a3. The faculty clicks on the submit button. 3a4. The system shows a popup message that indicates an account is

	created. 3a5. The system directs the faculty to the login page to login.

Table 5.0. Use Case Description Table for Logout

Use Case ID:	UC003
Use Case Name:	Logout
Created By:	Elton Wong
Date Created:	11-12-2022
Description:	This use case allows the user to logout from the system whenever he/she wishes to. To logout from the system, the user needs to click on the ‘Logout’ button on the navigation bar. When the user is logged out. The system will direct the user back to the login page.
Primary Actor:	Faculty, Supervisor, Student, Panel
Secondary Actor:	None
Preconditions:	The user is logged in.

Postconditions:	The user is logged out.
Main Scenario	1. The user is logged into the system with an existing customer account. 2. The system directs the user to the homepage of the system. 3. The user clicks on the ‘Logout’ button. 4. The system will pop out a confirmation box before log out. 5. The user responds ‘Yes’ to the pop out box. 6. The system logs the user out from the system.
Alternative Scenario	4a. The user accidentally click on the ‘Logout’ button
	4a1. The system will pop out a confirmation box before log out. 4a2. The user responds ‘No’ to the pop out box.
Exception Scenario	Not applicable

Table 6.0. Use Case Description Table for View User Profile

Use Case ID:	UC004
Use Case Name:	View User Profile
Created By:	Elton Wong
Date Created:	11-12-2022
Description:	This use case allows the user to view the user profile. To view the user profile, the user will need to click on the profile picture icon on the navigation bar. When the user is landed in the profile page, a list of user basic information is shown by the system to the user.
Primary Actor:	Faculty, Supervisor, Student
Secondary Actor:	None
Preconditions:	The user is authenticated and is logged in, the target user to be viewed exists in the system database.
Postconditions:	Get insight of the user's basic information.
Main Scenario:	1. The user is logged into the system with an existing user account.

	2. The system directs the user to the homepage of the system. 3. The user clicks on the ‘User Profile’ button. 4. The system directs the user to the profile page. 5. The user can view the list of his/her account details.
Alternative Scenario:	Not applicable
Exceptional Scenario:	5a. The supervisor and student found error entries in their profile information.
	5a1. The system directs the user to the profile page. 5a2. The user can view the list of his/her account details. 5a3. The system shows some missing information about the profile. 5a4. The supervisor and student can contact the faculty for updating the entries. 5a5. The system redirects the

	supervisor and student back to the previous page.

Table 7.0. Use Case Description Table for Edit User Profile

Use Case ID:	UC005
Use Case Name:	Edit User Profile
Created By:	Elton Wong
Date Created:	11-12-2022
Description:	This use case allows the faculty to amend the information of the supervisor and the student's user profile. Information of the user profile can be edited and updated to the latest including but not limited to the username, password, supervisor academic position, advisor, student admit term and so on.
Primary Actor:	Faculty
Secondary Actor:	None
Preconditions:	The target user info to be edited

	exists in the system database.
Postconditions:	Latest information of the user is updated and stored into the system database.
Main Scenario	1. The faculty is logged into the system with an existing faculty account. 2. The system directs the faculty to the homepage of the system. 3. The faculty clicks on the ‘User Profile’ button. 4. The system shows the selection type of profile to be viewed as ‘Individual’ or ‘Student’ or ‘Supervisor’. 5. The faculty select the type of profile to be viewed. 6. The system shows the list of registered users. 7. The faculty click on the ‘Details’ button of the user profile he/she want to amend 8. The system brings the faculty to the respective user account details

	page. 9. The faculty key in new values for the form fields to update the account details and clicks the ‘Update’ button. 10. The system indicates information updated successfully.
Alternative Scenario	Not applicable
Exceptional Scenario	6a. The system indicates info updating failure.
	6a1. The faculty key in new values for the form fields to update the account details and clicks the ‘Update’ button 6a2. The system informs the faculty that invalid type of data field has been key in to update. 6a3. The system asks the faculty to re-enter the valid data.

Table 8.0. Use Case Description Table for Request For Research Proposal Defence

Use Case ID:	UC006
Use Case Name:	Request For Research Proposal Defence
Created By:	Elton Wong
Date Created:	11-12-2022
Description:	This use case allows the student to request for research proposal defence within the given norm time and maximum time. The system allows the student to submit the proposal defence request form together with a mini thesis for the research proposal defence application. Prior to the request submission, the students are required to key in some submission details including but not limited to the title of the proposal, degree level, matric number and so on before submitting to the system.
Primary Actor:	Student

Secondary Actor:	None
Preconditions:	The student's proposal defence request form and mini thesis is ready to submit.
Postconditions:	The faculty are able to receive the request application from the student.
Main Scenario	1. The student is logged into the system with an existing student account. 2. The system directs the student to the homepage of the system. 3. The student clicks on the 'Request For Research Proposal Defence'. 4. The system directs the student to the request page. 5. The student key in the submission details and upload the pdf file on the form fields. 6. The student clicks the 'Submit' button. 7. The system prompt the user indicates that a request application is submitted.

Alternative Scenario	Not applicable
Exceptional Scenario	7a. The file is failed to upload and submit
	7a1. The student key in the submission details and upload the pdf file on the form fields. 7a2. The student uploads a file which is not .pdf type. 7a3. The student clicks the ‘Submit’ button. 7a4. The system prompts an error indicating the wrong file type. 7a5. The user re-upload the file with the correct file format. 7a6. The student clicks the ‘Submit’ button. 7a7. The system prompt the user indicates that a request application is submitted.

Table 9.0. Use Case Description Table for Research Proposal Defence Request Application Approval

Use Case ID:	UC007
Use Case Name:	Research Proposal Defence Request Application Approval
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the faculty to approve or reject the research proposal defence request application by the student. The system will show up the list of the request application in the form of a table. The faculty can either approve or disapprove the request of the student based on their eligibility. The table will have 2 tabs. The ‘Pending’ tab will show the request application that has not been processed. While the ‘Processed’ tab will show the processed request.
Primary Actor:	Faculty
Secondary Actor:	None
Preconditions:	The students have requested for the research proposal defence.

Postconditions:	The evaluation on the result of research proposal defence can be done.
Main Scenario	1. The faculty is logged into the system with an existing faculty account. 2. The system directs the faculty to the homepage of the system. 3. The faculty clicks on the 'Research Proposal Defence Request Application'. 4. The system directs the faculty to the page. 5. The faculty view list of the request application in the form of a table. 6. The faculty clicks on the 'Details' button of the student he/she would like to validate. 7. The system will direct the faculty to the details page that shows the eligibility of the student to apply for the proposal defence. 8. The faculty can either click on the

	‘Approve’ button to accept the request or ‘Reject’ button to reject the request. 9. The system prompt the user indicates that a request is processed.
Alternative Scenario	8a. The faculty view the processed request application.
	8a1. The faculty clicks on the ‘Research Proposal Defence Request Application’. 8a2. The system directs the faculty to the page. 8a3. The faculty view list of the request application in the form of a table. 8a4. The faculty click on the ‘Processed’ tab on the top of the table. 8a5. The system shows the list of the history of the processed request application.
Exceptional Scenario	9a. The system does not return a list of pending unprocessed requests.

	9a1. The faculty clicks on the ‘Research Proposal Defence Request Application’. 9a2. The system directs the faculty to the page. 9a3. The system prompts the user that currently there is no research proposal defence request.

Table 10.0. Use Case Description Table for Evaluate Result of Research Proposal Defence

Use Case ID:	UC008
Use Case Name:	Evaluate Result of Research Proposal Defence
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the panel to evaluate the research proposal defence’s result of the students. To evaluate the result of the student, the panel will need to click the ‘Evaluate’ button of the specific

	student to be evaluated. The system will then prompt an input field with 2 choices, ‘S’ indicates passed grade and ‘US’ indicates failure grade. The panel can grade the student by filling up the input field. Each student shall be given 3 attempts to pass the proposal defence.
Primary Actor:	Panel
Secondary Actor:	None
Preconditions:	The students have submitted the required document through the system.
Postconditions:	Result of the research proposal defence.
Main Scenario	1. The panel is logged into the system with an existing faculty account. 2. The system directs the panel to the homepage of the system. 3. The panel clicks on the ‘Research Proposal Defence Evaluation’.

	4. The system directs the panel to the page. 5. The system shows a summary list that contains the submission details from the student and its tracking information. 6. The panel clicks on the ‘Evaluate’ button of the specific student to be evaluated. 7. The panel evaluates the student grade by filling the required form field to evaluate and submit. 8. The system indicates ‘Evaluation Complete”.
Alternative Scenario	None
Exceptional Scenario	10a. The panel could not evaluate the result of the research proposal.
	10a1.The panel click on the ‘Evaluate’ button of the specific student to be evaluated 10a2.The panel evaluates the student grade by filling the required form field and submitting.

	10a3. The system indicates that something has gone wrong. 10a4. The panel can contact the system administrator for error troubleshooting.

Table 11.0. Use Case Description Table for View Result of Research Proposal Defence

Use Case ID:	UC009
Use Case Name:	View Result of Research Proposal Defence
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the supervisor to view the result of research proposal defence of the student. A summary list that contains the result of work completion defence of the student is displayed in a form of table for the supervisor to view.
Primary Actor:	Supervisor
Secondary Actor:	None

Preconditions:	The panel has evaluate the result of work completion defence
Postconditions:	The list of work completion results of students can be viewed and can be further assessed by the supervisor.
Main Scenario	1. The supervisor is logged into the system with an existing supervisor account. 2. The system directs the supervisor to the homepage of the system. 3. The supervisor clicks on the 'View Research Proposal Defence Result'. 4. The system directs the supervisor to the page. 5. The supervisor views the summary list that contains the result of the student he/she is supervising.
Alternative Scenario	None
Exceptional Scenario	11a. The system does not return the search result of the student that the supervisor is searching for.

	11a1. The supervisor clicks on the ‘View Research Proposal Defence Result’. 11a2. The system directs the supervisor to the page. 11a3. The system prompts the supervisor that the result for the student does not exist in the system.

Table 12.0. Use Case Description Table for Request For Work Completion Defence

Use Case ID:	UC010
Use Case Name:	Request For Work Completion Defence
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the student to request for work completion defence after he/she has completed and passed the research proposal defence. The system allows the student to submit the work

	completion defence request form for the work completion defence application. Prior to the request submission, the students are required to key in some submission details including but not limited to the title of the thesis, degree level, matric number, date of successfully passing the proposal defence and so on before submitting to the system.
Primary Actor:	Student
Secondary Actor:	None
Preconditions:	The student has received ‘S’ grade for research proposal defence.
Postconditions:	The supervisor and the faculty are able to receive the request application from the student.
Main Scenario	1. The student is logged into the system with an existing student account. 2. The system directs the student to the homepage of the system.

	3. The student clicks on the ‘Request For Work Completion Defence’. 4. The system directs the student to the request page. 5. The student key in the submission details on the form fields. 6. The student clicks the ‘Submit’ button. 7. The system prompt the user indicates that a request application is submitted.
Alternative Scenario	Not applicable
Exceptional Scenario	12a. The submission is failed
	12a1. The student clicks the ‘Submit’ button. 12a2. The system prompts an error indicating all the form fields are required to be filled in. 12a3. The student key in the submission details on the form fields.

Table 13.0. Use Case Description Table for Work Completion Defence Request Application Approval

Use Case ID:	UC011
Use Case Name:	Work Completion Defence Request Application Approval
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the faculty to validate the work completion defence request application by the student. The system will show up the list of the request application in the form of a table. The faculty can either approve or disapprove the request of the student based on their eligibility. The table will have 2 tabs. The ‘Processing’ tab will show the request application that has not been processed. While the ‘Processed’ tab will show the processed request.

Primary Actor:	Faculty
Secondary Actor:	None
Preconditions:	The students have requested for the work completion defence.
Postconditions:	The evaluation on the result of work completion defence can be done.
Main Scenario	1. The faculty is logged into the system with an existing faculty account. 2. The system directs the faculty to the homepage of the system. 3. The faculty clicks on the “Work Completion Defence Request Application’. 4. The system directs the faculty to the page. 5. The faculty view list of the request application in the form of a table. 6. The faculty clicks on the ‘Details’ button of the student he/she would like to validate. 7. The system will direct the faculty

	to the details page that shows the eligibility of the student to apply for the work completion defence. 8. The faculty can either click on the 'Approve' button to accept the request or 'Reject' button to reject the request.
Alternative Scenario	13a. The faculty view the processed request application.
	13a1. The faculty clicks on the 'Work Completion Defence Request Application'. 13a2. The system directs the faculty to the page. 13a3. The faculty view list of the request application in the form of a table. 13a4. The faculty click on the 'Processed' tab on the top of the table. 13a5. The system shows the list of the history of the processed request application.

Exceptional Scenario	14a. The system does not return a list of pending unprocessed requests.
	14a1. The faculty click on the ‘Processed’ tab on the top of the table. 14a2. The system prompts the user that currently there is no work completion defence request.

Table 14.0. Use Case Description Table for Evaluate Result of Work Completion Defence

Use Case ID:	UC012
Use Case Name:	Evaluate Result of Work Completion Defence
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the panel to evaluate the work completion defence’s result of the students. To evaluate the result of the student, the panel will need to click the

	‘Evaluate’ button of the specific student to be evaluated. The system will then prompt an input field with 2 choices, ‘S’ indicates passed grade and ‘US’ indicates failure grade. The panel can grade the student by filling up the input field. Each student shall be given 3 attempts to pass the proposal defence.
Primary Actor:	Panel
Secondary Actor:	None
Preconditions:	The students have submitted the required document through the system.
Postconditions:	Result of the work completion defence
Main Scenario	1. The panel is logged into the system with an existing faculty account. 2. The system directs the panel to the homepage of the system. 3. The panel clicks on the ‘Work

	Completion Defence Evaluation'. 4. The system directs the panel to the page. 5. The system shows a summary list that contains the submission details from the student and its tracking information. 6. The panel click on the 'Evaluate' button of the specific student to be evaluated 7. The panel evaluates the student grade by filling the required form field and clicking the 'Submit' button.
Alternative Scenario	None
Exceptional Scenario	15a. The panel could not evaluate the result of the work completion.
	15a1. The panel click on the 'Evaluate' button of the specific student to be evaluated 15a2. The panel evaluates the student grade by filling the required form field and clicking the 'Submit'

	button. 15a3. The system indicates that something has gone wrong. 15a4. The faculty can contact the system administrator for error troubleshooting.

Table 15.0. Use Case Description Table for View Result of Work Completion Defence

Use Case ID:	UC013
Use Case Name:	View Result of Work Completion Defence
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the supervisor to view the result of work completion defence of the student. A summary list that contains the result of work completion defence of the student is displayed in a form of table for the supervisor to view.
Primary Actor:	Supervisor

Secondary Actor:	None
Preconditions:	The panel has evaluate the result of work completion defence
Postconditions:	The list of work completion results of students can be viewed and can be further assessed by the supervisor.
Main Scenario	1. The supervisor is logged into the system with an existing supervisor account. 2. The system directs the supervisor to the homepage of the system. 3. The supervisor clicks on the 'View Work Completion Defence Result'. 4. The system directs the supervisor to the page. 5. The supervisor views the summary list that contains the result of the student he/she is supervising.
Alternative Scenario	None
Exceptional Scenario	16a. The system does not return the search result of the student that the

	supervisor is searching for.
	16a1. The supervisor clicks on the 'View Work Completion Defence Result'. 16a2. The system directs the supervisor to the page. 16a3. The supervisor searches using the search bar. 16a4. The system prompts the supervisor that the result for the student does not exist in the system.

Table 16.0. Use Case Description Table for Submit Progress Report

Use Case ID:	UC014
Use Case Name:	Submit Progress Report
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the student a half-yearly progress report. During the submission process, the students are required to key in some

	submission details including but not limited to the project title, supervisor name, achievements, work plan and so on.
Primary Actor:	Student
Secondary Actor:	None
Preconditions:	The student's submission of the progress report is ready.
Postconditions:	The panel is able to receive the submission from the student.
Main Scenario	1. The student is logged into the system with an existing student account. 2. The system directs the student to the homepage of the system. 3. The student clicks on the 'Submit Progress Report'. 4. The system directs the student to the submission page. 5. The student key in the submission details and upload the report in .pdf format on the form fields.

	6. The student clicks the ‘Submit’ button. 7. The system prompt the user indicates that submission is submitted.
Alternative Scenario	Not applicable
Exceptional Scenario	15a. The file is failed to upload and submit
	15a1. The student clicks the ‘Submit’ button. 15a2. The system verified the uploaded report and found out the report is not in .pdf format. 15a3. The system prompts an error indicating the wrong file type. 15a4. The user re-upload the file with the correct file format.

Table 17.0. Use Case Description Table for Evaluate Result of Progress Report

Use Case ID:	UC015

Use Case Name:	Evaluate Result of Progress Report
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the panel to evaluate the progress report's result of the students. To evaluate the result of the student, the panel will need to click the 'Evaluate' button of the specific student to be evaluated. The system will then prompt an input field with 2 choices, 'S' indicates passed grade and 'US' indicates failure grade. The panel can grade the student by filling up the input field. Each student shall be given 3 attempts to pass the progress report.
Primary Actor:	Panel
Secondary Actor:	None
Preconditions:	The students have submitted the required document through the system.
Postconditions:	Result of the progress report.

Main Scenario	1. The panel is logged into the system with an existing panel account. 2. The system directs the panel to the homepage of the system. 3. The panel clicks on the ‘Progress Report Evaluation’. 4. The system directs the panel to the page. 5. The system shows a summary list that contains the submission details from the student and its tracking information. 6. The panel click on the ‘Evaluate’ button of the specific student to be evaluated 7. The panel evaluates the student grade by filling the required form field and clicking the ‘Submit’ button.
Alternative Scenario	None
Exceptional Scenario	16a. The panel could not evaluate the result of the progress report.

	16a1. The panel click on the ‘Evaluate’ button of the specific student to be evaluated 16a2. The panel evaluates the student grade by filling the required form field and clicking the ‘Submit’ button. 16a3. The system indicates that something has gone wrong. 16a4. The panel can contact the system administrator for error troubleshooting.

Table 18.0. Use Case Description Table for View Result of Progress Report

Use Case ID:	UC016
Use Case Name:	View Result of Progress Report
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the supervisor to view the result of the progress

	report of the student. A summary list that contains the result of progress report of the student is displayed in a form of table for the supervisor to view.
Primary Actor:	Supervisor
Secondary Actor:	None
Preconditions:	The panel has evaluated the result of the progress report.
Postconditions:	The list of progress report results of students can be viewed and can be further assessed by the supervisor.
Main Scenario	1. The supervisor is logged into the system with an existing supervisor account. 2. The system directs the supervisor to the homepage of the system. 3. The supervisor clicks on the 'View Progress Report Result'. 4. The system directs the supervisor to the page. 5. The supervisor views the

	summary list that contains the result of the student he/she is supervising.
Alternative Scenario	None
Exceptional Scenario	17a. The system does not return the search result of the student that the supervisor is searching for.
	17a1. The supervisor clicks on the 'View Progress Report Result'. 17a2. The system directs the supervisor to the page. 17a3. The supervisor searches using the search bar. 17a4. The system prompts the supervisor that the result for the student does not exist in the system.

Table 19.0. Use Case Description Table for Cease Student Status

Use Case ID:	UC017
Use Case Name:	Cease Student Status
Created By:	Elton Wong
Date Created:	12-12-2022
Description:	This use case allows the faculty to terminate the status of students. Once the status of a student is terminated, he/she would no longer have access to the student account as the account will be removed from the system. The termination of student status can be either they have exceeded the study period or have poor performance throughout the study period.
Primary Actor:	Faculty
Secondary Actor:	None
Preconditions:	The students that exceed the maximum period of study or poor performance on study period.

Postconditions:	The student has no longer access to the student account.
Main Scenario	1. The faculty is logged into the system with an existing faculty account. 2. The system directs the faculty to the homepage of the system. 3. The faculty clicks on the 'Candidature Monitoring'. 4. The system directs the faculty to the page. 5. The system shows a summary list of student studies performance information such as the expected graduation date, thesis completion status ,research proposal defence result and work completion defence result information and so on. 6. The faculty click the 'Cease Status' button to remove the status of the student. 7. The system prompts the user that the operation was successful and removes the student account from

	the system.
Alternative Scenario	None
Exceptional Scenario	18a. The faculty could not perform the cease action on the student.
	18a1. The faculty click the ‘Cease Status’ button to remove the status of the student. 18a2. The system indicates that something has gone wrong. 18a3. The faculty can contact the system administrator for error troubleshooting.

Table 20.0. Use Case Description Table for Assign Number of Supervision

Use Case ID:	UC018
Use Case Name:	Assign Number of Supervision
Created By:	Elton Wong
Date Created:	16-12-2022
Description:	This use case allows the faculty to assign the number of the supervision

	that supervisors are allowed for the thesis supervision of students. The number of the student that supervisor is allowed to supervise, is based on his/her academic position in the university.
Primary Actor:	Faculty
Secondary Actor:	None
Preconditions:	The supervisor must be the one who holds an academic position in the university.
Postconditions:	The supervisor is able to choose a student to supervise.
Main Scenario:	1. The faculty is logged into the system with an existing faculty account. 2. The system directs the faculty to the homepage of the system. 3. The faculty clicks on the ‘Assign Number of Supervision’. 4. The system directs the faculty to the page.

	5. The system will show a list of information in a form of table the info include the supervisor name, academic position, number of assigned supervision 6. The faculty clicks on the 'Edit' button of the supervisor that he/she would like to assign. 7. The system bring the faculty the detail page of that specific supervisor 8. The faculty click on the '+' symbol to increase the number of supervision allowed for supervisor. 9. The system will show the update on the number.
Alternative Scenario:	19a. Decrease the number of supervision allow for the supervisor
	19a1. The faculty is logged into the system with an existing faculty account. 19a2. The system directs the faculty to the homepage of the system. 19a3. The faculty clicks on the

	‘Assign Number of Supervision’. 19a4. The system directs the faculty to the page. 19a5. The system will show a list of information in a form of table the info include the supervisor name, academic position, number of assigned supervision 19a6. The faculty clicks on the ‘Edit’ button of the supervisor that he/she would like to assign. 19a7. The system bring the faculty the detail page of that specific supervisor 19a8. The faculty click on the ‘-’ symbol to decrease the number of supervision allowed for supervisor. 19a9. The system will show the update on the number.
Exceptional Scenario:	20a. The faculty cannot further increase the number of supervision for a supervisor
	20a1. The faculty return back to the previous page that shows the list of

	information, and examine if the supervisor has reached the number of supervision based on his/her academic position.

Table 21.0. Use Case Description Table for Choose Student to Supervise

Use Case ID:	UC019
Use Case Name:	Choose Student to Supervise
Created By:	Elton Wong
Date Created:	16-12-2022
Description:	This use case allows the supervisor to choose the student to supervise. The list of students in the system will be shown in the form of a table, and the supervisor can choose who is the available student he/she wants to supervise.
Primary Actor:	Supervisor
Secondary Actor:	None
Preconditions:	The number of student supervision is assigned by the faculty to the supervisor.
Postconditions:	The supervisor is able to supervise students.
Main Scenario:	1. The supervisor is logged into the

	system with an existing faculty account. 2. The system directs the supervisor to the homepage of the system. 3. The supervisor clicks on ‘Choose Student Supervision’. 4. The system directs the faculty to the page. 5. The system shows a summary list of available students who are yet to be assigned to any supervisor. 6. The supervisor clicks on the ‘Choose’ button to supervise the student he/she wishes to. 7. The system prompts the supervisor indicating that the operation is successful.
Alternative Scenario:	Not applicable
Exceptional Scenario:	21a. The supervisor cannot proceed to choose more students to be under his/her supervision.
	21a1. The supervisor clicks on the ‘Choose’ button to supervise the

	student he/she wishes to. 21a2. The system disables the 'Choose' button, preventing the supervisor from further adding the student supervisor, if the supervisor reaches his supervision's limit. 21a3. The system will prompt the supervisor indicating that the operation has failed.

Table 22.0. View Student Data Report

Use Case ID:	UC020
Use Case Name:	View Student Data Report
Created By:	Elton Wong
Date Created:	16-12-2022
Description:	This use case allows the faculty and supervisor to view the student data dashboard. The system will provide the faculty with an overview of quick summary for all postgraduate students personal details including

	the academic performance throughout their study. On the other hand, the supervisor will only be able to see all these details about the details of the student he/she is supervising.
Primary Actor:	Faculty, Supervisor
Secondary Actor:	None
Preconditions:	The student status is active.
Postconditions:	The faculty and supervisor is able to visualise the overall data about the student.
Main Scenario:	1. The faculty is logged into the system with an existing faculty account. 2. The system directs the faculty to the homepage of the system. 3. The faculty clicks on the ‘Student Data Report’ 4. The system directs the faculty to the page. 5. The system shows a summary list

	containing the details of all postgraduate students that are registered to the system.
Alternative Scenario:	22a. The supervisor role access to the ‘Student Data Report’.
	22a1. The supervisor is logged into the system with an existing supervisor account. 22a2. The system directs the supervisor to the homepage of the system. 22a3. The supervisor clicks on the ‘Student Data Report’. 22a4. The system directs the supervisor to the page. 22a5. The supervisor views only the summary list that contains the submission details of the student who is under his/her supervision.
Exceptional Scenario:	None

4.6 Package Diagram

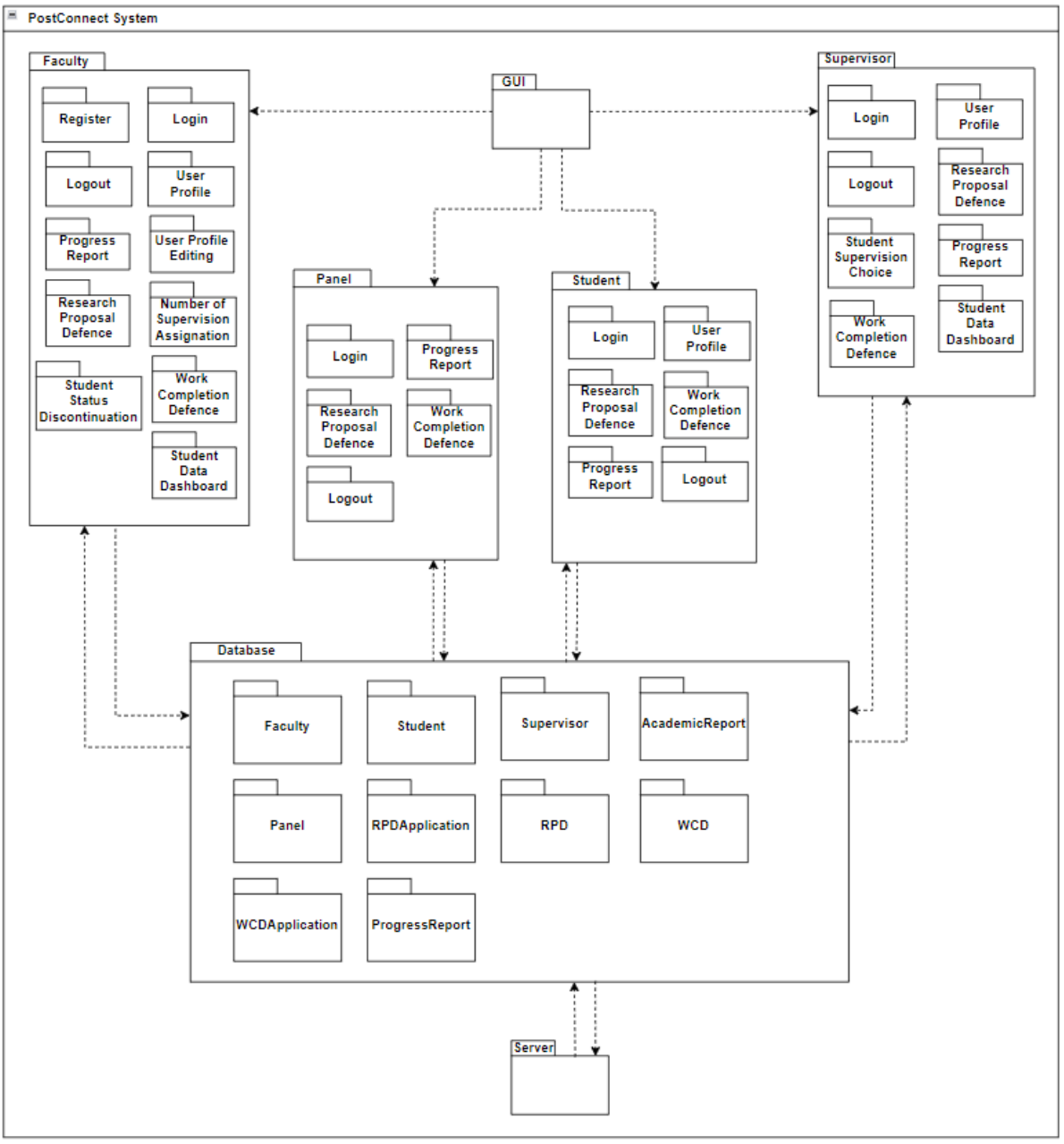

Figure 6.0. Package Diagram for PostConnect

4.7 Flowcharts

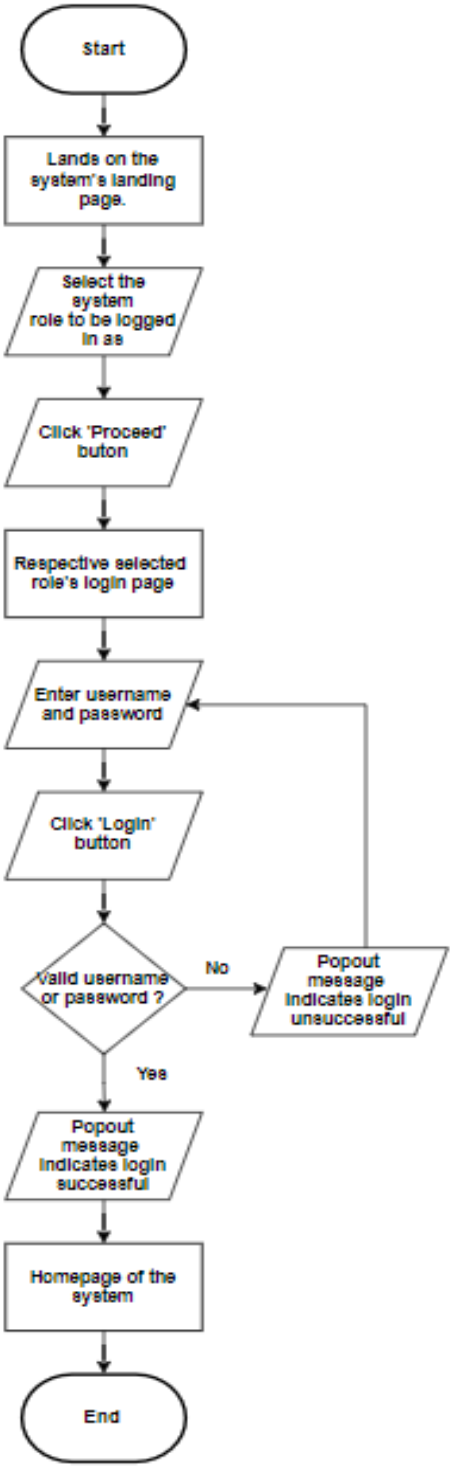

Figure 7.0. Flowchart for Login

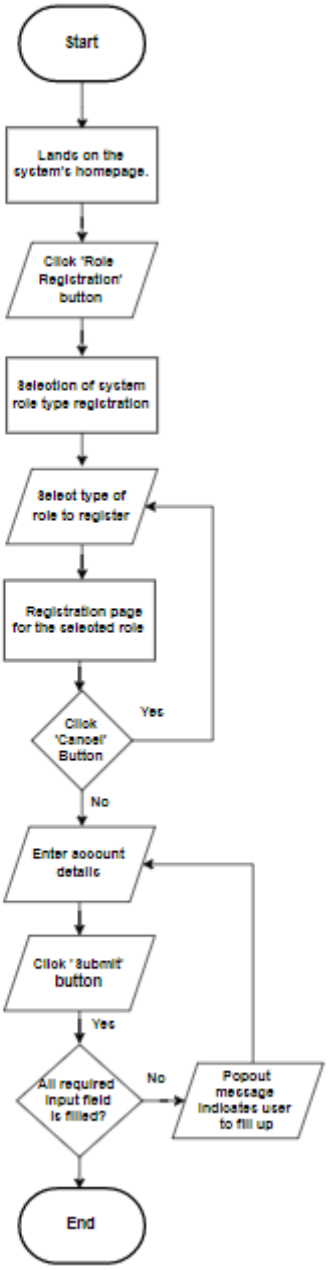

Figure 8.0. Flowchart for Register

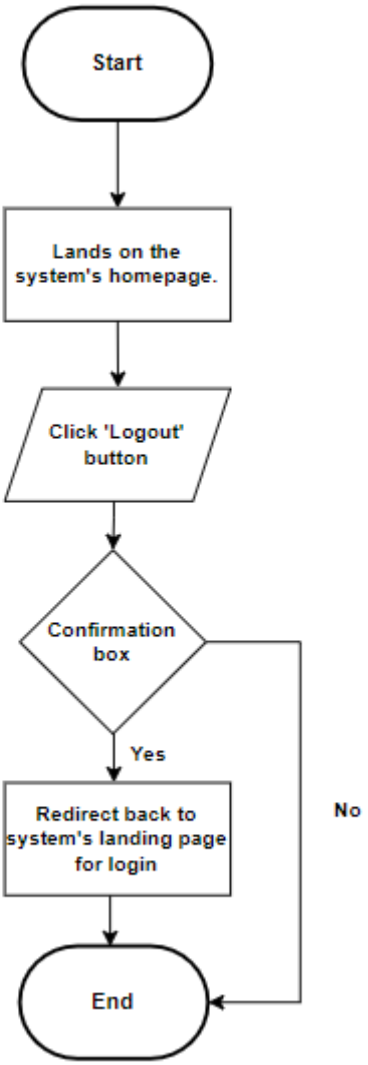

Figure 9.0. Flowchart for Logout

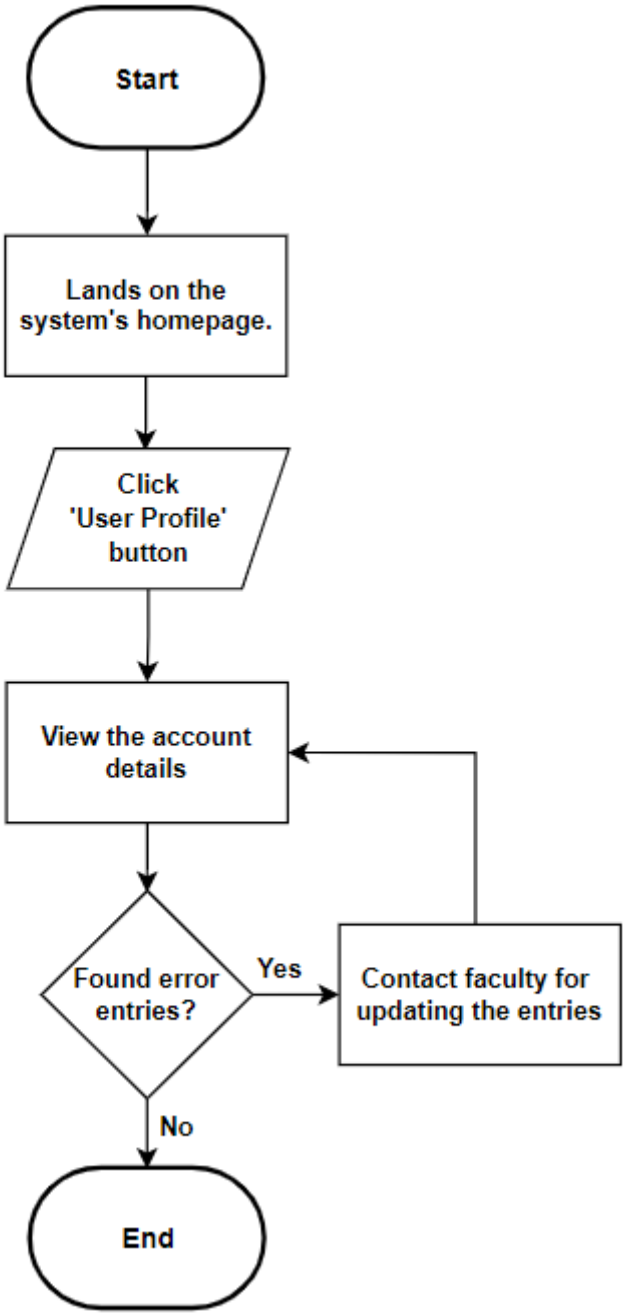

Figure 10.0. Flowchart for View User Profile

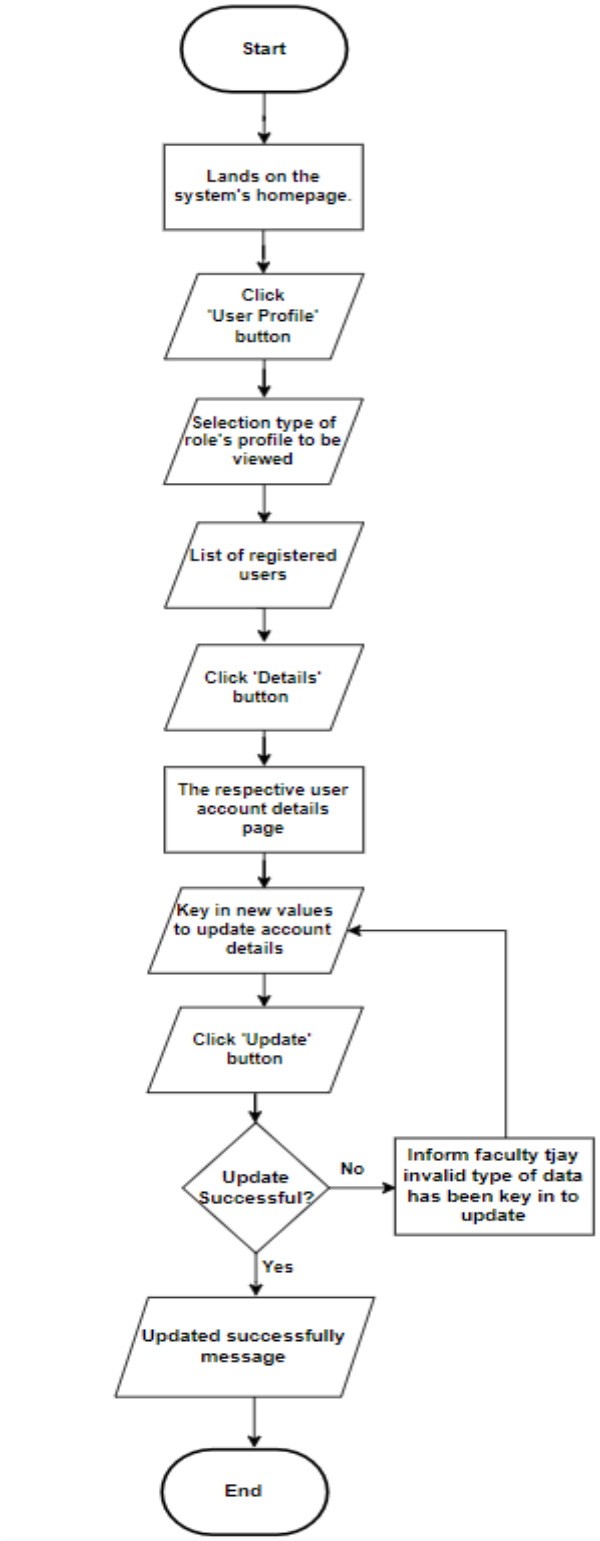

Figure 11.0. Flowchart for Edit User Profile

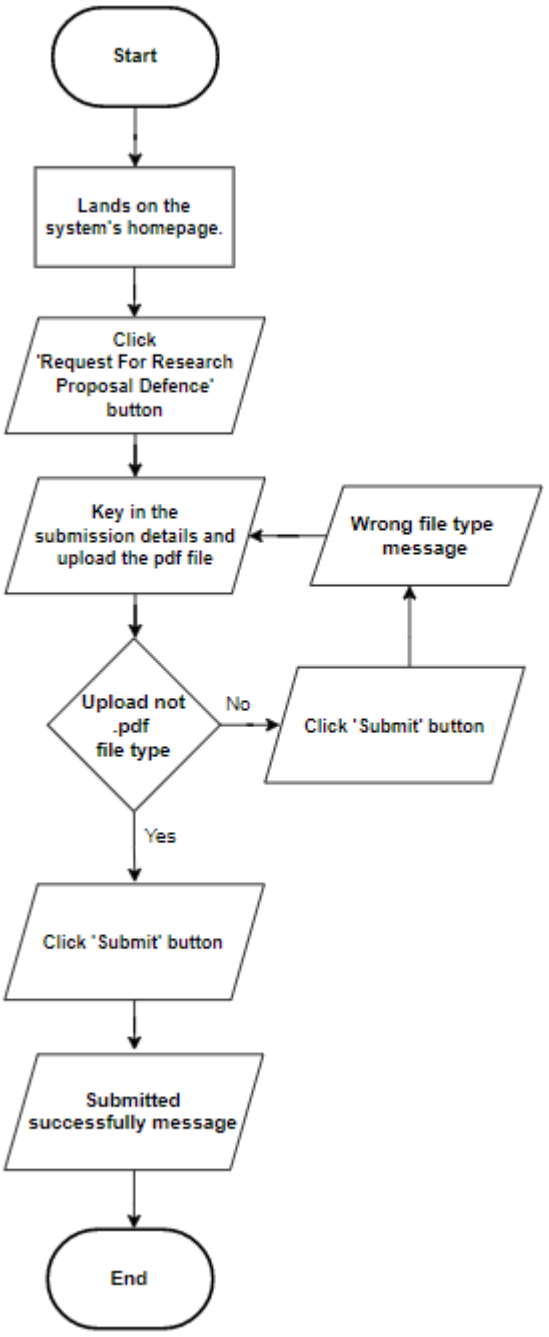

Figure 12.0. Flowchart for Request Research Proposal Defence

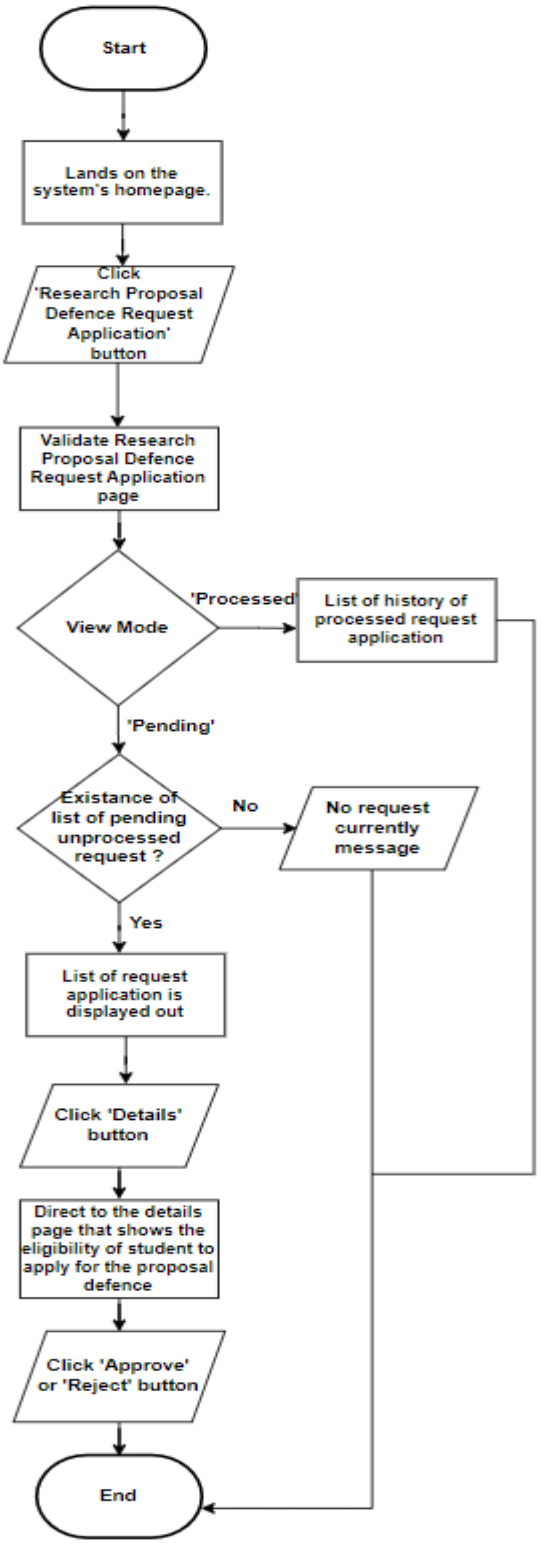

Figure 13.0. Flowchart for Research Proposal Defence Request Application Approval

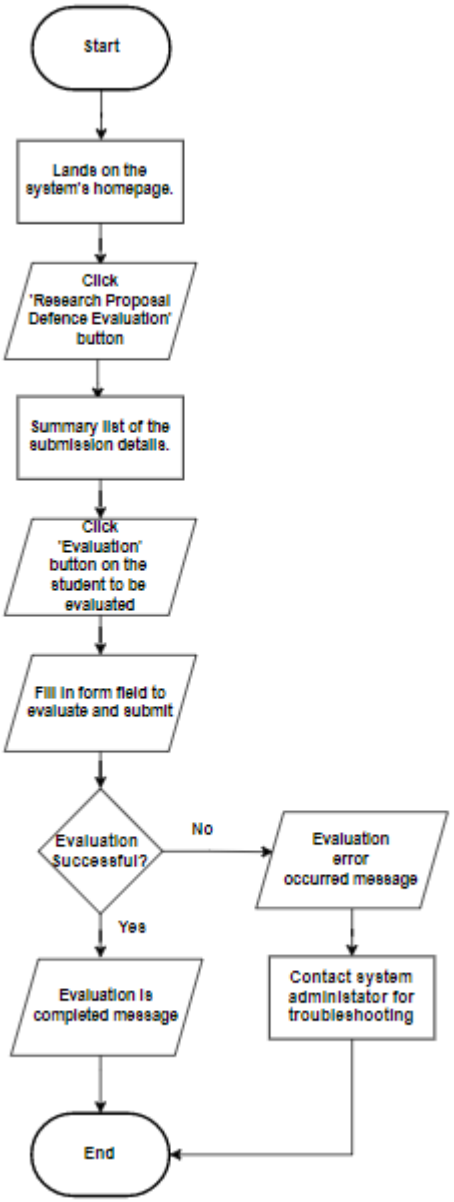

Figure 14.0. Flowchart for Evaluate Result of Research Proposal Defence

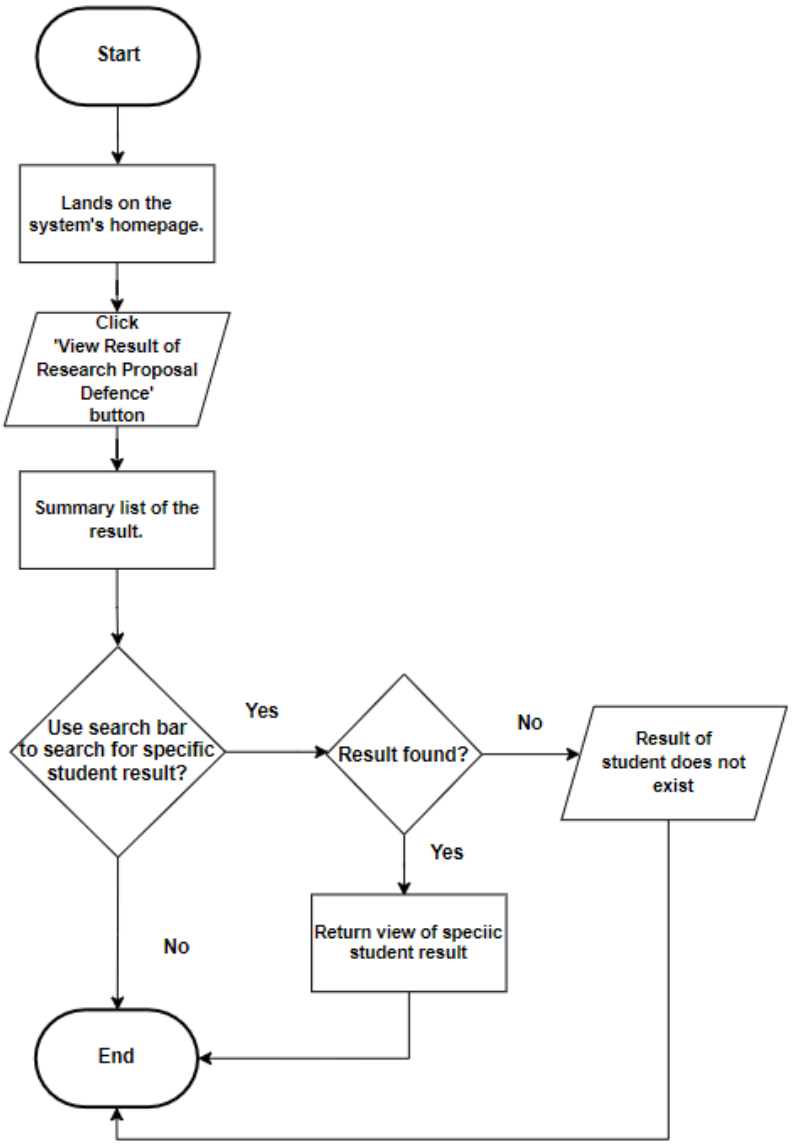

Figure 15.0. Flowchart for View Result of Research Proposal Defence

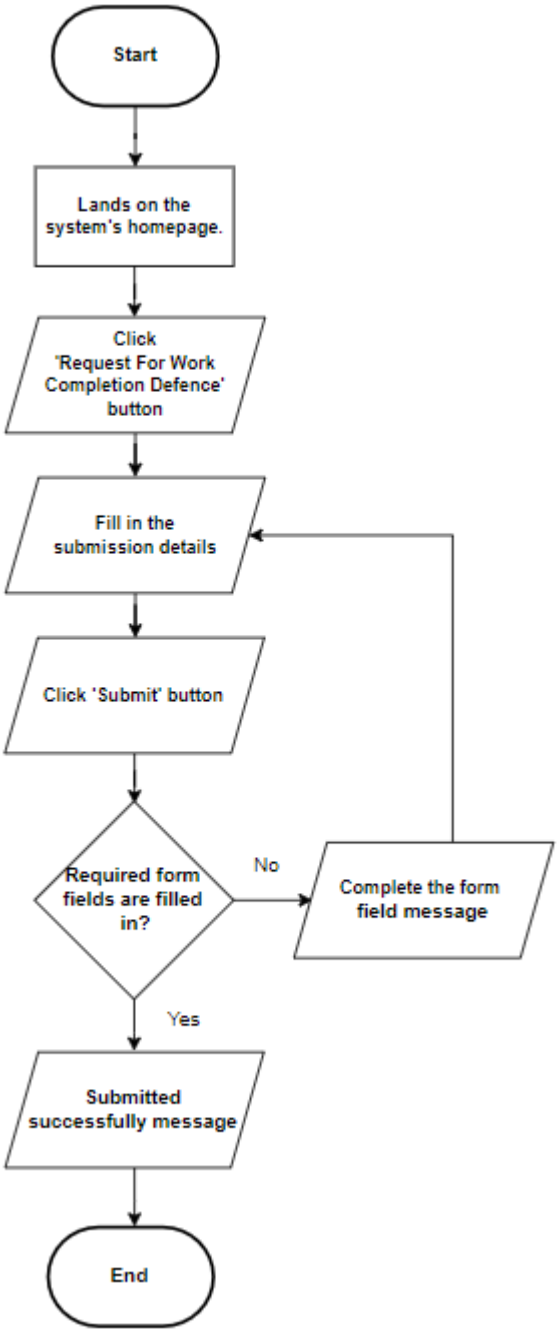

Figure 16.0. Flowchart for Request Work Completion Defence

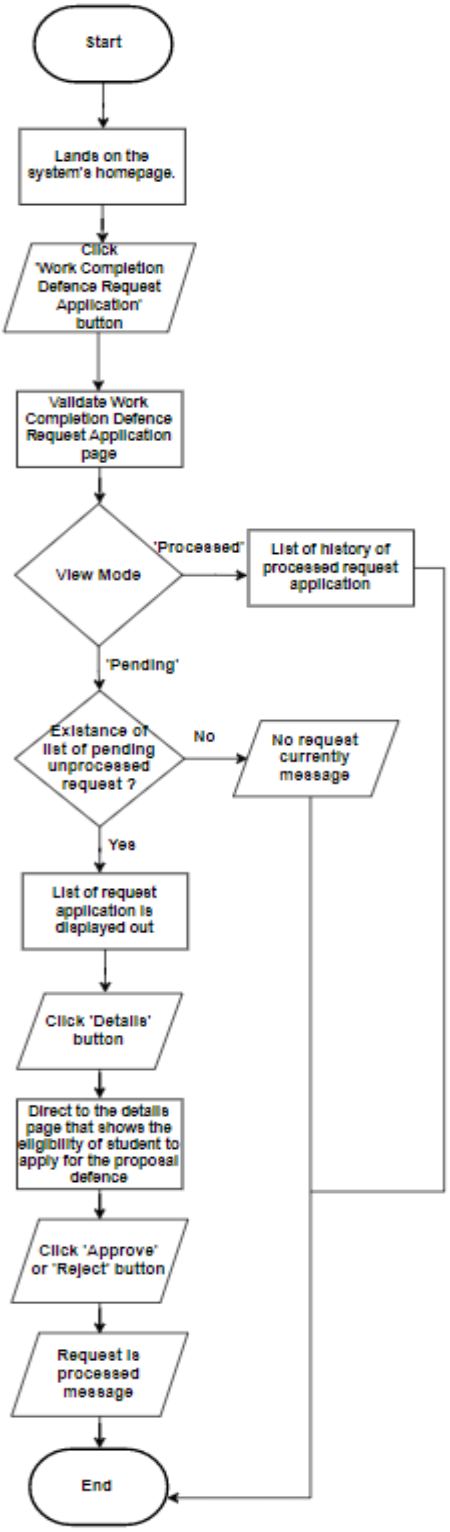

Figure 17.0. Flowchart for Work Completion Defence Request Application Approval

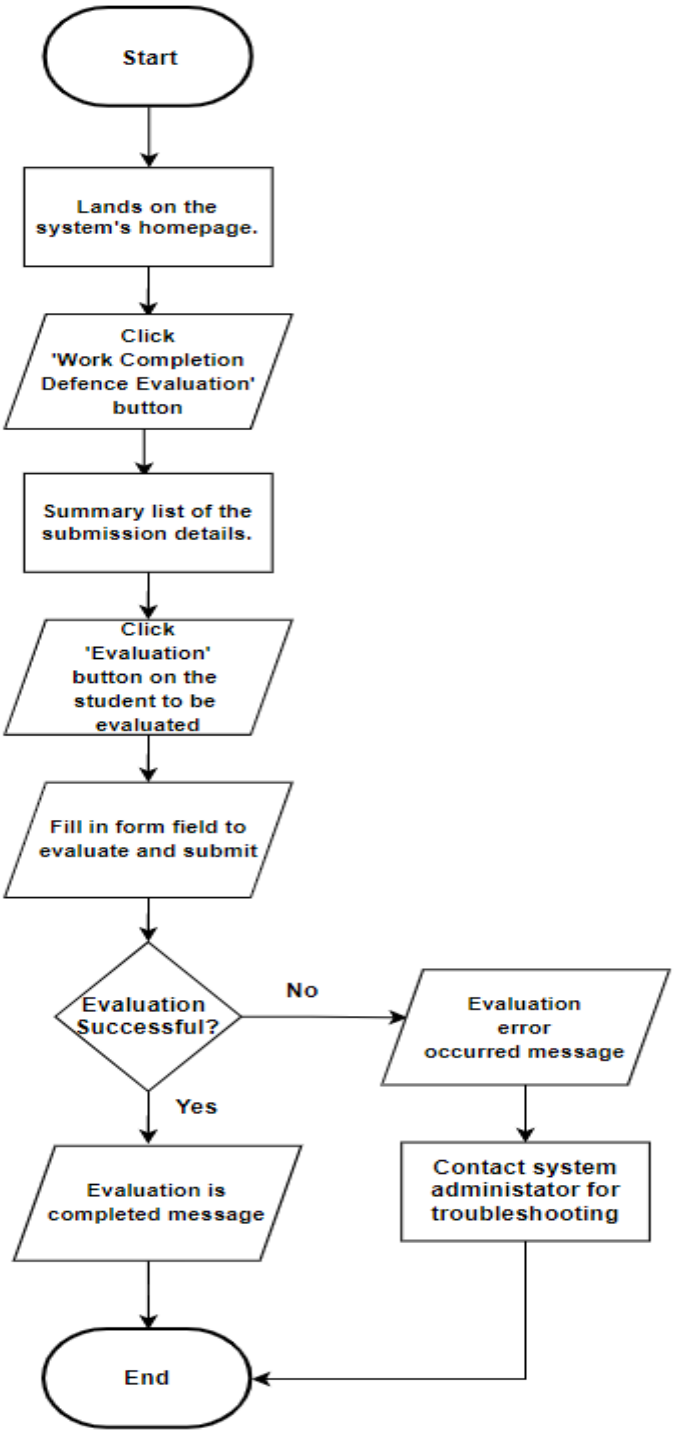

Figure 18.0. Flowchart for Evaluate Result of Work Completion Defence

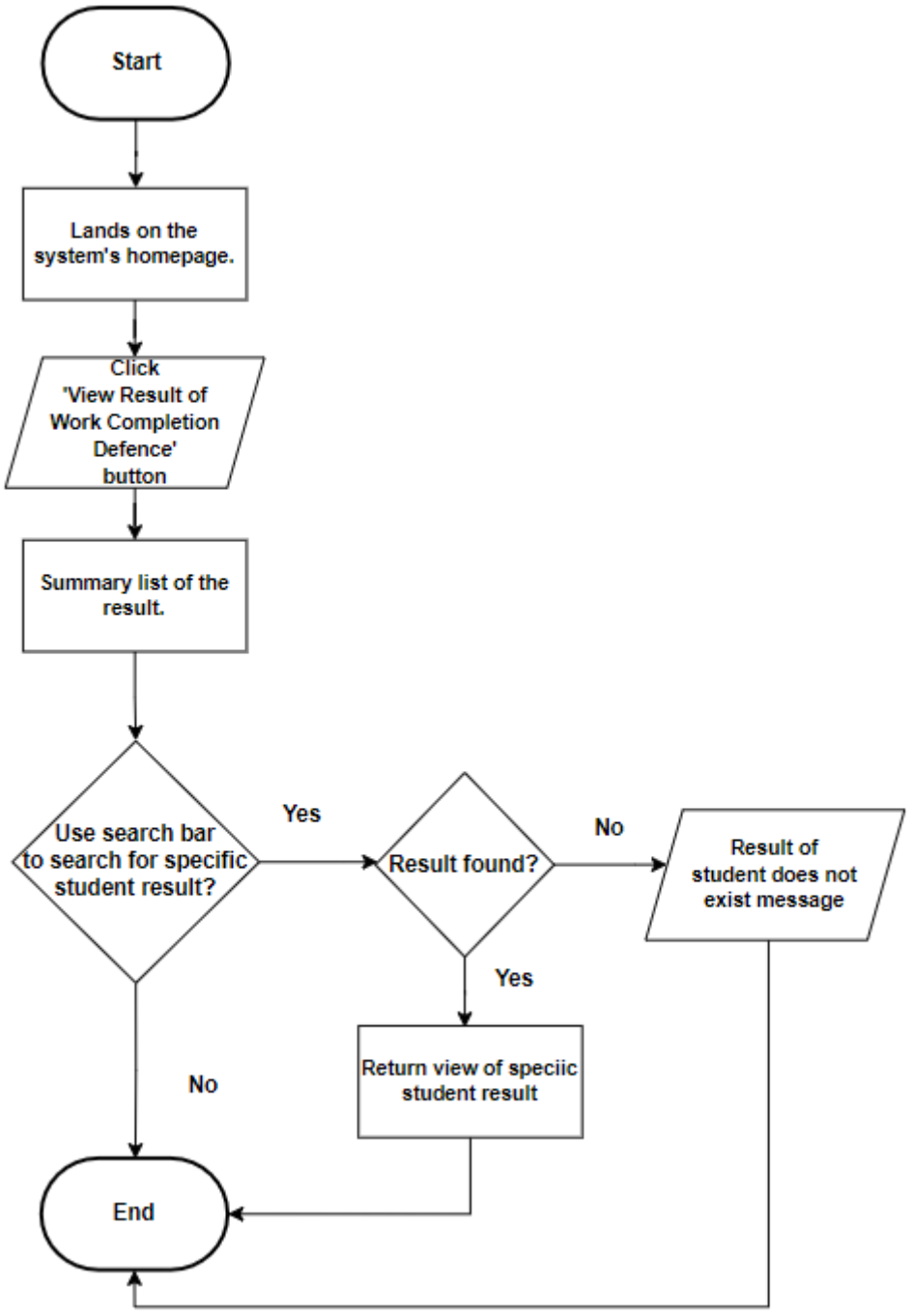

Figure 19.0. Flowchart for View Result of Work Completion Defence

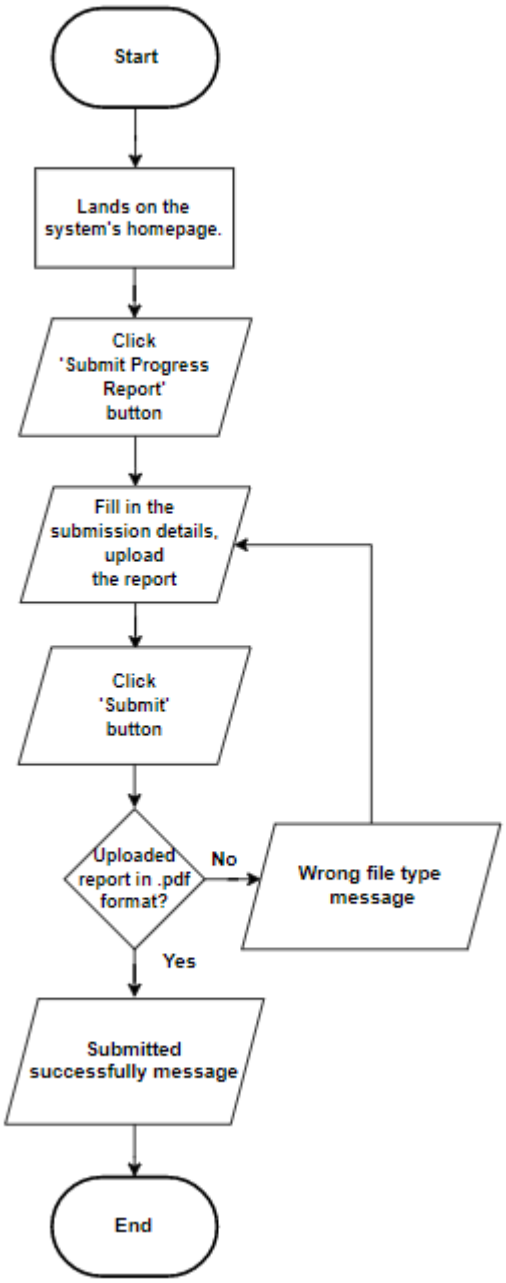

Figure 20.0. Flowchart for Submit Progress Report

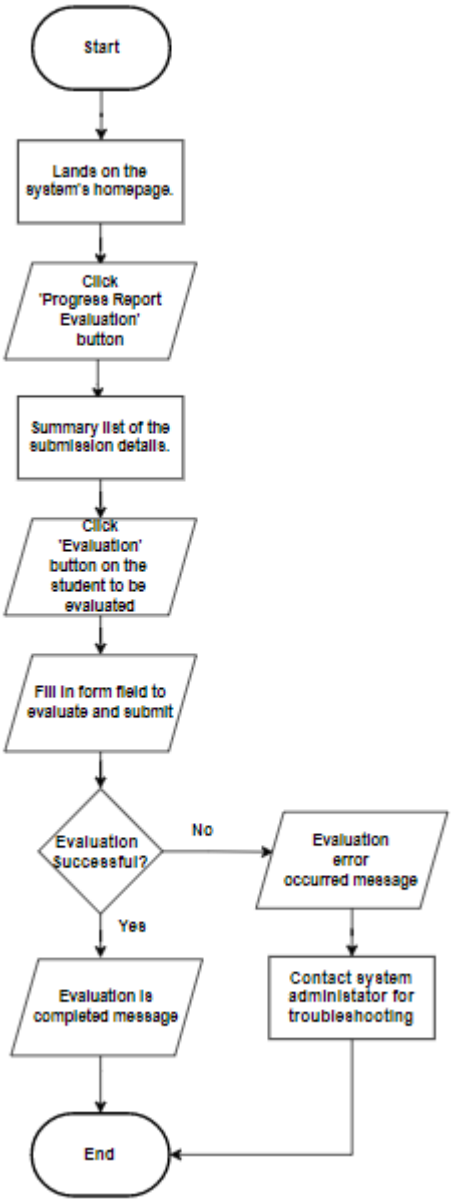

Figure 21.0. Flowchart for Evaluate Result of Progress Report

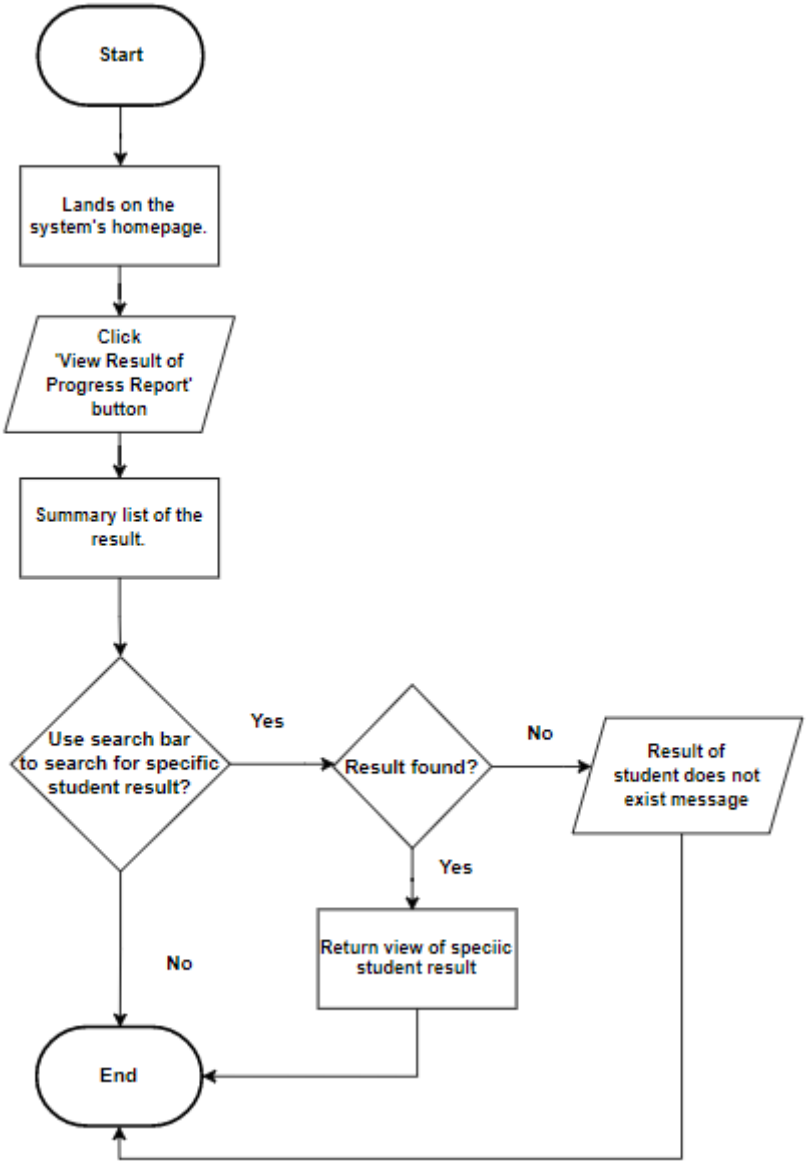

Figure 22.0. Flowchart for View Result of Progress Report

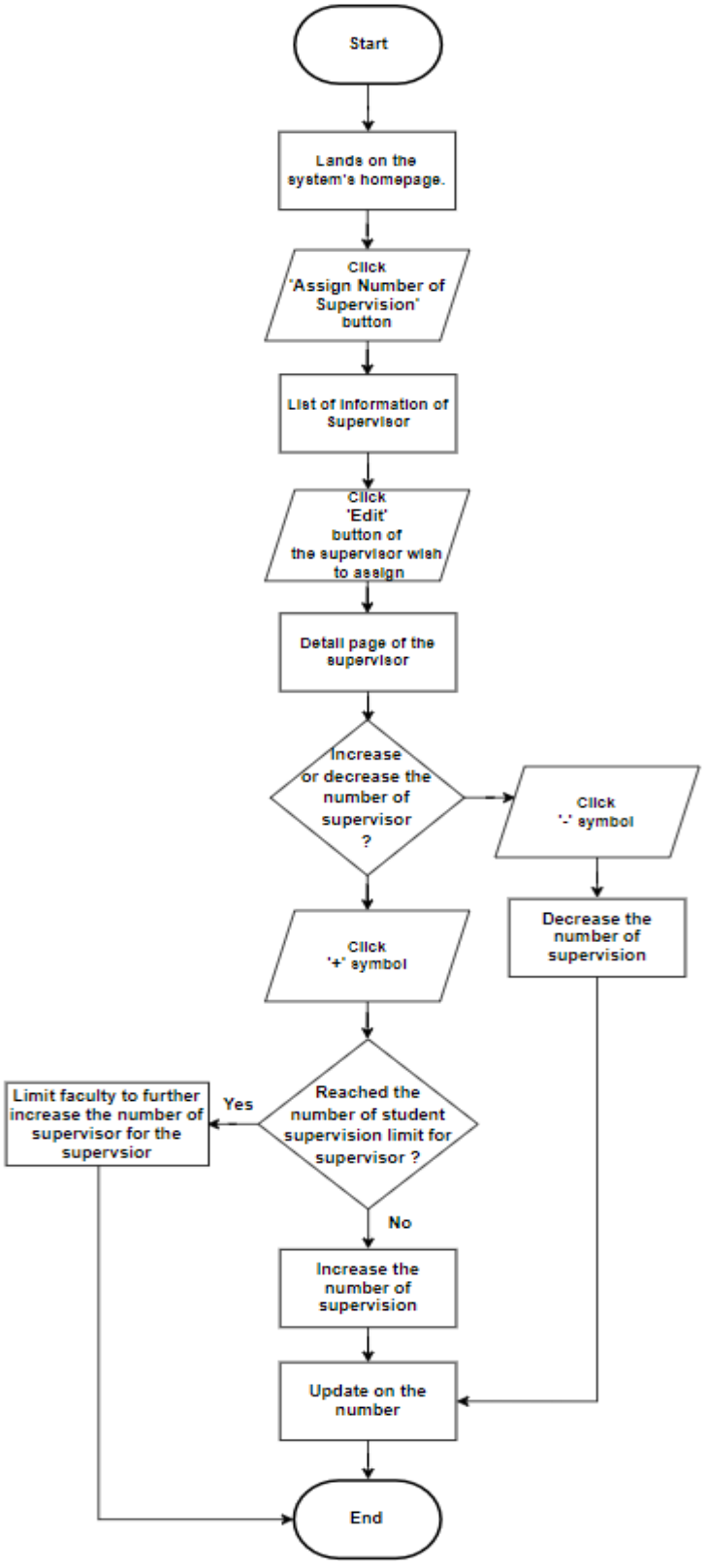

Figure 23.0. Flowchart for Assign Number of Supervision

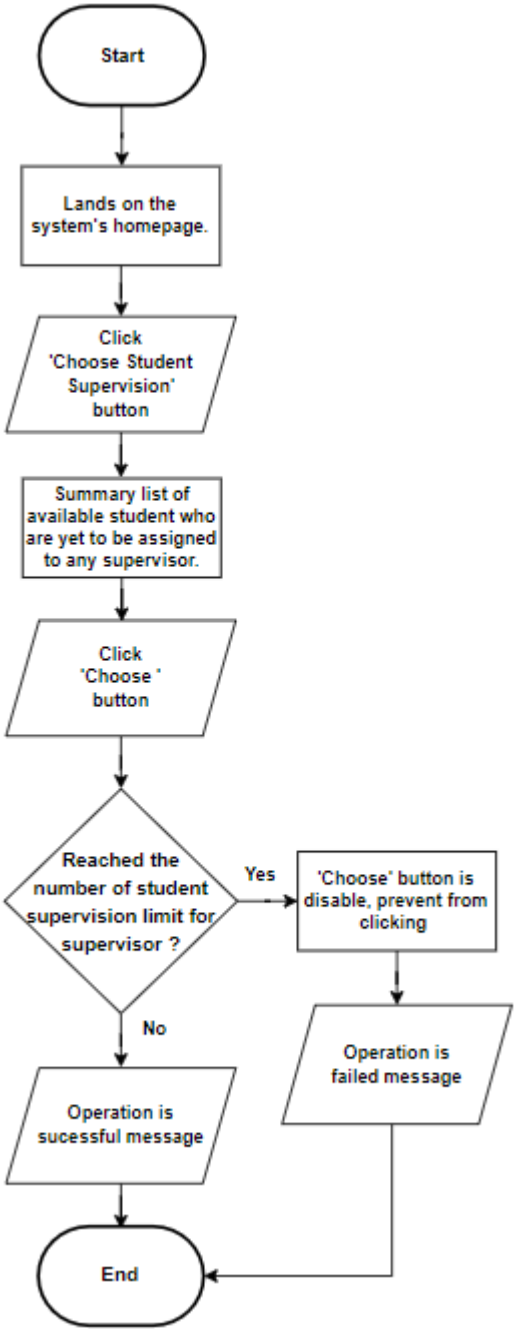

Figure 24.0. Flowchart for Choose Student to Supervise

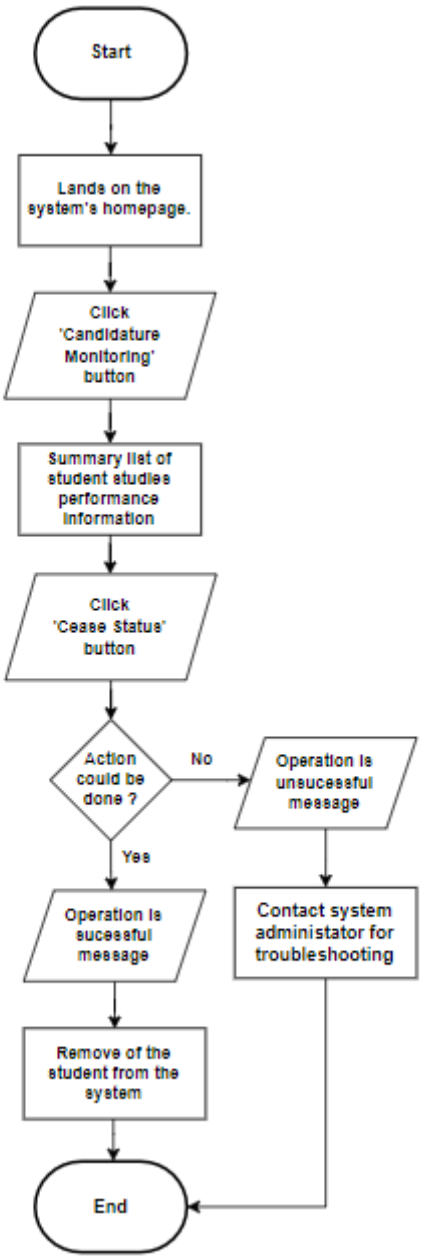

Figure 25.0. Flowchart for Cease Student Status

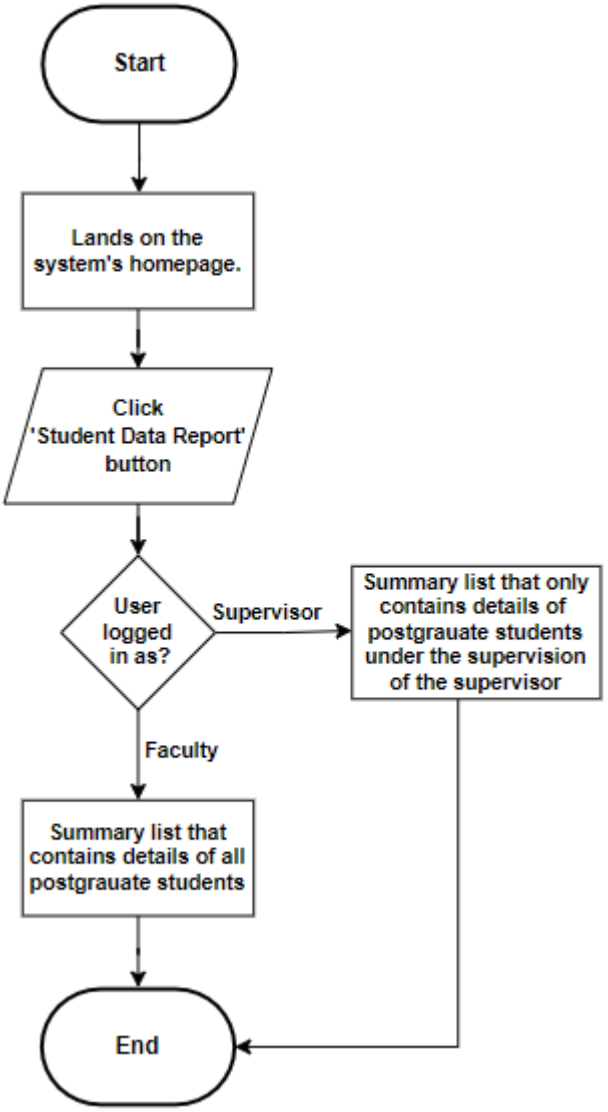

Figure 26.0. Flowchart for View Student Data Report

4.8 Database Design

4.8.1 Business Rules

Faculty, Panel, Supervisor, Student

- A faculty can register one or many user accounts for the panel, supervisor and student role.
- An user account of the panel, supervisor and student role can be only registered by one faculty.
- A faculty may edit zero or many profiles of other system type users.
- A profile can be only edited by one faculty.
- A faculty can assign one or many amounts of student supervision to the supervisor.
- An amount of student supervision can only be assigned by one faculty to the supervisor.
- A supervisor can choose one or many student to supervise
- A student can only be supervised by one supervisor.
- A faculty can cease one or many student status.
- A student status can be ceased by only one faculty.

AcademicReport

- An academic report can include one or many student information.
- A student's information can only be included by one academic report.
- An academic report can include one or many information about a student's research proposal defence result.

- A piece of information about the student’s research proposal defence result can only be included by one academic report.
- An academic report can include one or many pieces of information about a student's work completion defence result.
- A piece of information about the student’s work completion defence result can only be included by one academic report.
- An academic report can include one or many pieces of information about a student's progress report result.
- A piece of information about the student’s progress report result can only be included by one academic report.
- A faculty can access one or many academic reports of students.
- An academic report can be only accessed by one faculty.
- A supervisor can access one or many academic reports of students.
- An academic report can be accessed by one or many supervisors.

RPDApplication

- A student may request for zero or one application for Research Proposal Defence each time.
- An application for Research Proposal Defence may be requested by zero or many students.
- A faculty may view zero or many request applications of research proposal defence.
- A request for research proposal defence application can be only viewed by one faculty.
- A faculty may approve or reject zero or many request applications of research proposal defence.

- A request for a research proposal defence application can be only accepted or rejected by one faculty.

RPD

- A RPD database table can save one or many approved research proposal defence applications.
- An approved research proposal defence application can be only saved into one RPD database table.
- A panel can evaluate the result of one or many research proposal defences.
- A result of research proposal defence can be evaluated by only one panel.
- A supervisor can view one or many research proposal defence results.
- A research proposal defence result can be only viewed by one supervisor.

WCDApplication

- A student can request for zero or one application for work completion Defence each time.
- An application for work completion Defence can be requested by zero or many students.
- A faculty can view zero or many request applications of work completion defence.
- A request for work completion defence application can be only viewed by one faculty.
- A faculty can approve or reject zero or many request applications of work completion defence.

- A request for a work completion defence application can be only accepted or rejected by one faculty.

WCD

- A WCD database table can save one or many approved research proposal defence applications.
- An approved work completion defence application can be only saved into one WCD database table.
- A panel can evaluate the result of one or many work completion defence.
- A result of work completion defence can be evaluated by only one panel.
- A supervisor can view one or many work completion defence results.
- A work completion defence result can be only viewed by one supervisor.

ProgressReport

- A student may submit zero or one progress report.
- A progress report may be submitted by zero or many students.
- A panel can evaluate one or many progress report results.
- A progress report result can be evaluated by only one panel.
- A supervisor can view one or many progress report results.
- A progress report result can be only viewed by one supervisor.

4.8.2 Entity Relationship Diagram (ERD)

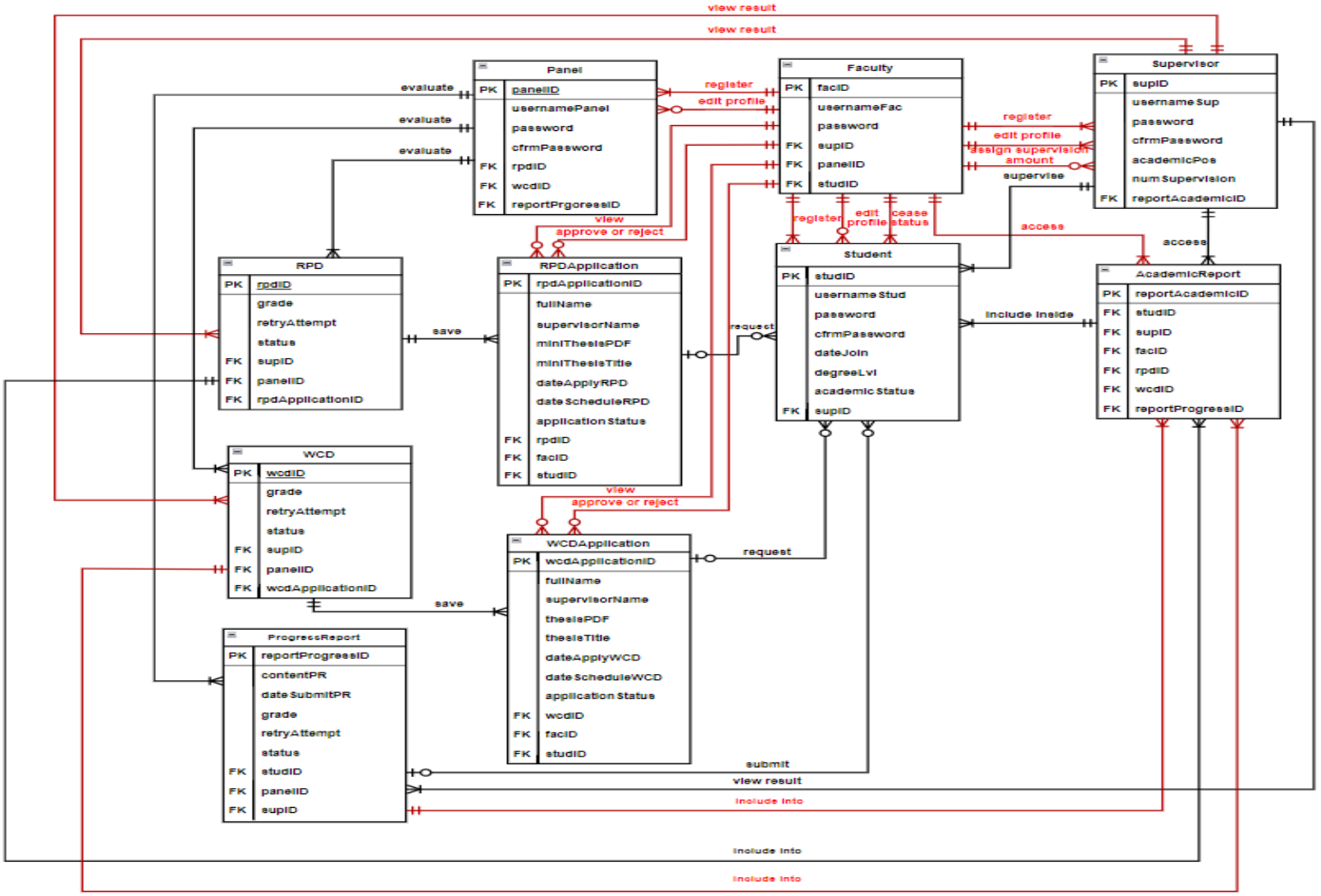

Figure 27.0. - Entity Relationship Diagram(ERD) for PostConnect

4.8.3 Data Dictionary

Name	Data Types	Description
academicPos	String	Supervisor's academic position.
academicStatus	Boolean	Student's academic status.
applicationStatus	Boolean	Status of request application.
cfrmPassword	String	Confirm password to register an user account.
cotentPR	String	Content of progress report.
dateApplyRPD	Date	Date when request for research proposal defence.
dateApplyWCD	Date	Date when request for work completion defence.
dateJoin	Date	Date when students join the course.

dateScheduleRPD	Date	Date for the research proposal defence seminar to start.
dateScheduleWCD	Date	Date for the work completion defence seminar to start.
dateSubmitPR	Date	Date to submit the progress report.
degreeLvl	String	Student's level of study.
facID	Object ID	Faculty ID.
fullName	String	Full name of student.
grade	String	Result.
miniThesisPDF	String	PDF file of mini thesis.
miniThesisTitle	String	Mini thesis title.
numSupervision	Integer	Number of student supervision has been assigned.
panelID	Object ID	Panel ID.

pasword	String	Password of an user account.
reportAcademicID	Object ID	Academic report ID
reportProgressID	Object ID	Progress report ID
retryAttempt	Integer	Number of retry attempts.
rpdApplicationID	Object ID	Research proposal defence request application ID.
rpdID	Object ID	Research proposal defence ID.
status	Boolean	Status to indicate if a student has passed.
studID	Object ID	Student ID.
supID	Object ID	Supervisor ID.
thesisPDF	String	PDF file of thesis.
thesisTitle	String	Thesis title.
usernameFac	String	Username of faculty.
usernamePanel	String	Username of panel.

usernameStud	String	Username of student.
usernameSup	String	Username of supervisor.
wcdID	Object ID	Work completion defence ID

Chapter 5: Implementation Plan

5.0 Introduction

As of FYP 1, a working version of the PostConnect system has not yet been officially developed. However, a prototype of the system is designed in order to provide the stakeholders of the system with the ability to experience the look and feel design of the system at the very stages of the development. Since PostConnect is a big system with alot of modules, therefore, for the demonstration of system prototyping, it would only focus on Research Proposal Defence Monitoring feature. To further elaborate on this, this report section will focus on demonstrating an example of a user scenario by showing the complete process of the research proposal defence monitoring. The print screens and the description of the system are as follows.

5.1 Print Screens of PostConnect

Figure 28.0 shows the print screen of the login landing page display screen. This is the initial page of the system that the user will land on when they access the system. Inside this page, the user will be given choices to choose the account type that he/she would like to log in as. Upon selecting the account type, the user will need to click the 'Proceed' button.

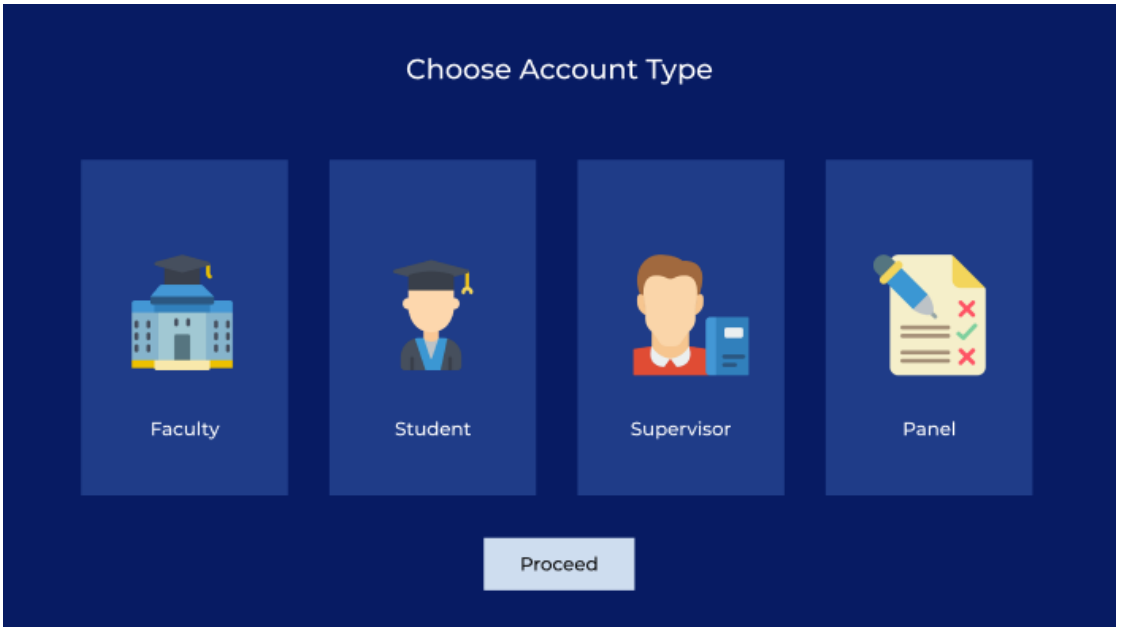

Figure 28.0 - Login Landing Page Display Screen

Figure 29.0 shows the print screen of the login page display screen. The user will be directed to the login page once he/she has selected the account type they would like to log in. Inside this page, the user will need to key in the his/her valid user account credential. Upon filling in the form field, the user clicks login.

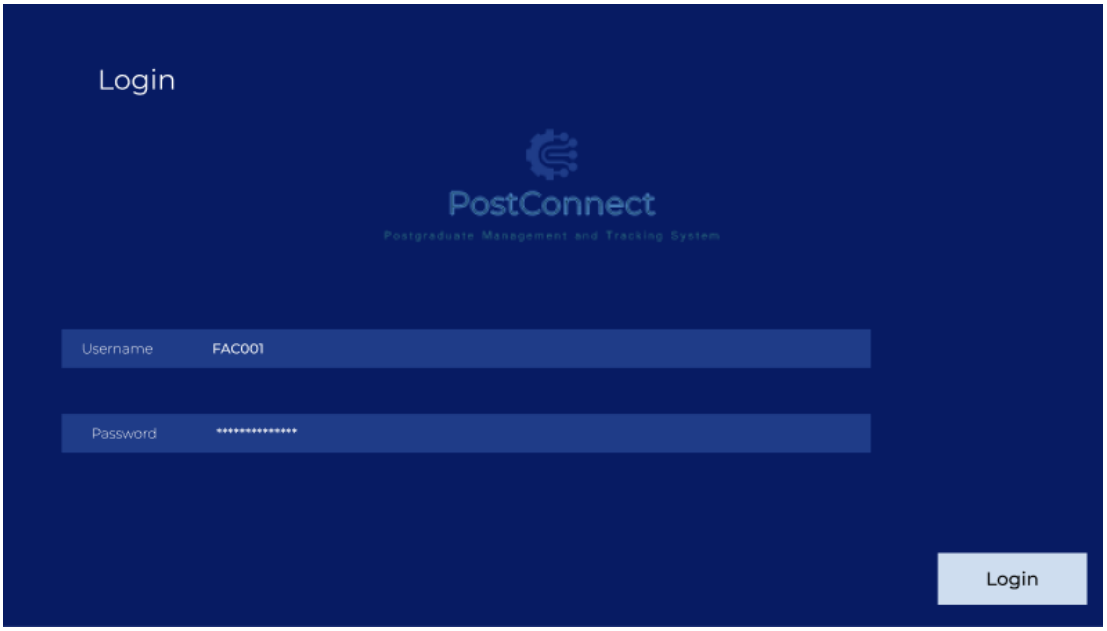

Figure 29.0 - Login Page Display Screen

Figure 30.0 shows the print screen of the faculty homepage display screen. The navigation sidebar contains the set of features for the faculty type of user to access. Inside this page, the faculty users are able to see the total number of registered accounts of student, supervisor and panel. Besides, the page also contains a to-do list and a calendar to ease the management operation for the faculty.

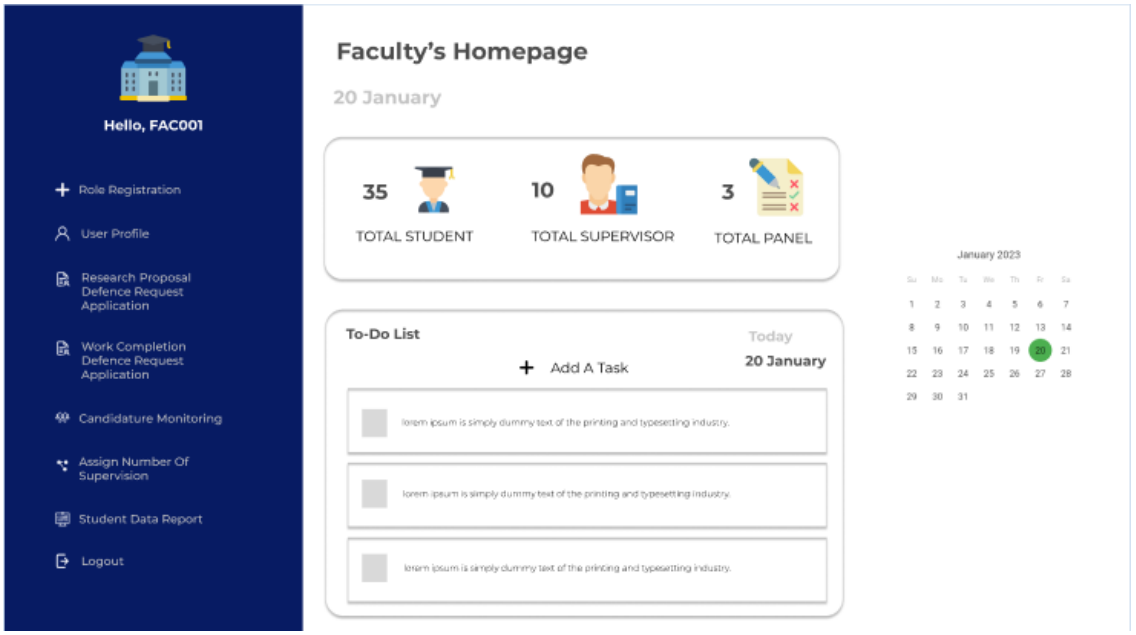

Figure 30.0 - Faculty Homepage Display Screen

Figure 31.0 shows the print screen of the supervisor homepage display screen. The navigation sidebar contains the set of features for the supervisor type of user to access. Inside this page, the supervisor users are able to see the total number of students he/she is currently supervising. Besides, the page also contains a to-do list and a calendar to ease the management operation for the supervisor.

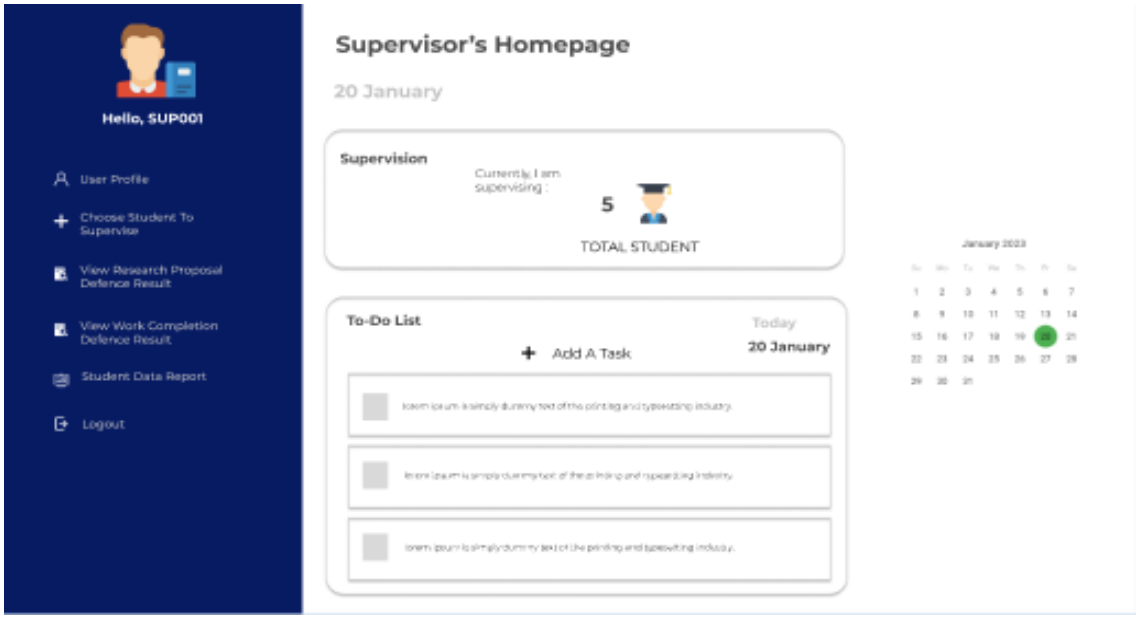

Figure 31.0 - Supervisor Homepage Display Screen

Figure 32.0 shows the print screen of the panel homepage display screen. The navigation sidebar contains the set of features for the faculty type of user to access. Inside this page, the panel users are able to see the total number of registered accounts of admin, student and panel. Besides, the page also contains a to-do list and a calendar to ease the management operation for the panel.

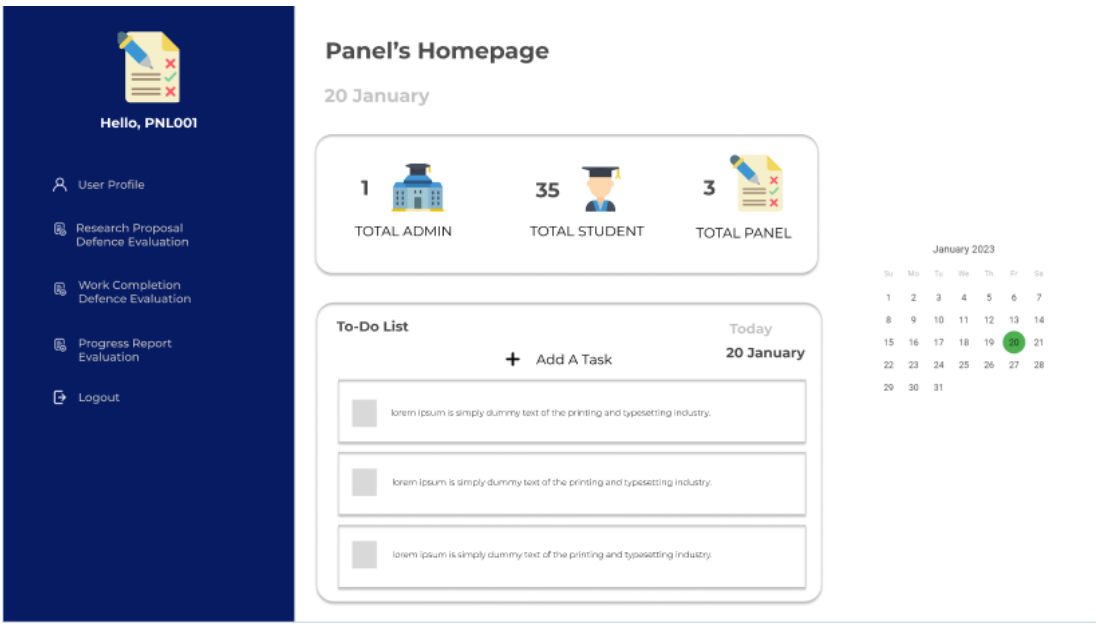

Figure 32.0 - Panel Homepage Display Screen

Figure 33.0 shows the print screen of the student homepage display screen. The navigation sidebar contains the set of features for the student type of user to access. Inside this page, the student users are able to see a digital clock that shows the current time. Besides, the page also contains a to-do list and a calendar for the student to view and use.

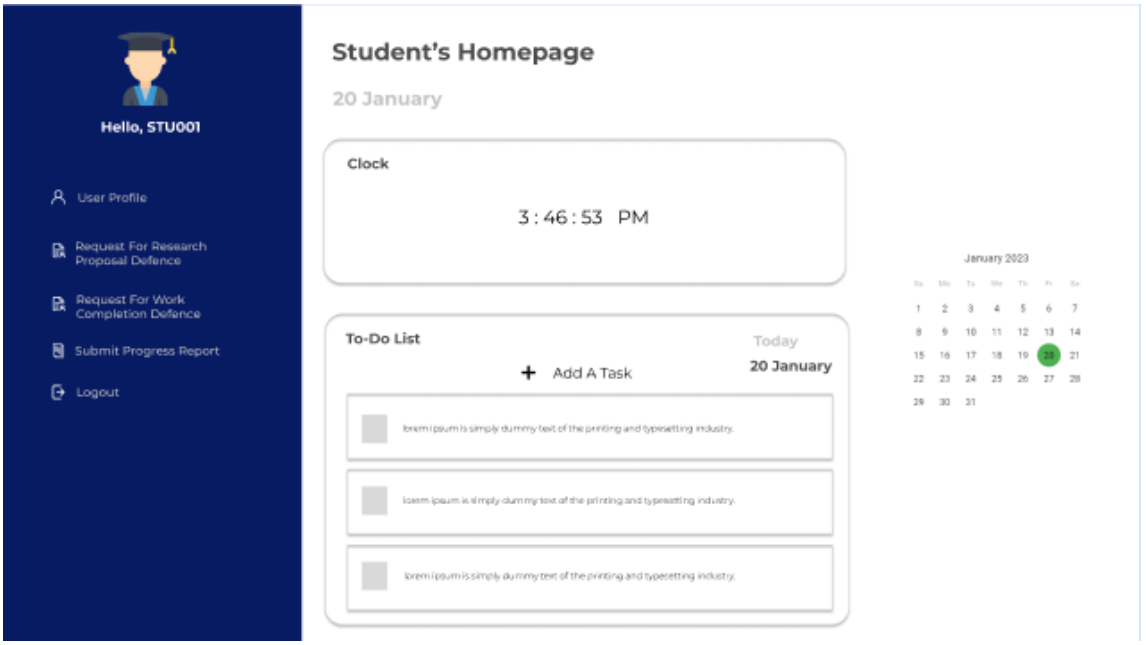

Figure 33.0 - Student Homepage Display Screen

Figure 34.0 shows the print screen of the student request for research proposal defence screen. Inside this page, the student will need to fill in the request form prior to request for the application. The form field required to be filled in is the full name of the student, the thesis title, supervisor name. The user will also need to upload a copy of the .pdf file of the mini thesis. Upon filling in all the information, the student click on the submit button to send the request form.

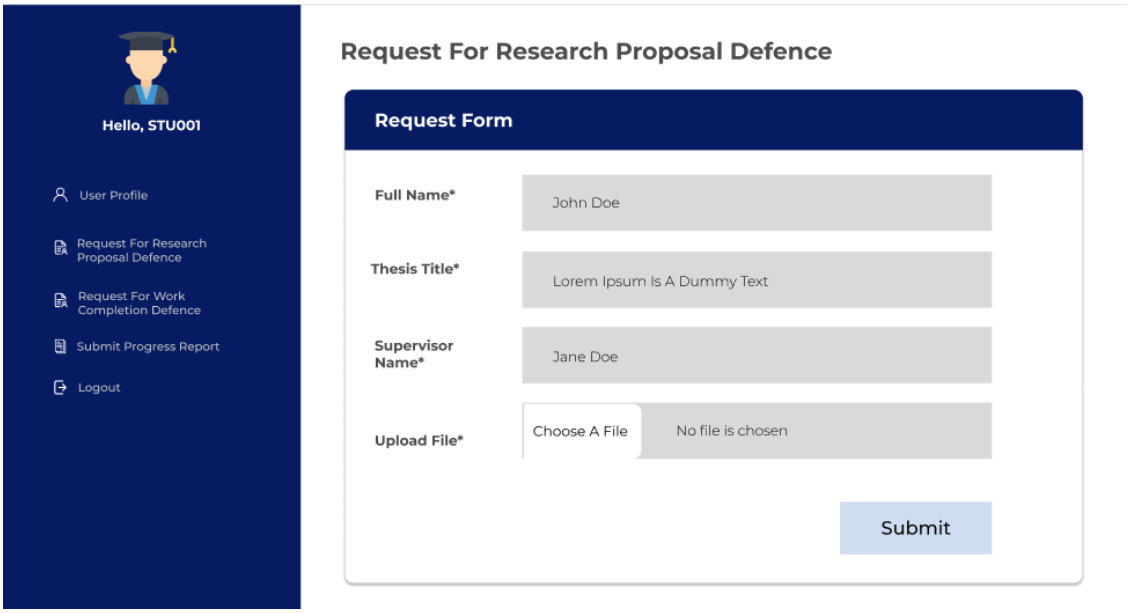

Figure 34.0 - Request For Research Proposal Defence Display Screen

Figure 35.0 and Figure 36.0 show the print screen of the research proposal defence request application and its details display screen. This is one of the features that the faculty user type of account can access to. Any incoming request for a research proposal defence application from a student will show up at this page. The faculty can access the page to process these request applications, either to accept or reject the student request. Inside this page, the faculty is able to see the pending request application which is awaited to be processed as well as the processed request list.

Figure 35.0 - Research Proposal Defence Request Application Display Screen

Figure 36.0 - Research Proposal Defence Request Application Details Display Screen

Figure 37.0 and Figure 38.0 show the print screen of the research proposal defence evaluation and its details display screen. It is one of the features that can be accessed by the panel type of account, to evaluate the research proposal defence result of a student. Inside this page, the details of the proposal is displayed in the form of a table. To evaluate the result of the proposal, the panel can click on the 'Evaluate' button. The system will then bring the panel to the details of the research proposal defence. Inside this page, the details of the proposal are displayed. After reviewing the details, the panel can evaluate the result of the student's proposal either specifying 'S' grade to indicate pass, or 'US' grade to indicate fail.

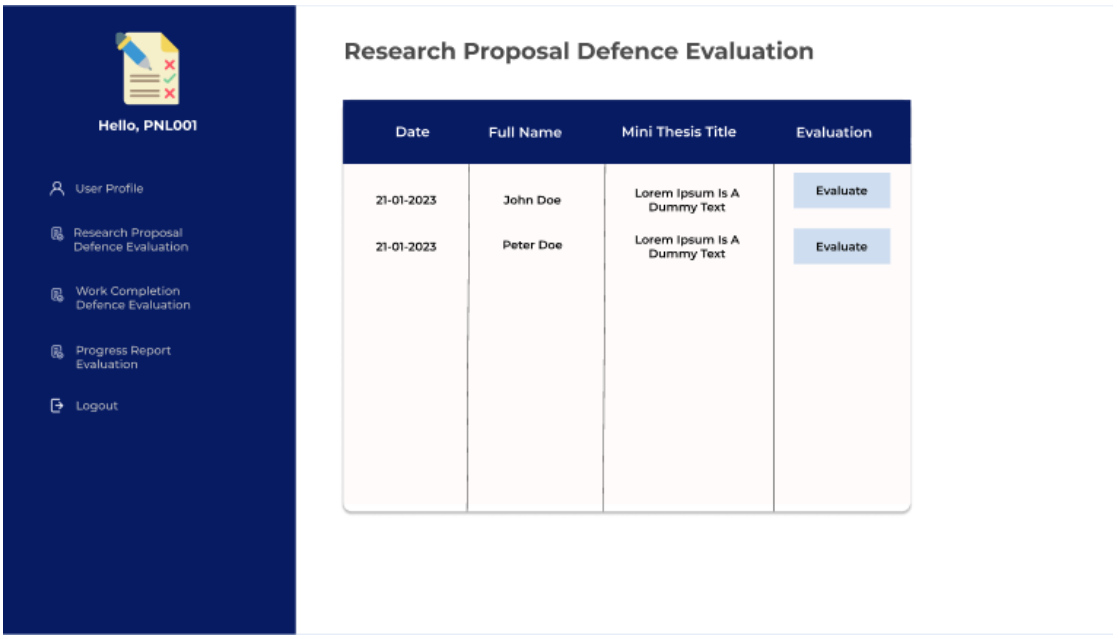

Figure 37.0 - Research Proposal Defence Evaluation Display Screen

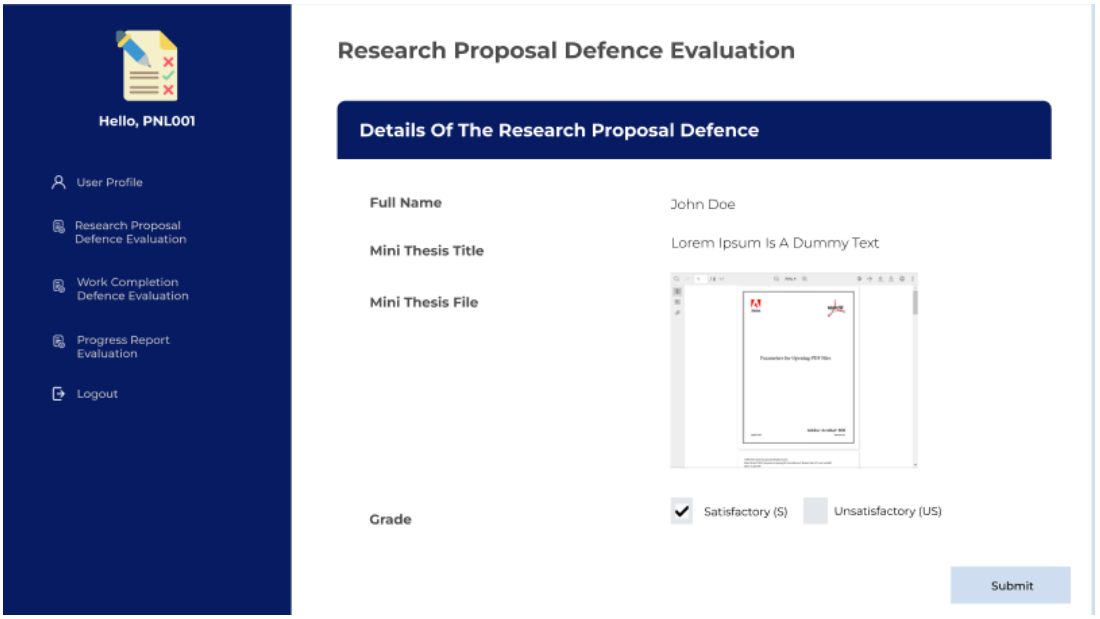

Figure 38.0 - Research Proposal Defence Evaluation Details Display Screen

Figure 39.0 shows the print screen of the view research proposal defence result display screen. Inside this page, the supervisor is able to see the result of the research proposal defence of the student that is currently under he/her supervision.

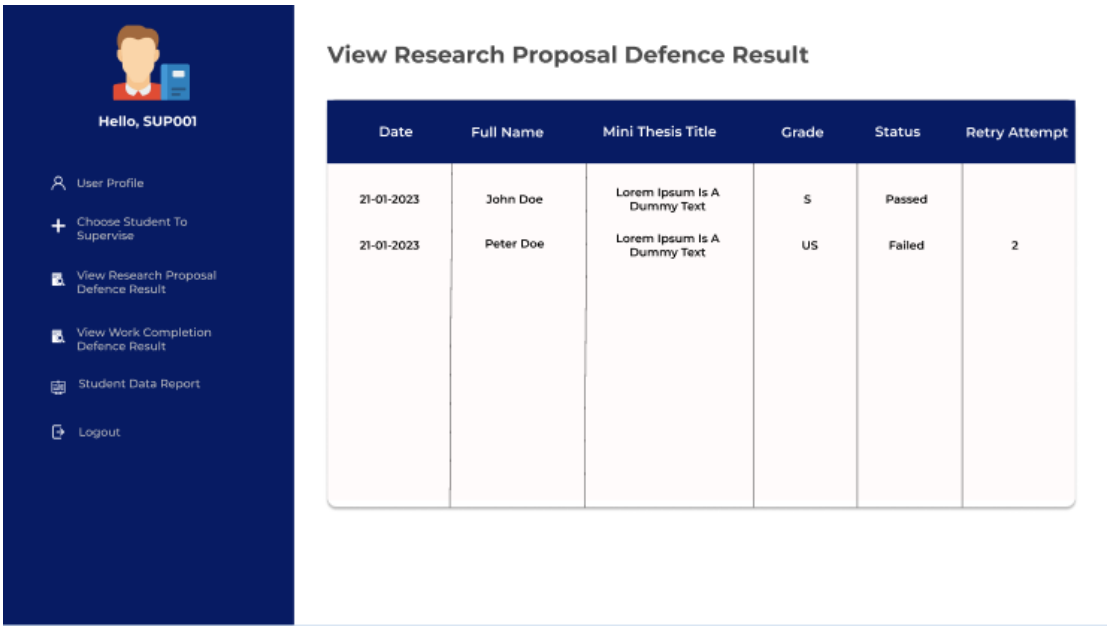

Figure 39.0 - View Research Proposal Defence Result Display Screen

5.1 Gantt Chart

Figure 40.0 shows the Gantt Chart for the Final Year Project Part 1 (FYP1).

Gantt Chart For Postgraduate Student Tracking and Management System

No	Task	04/10 -11/10 Week 1	12/10 - 19/10 Week 2	20/10 - 27/10 Week 3	28/10 - 04/11 Week 4	05/11 - 12/11 Week 5	13/11- 20/11 Week 6	21/11 - 28/11 Week 7	30/11 - 6/12 Week 8	7/12 - 14/12 Week 9	15/12 -22/12 Week 10	23/12 - 30/12 Week 11	31/12 - 7/1 Week 12	8/1 - 15/1 Week 13	16/1 - 23/1 Week 14	24/1 - 31/1 Week 15
1.0.	**Phase 1: Literature Review**															
1.1	Introduction															
1.2	General concepts															
1.3	Technologies Used															
1.4	Examples of Exsiting Systems															
1.5	Conclusion															
2.0.	**Phase 2: Introduction**															
2.1	Problem Statements															
2.2	Introduction															
2.3	Scopes															
2.4	Objectives															
3.0.	**Phase 3: Methodology**															
3.1	SDLC Phases															
4.0.	**Phase 4: Proposed Solution**															
4.1	Functional Requirements															
4.2	Non Functional Requirements															
4.3	System Requirements															
4.4	Use Case Diagram															
4.5	Use Case Description Table (UCDT)															
4.6	Context Diagram															
4.7	Package Diagram															
4.8	Flowcharts															
4.9	Database Design															
5.0.	**Phase 5: Implementation Plan**															
5.1	Desiging the system prototype															
5.2	Description and flow for the system prototype															
6.0.	**Phase 6: Conclusion**															
6.1	Conclusion															

Figure 40.0 - FYP 1 Gantt Chart

Chapter 6: Conclusion

In a nutshell, as for the Final Year Project - Part 1 (FYP1), I have done quite a lot of work prior to the planning of the PostConnect system development. I have prepared an interim report to serve a vital purpose to show how far I have progressed with the FYP1. This report that I have prepared, covers 6 chapters all together from identifying the problem statements that motivates the development of this system for the project to building a prototype for the system. Each of the chapters serves different purposes and provides the picture of the design of the system from different perspectives. In the first chapter of this report **Chapter 1 Introduction**, this chapter mainly describes the motivations and purposes that drive me to develop the system. Next, **Chapter 2 Literature Review** is the part where I do some background research about the relevant system, so that I can collect more ideas on the system I am going to build. On the other hand, **Chapter 3 Methodology** is the chapter used to describe how I am going to conduct my project step by step and map with objectives stated in Chapter 1. Moving on to **Chapter 4 Proposed Solution**, this chapter shows the modelling process and the design process of the system. For instance, the Entity Relationship Diagram is used for the data modelling while the Use Case Diagram is used to describe what our system does. Also, **Chapter 5 Implementation Plan** is the part where the prototype design of the system is shown.

As for the Final Year Project - Part 2 (FYP2) plan. The future plans completed in FYP2 will mainly transform what has been specified in the FYP1 into the real working system. To do so, the development journey of the system will begin during FYP2. The plan will be executed

step by step following the software development lifecycle which I have chosen earlier. Last but not least, the final report of the final year project will be delivered in FYP2.

References

Mokhtar, R., Samed, M., Isa, N., Abd Rahman, M., & Suhaimi, A. (2022). Designing an Electronic Logbook System for Monitoring Postgraduate Research Students Progress. International Journal Of Business And Technology Management, 4(3), 45-53. Retrieved from https://myjms.mohe.gov.my/index.php/ijbtm/article/view/19167

Hasnan, S., Aziz, R., & Hamid, A. (2015). Postgraduate Tracking System: Student Research Progress Tracking Tool. *International Research in Education, 3*(1), 47-53. doi:http://dx.doi.org/10.5296/ire.v3i1.6539

Yu, X. (2017). Design of Postgraduate Information Management System Based on Spring. *Proceedings of the 7th International Conference on Management, Education, Information and Control (MEICI 2017)*, 245-249. doi:https://doi.org/10.2991/meici-17.2017.51

Xia, L., Yu, L., & Yang, K. (2021) Research on the Design of Postgraduate Management Model at Universities with Geosciences and Environmental Education, *Journal of Earth and Environmental Science Research*, SRC/JEESR-157. doi: https://doi.org/10.47363/JEESR/2021(3)140.

Mokhtar, R., Samed, M., Isa, N., Abd Rahman, M., & Suhaimi, A. (2022). Designing an Electronic Logbook System for Monitoring Postgraduate Research Students Progress. International Journal Of Business And Technology Management, 4(3), 45-53. Retrieved from https://myjms.mohe.gov.my/index.php/ijbtm/article/view/19167

Appendix

Appendix A: FYP 1 Meeting Logs

Meeting Log 1

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TPT3101 Final Year Project (FYP1) Meeting Log
Trimester 1, 2022/23 (Trimester ID:2210)

Meeting Date: 12/09, 04/10, 18/10	**Meeting No.:** 1
Meeting Mode: Face to face mode, Online mode	
Project ID: 2099	**Project Type:** **Research-based/Application-based**
Project Title : Postgraduate Student Tracking and Management System	
Student ID : 1181203056	**Student Name:** Elton Wong Chun Meng
Student Programme and Specialisation: Bachelor of Computer Science (Hons.) in Software Engineering	
Supervisor Name: Dr. Chua Fang Fang	**Co-Supervisor Name:** **(if applicable)** Dr. Amy Lim Hui Lan
Collaborating Company: **(if applicable)**	**Company Supervisor Name:** **(if applicable)**

1. WORK DONE
[Please write the details of the work done, after the last meeting]

Tasks: ~~Problem Formulation and Project Planning~~ / Background Study or Literature Review / ~~Requirement Analysis or Theoretical Framework / Design or Research Methodology / Prototype Development or Proof of Concept / Draft Report Completion~~

(Please strike out the tasks, which are not applicable)

Details (in point form):

I have a total of 3 meetings with my supervisor since the commencement of this trimester. Below are the details of the work done after the last 3 meetings.

Meeting 1

- I was introduced to the tasks that will needed to be completed to fulfill the requirement of FYP 1
- The guidelines that is provided by my supervisor cover 6 chapters. Each chapter contains the tasks needed to be done, and is given a due date. For example, Chapter 1 Introduction (by Week 5), Chapter 2 Literature Review (by Week 5), Chapter 3 Methodology by Week 7 and so on.
- Search online for the journal, past studies that are relevant to my FYP title.
- From each paper, identify the name of the paper, contribution, objective, method and the limitation (conclusion / future work), then summarize and write into a word document.

Meeting 2

- Went through the MMU postgraduate student handbook given by the supervisor.
- Review one more past study to add into the literature review later.
- Summarized a few essential core functionalities from the handbook and decided to implement these functions into my system.

Meeting 3

- Summarized the content of the papers I have went through according the format that is requested by the supervisor
- Completed the literature review draft
- The draft is in paragraph form and with all the comments addressed in the corrections

2. WORK TO BE DONE

[Please write the details of the work to be done, before the next meeting]

Tasks: Problem Formulation and Project Planning / Background Study or Literature Review / ~~Requirement Analysis or Theoretical Framework / Design or Research Methodology / Prototype Development or Proof of Concept/ Draft Report Completion~~

(Please strike out the tasks, which are not applicable)

Details (in point form):

- Complete the Chapter 1 – Introduction, where it covers the introduction, problem statement, the objectives of the project and the scope of the projects.
- Amend the errors that were pointed out by the supervisor during the last meeting in order to complete the Chapter 2 – Literature Review.

3. PROBLEMS ENCOUNTERED AND SOLUTIONS

[Please write the details of the problems encountered, after the last meeting and provide the solutions / plan for the solutions]

One of the biggest problems encountered during my work progress after the last meeting is that, I found that I could barely find out the existing study of the relevant system. There is not much paper out there that is related to what I am looking for. To deal with this issue, I try to search the paper by indicating a few more different keywords and search from a few more different websites that contain a library of research papers such as Academia, IEEE, Research Gate, Google Scholar and so on.

4. COMMENTS (Supervisor / Co-Supervisor /~~Company Supervisor~~)

- Add in some definition for your FYP title - **2.1 General Concept.**
- Include the contribution / improvement of the system from the existing studies.
- Do not cut and paste the figure / table / graph from the journal paper.
- No need to include the figure that is unnecessary for the literature review.
- Add in citation in text using APA style for the section **2.3 Examples of Existing Systems**
- Include what technologies your system will be using after you have summarized all the findings from the existing papers.

FFCHUA

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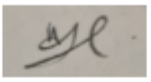
Supervisor's Signature



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Student's Signature

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Co-Supervisor's Signature
(if applicable)

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Company Supervisor's Signature
(if applicable)

IMPORTANT NOTES TO STUDENTS:

1. Items 1 – 3 are to be completed by the students prior to the meeting. Item 4 is to be completed by the supervisor / co-supervisor / company supervisor.

2. Student has to upload the soft copies of the meeting logs in Google Classroom and also attach them along with interim (FYP1) report.
   Minimum requirement is SIX Meeting Logs (Period: Week 4 to Week 14). Students can have fortnightly meetings with the supervisor.

3. Log sheets provide the basis for evaluating the General Effort (Project Management, Attitude, and Technical Competency) of the student, by the supervisor and also for checking the attendance requirement of the student, by the FYP Committee.

   This also provide the student with feedback from the supervisor / co-supervisor / company supervisor on the tasks done and provide the plan for the upcoming tasks. This can provide the motivation for the student to give consistent and efficient effort throughout the period of FYP.

4. Student who fails to meet the minimum requirement (six nos.) of log sheets will not be allowed to submit FYP report.

Meeting Log 2

TPT3101 Final Year Project (FYP1) Meeting Log
Trimester 1, 2022/23 (Trimester ID:2210)

Meeting Date: 1/11, 8/11 (grp)	**Meeting No.:** 2
Meeting Mode: Online mode	
Project ID: 2099	**Project Type:** Research-based/Application-based
Project Title : Postgraduate Student Tracking and Management System	
Student ID : 1181203056	**Student Name:** Elton Wong Chun Meng
Student Programme and Specialisation: Bachelor of Computer Science (Hons.) in Software Engineering	
Supervisor Name: Dr. Chua Fang Fang	**Co-Supervisor Name:** **(if applicable)** Dr. Amy Lim Hui Lan
Collaborating Company: **(if applicable)**	**Company Supervisor Name:** **(if applicable)**

1. WORK DONE
[Please write the details of the work done, after the last meeting]

Tasks: Problem Formulation and Project Planning / Background Study or Literature Review / ~~Requirement Analysis or Theoretical Framework / Design or Research Methodology / Prototype Development or Proof of Concept /~~ Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

I have had a total of 2 meetings with my supervisor during the date period 1/11 and 8/11. Below are the details of the work done after the last 2 meetings.

Meeting 1

Chapter 1

- Completed the draft for Chapter 1 for checking.

Chapter 2

- Removed and replaced the previous content of Introduction with a new Introduction.
- Deleted the figure that is irrelevant to the explanation of the system.
- Added more points to show the contribution of the existing system from the background studies.
- Redraw the figure and delete the unnecessary table.
- Completed the draft for Chapter 2 for checking.

Meeting 2

- A group meeting was held by my supervisor to brief over the content of the remaining chapter yet to be started which is from Chapter 3 all the way to Chapter 6.
- Had a small individual meeting with the supervisor after the group meeting was dismissed.

2. WORK TO BE DONE

[Please write the details of the work to be done, before the next meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review / Requirement Analysis or Theoretical Framework~~ / Design or Research Methodology / ~~Prototype Development or Proof of Concept/ Draft Report Completion~~

(Please strike out the tasks, which are not applicable)

Details (in point form):

- Completed the Chapter 3 - Methodology draft for the further checking by the supervisor

3. PROBLEMS ENCOUNTERED AND SOLUTIONS

[Please write the details of the problems encountered, after the last meeting and provide the solutions / plan for the solutions]

The biggest problem I have encountered during my work progress after the last meeting is that I found that it is slightly difficult to remove and replace the previous content of Introduction with a new Introduction in Chapter 2. Due to the fact that, I have completely deleted the previous Introduction and started a whole new Introduction from scratch. To deal with this issue, I try to put more attention on thinking of the content from the perspective of how a system is beneficial to business operations as well as what is the content expected to be covered in the chapter.

4. COMMENTS (Supervisor / Co-Supervisor / Company Supervisor)

- Inside chapter 1, clearly state how the system is being evaluated in the section - Objective from the report.
- Inside chapter 1, the section - Scope. I have given a big picture of the system by explaining each of the functionalities inside the system.
- Inside Chapter 2, used the short form name as the name of the system instead of the full form name, when the full form name of the system is already specified previously.

FFChua

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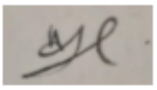
Supervisor's Signature



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Student's Signature

Amy Lim

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Co-Supervisor's Signature
(if applicable)

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Company Supervisor's Signature
(if applicable)

IMPORTANT NOTES TO STUDENTS:

1. Items 1 – 3 are to be completed by the students prior to the meeting. Item 4 is to be completed by the supervisor / co-supervisor / company supervisor.

2. Student has to upload the soft copies of the meeting logs in Google Classroom and also attach them along with interim (FYP1) report.
   Minimum requirement is SIX Meeting Logs (Period: Week 4 to Week 14). Students can have fortnightly meetings with the supervisor.

3. Log sheets provide the basis for evaluating the General Effort (Project Management, Attitude, and Technical Competency) of the student, by the supervisor and also for checking the attendance requirement of the student, by the FYP Committee.

   This also provide the student with feedback from the supervisor / co-supervisor / company supervisor on the tasks done and provide the plan for the upcoming tasks. This can provide the motivation for the student to give consistent and efficient effort throughout the period of FYP.

4. Student who fails to meet the minimum requirement (six nos.) of log sheets will not be allowed to submit FYP report.

Meeting Log 3

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TPT3101 Final Year Project (FYP1) Meeting Log
Trimester 1, 2022/23 (Trimester ID:2210)

Meeting Date: 29/11	**Meeting No.:** 3
Meeting Mode: Online mode	
Project ID: 2099	**Project Type:** Research-based/Application-based
Project Title : Postgraduate Student Tracking and Management System	
Student ID : 1181203056	**Student Name:** Elton Wong Chun Meng
Student Programme and Specialisation: Bachelor of Computer Science (Hons.) in Software Engineering	
Supervisor Name:	**Co-Supervisor Name:** **(if applicable)**
Collaborating Company: **(if applicable)**	**Company Supervisor Name:** **(if applicable)**

1. WORK DONE
[Please write the details of the work done, after the last meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review~~ / Requirement Analysis or Theoretical Framework / Design or Research Methodology / ~~Prototype Development or Proof of Concept~~ / Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

I have a meeting with my supervisor on 29/11/2022
Below are the details of the work done after the meeting.

Meeting 1

Chapter 3

- Completed the draft for Chapter 3 - Methodology and have been checked by the supervisor.

Chapter 4

- Completed a small part of Chapter 4 - Proposed Solution by writing the functional and non-functional requirements of the system.

2. WORK TO BE DONE

[Please write the details of the work to be done, before the next meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review /~~ Requirement Analysis or Theoretical Framework ~~/ Design or Research Methodology / Prototype Development or Proof of Concept/~~ Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

- Completed a small part of Chapter 4, including 'System Requirement', 'Use Case Diagram'.

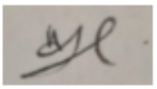
3. PROBLEMS ENCOUNTERED AND SOLUTIONS

[Please write the details of the problems encountered, after the last meeting and provide the solutions / plan for the solutions]

The only problem I have encountered while finishing up the Chapter 3 draft is I have the difficulty on deciding the type of SDLC I will apply for the project development. I have overcome this issue by spending more time on doing research on each type of SDLC before finalizing my decision.

4. COMMENTS (Supervisor / Co-Supervisor / Company Supervisor)

- Nothing changes to be made to Chapter 3 draft, can proceed to Chapter 4.



FFChua

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Supervisor's Signature

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Student's Signature

Amy Lim
Co-Supervisor's Signature
(if applicable)

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Company Supervisor's Signature
(if applicable)

IMPORTANT NOTES TO STUDENTS:

1. Items 1 – 3 are to be completed by the students prior to the meeting. Item 4 is to be completed by the supervisor / co-supervisor / company supervisor.

2. Student has to upload the soft copies of the meeting logs in Google Classroom and also attach them along with interim (FYP1) report.
   Minimum requirement is SIX Meeting Logs (Period: Week 4 to Week 14). Students can have fortnightly meetings with the supervisor.

3. Log sheets provide the basis for evaluating the General Effort (Project Management, Attitude, and Technical Competency) of the student, by the supervisor and also for checking the attendance requirement of the student, by the FYP Committee.

   This also provide the student with feedback from the supervisor / co-supervisor / company supervisor on the tasks done and provide the plan for the upcoming tasks. This can provide the motivation for the student to give consistent and efficient effort throughout the period of FYP.

4. Student who fails to meet the minimum requirement (six nos.) of log sheets will not be allowed to submit FYP report.

Meeting Log 4

TPT3101 Final Year Project (FYP1) Meeting Log
Trimester 1, 2022/23 (Trimester ID:2210)

Meeting Date: 27/12	**Meeting No.:** 4
Meeting Mode: Online mode	
Project ID: 2099	**Project Type:** Research-based/Application-based
Project Title : Postgraduate Student Tracking and Management System	
Student ID : 1181203056	**Student Name:** Elton Wong Chun Meng
Student Programme and Specialisation: Bachelor of Computer Science (Hons.) in Software Engineering	
Supervisor Name: Dr. Chua Fang Fang	**Co-Supervisor Name:** **(if applicable)** Dr. Amy Lim Hui Lan
Collaborating Company: **(if applicable)**	**Company Supervisor Name:** **(if applicable)**

1. WORK DONE
[Please write the details of the work done, after the last meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review /~~ Requirement Analysis or Theoretical Framework ~~/ Design or Research Methodology / Prototype Development or Proof of Concept~~ / Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

I have a meeting with my supervisor on 27/12/2022
Below are the details of the work done after the meeting.

Meeting 1

Chapter 4

- Completed a small part of Chapter 4 - Proposed Solution by creating the use case diagram, use case diagram template, context diagram, package diagram as well as flowcharts for some modules of the system

2. WORK TO BE DONE

[Please write the details of the work to be done, before the next meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review /~~ Requirement Analysis or Theoretical Framework~~/ Design or Research Methodology / Prototype Development or Proof of Concept~~/ Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

- Completed the Chapter 4 - Proposed Solution draft for the further checking by the supervisor

3. PROBLEMS ENCOUNTERED AND SOLUTIONS

[Please write the details of the problems encountered, after the last meeting and provide the solutions / plan for the solutions]

The biggest problem I have encountered during my work progress after the last meeting is that I found that it is difficult to think of the scenario of each use case in order to complete the use case template. In order to deal with this issue, I have browsed through the Internet to search for some existing school management systems and collect the idea on how the process inside the system works.

4. COMMENTS (Supervisor / Co-Supervisor / Company Supervisor)

- Make changes to the numbering format of the functional and non-functional requirements.
- Revise the functional requirement for the Research Proposal Defence Monitoring and Work Completion Defence, Student Data Dashboard modules.
- Add on a structure diagram to illustrate the context diagram.
- Consider to add in another use case actor for the system, Panel

FFChua

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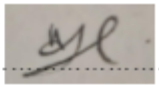
Supervisor's Signature



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Student's Signature

.....Amy Lim.....

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Co-Supervisor's Signature
(if applicable)

Company Supervisor's Signature
(if applicable)

IMPORTANT NOTES TO STUDENTS:

1. Items 1 – 3 are to be completed by the students prior to the meeting. Item 4 is to be completed by the supervisor / co-supervisor / company supervisor.

2. Student has to upload the soft copies of the meeting logs in Google Classroom and also attach them along with interim (FYP1) report.
   Minimum requirement is SIX Meeting Logs (Period: Week 4 to Week 14). Students can have fortnightly meetings with the supervisor.

3. Log sheets provide the basis for evaluating the General Effort (Project Management, Attitude, and Technical Competency) of the student, by the supervisor and also for checking the attendance requirement of the student, by the FYP Committee.

   This also provide the student with feedback from the supervisor / co-supervisor / company supervisor on the tasks done and provide the plan for the upcoming tasks. This can provide the motivation for the student to give consistent and efficient effort throughout the period of FYP.

4. Student who fails to meet the minimum requirement (six nos.) of log sheets will not be allowed to submit FYP report.

Meeting Log 5

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TPT3101 Final Year Project (FYP1) Meeting Log
Trimester 1, 2022/23 (Trimester ID:2210)

Meeting Date: 10/1/2023	**Meeting No.:** 5
Meeting Mode: Online mode	
Project ID: 2099	**Project Type:** Research-based/Application-based
Project Title : Postgraduate Student Tracking and Management System	
Student ID : 1181203056	**Student Name:** Elton Wong Chun Meng
Student Programme and Specialisation: Bachelor of Computer Science (Hons.) in Software Engineering	
Supervisor Name: Dr. Chua Fang Fang	**Co-Supervisor Name:** **(if applicable)** Dr. Amy Lim Hui Lan
Collaborating Company: **(if applicable)**	**Company Supervisor Name:** **(if applicable)**

1. WORK DONE
[Please write the details of the work done, after the last meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review /~~ Requirement Analysis or Theoretical Framework ~~/ Design or Research Methodology / Prototype Development or Proof of Concept~~ / Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

I have a meeting with my supervisor on 10/1/2023
Below are the details of the work done after the meeting.

Meeting 1

Chapter 4

- Reflect all the changes that were previously discussed with my supervisor. The changes were made on several system models including but not limited to the use case diagram, use case template, context diagram, package diagram and so on.
- Partially completed the flowchart for each functionality of the system.

2. WORK TO BE DONE

[Please write the details of the work to be done, before the next meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review /~~ Requirement Analysis or Theoretical Framework~~/ Design or Research Methodology / Prototype Development or Proof of Concept~~/ Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

- Completed the Chapter 4 - Proposed Solution ERD Diagram, Data Dictionary as well as the business rule of the system.

3. PROBLEMS ENCOUNTERED AND SOLUTIONS

[Please write the details of the problems encountered, after the last meeting and provide the solutions / plan for the solutions]

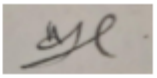
The biggest problem I have encountered during my work progress after the last meeting is that I was having a hard time reflecting on all the changes required by my supervisor. The changes I would need to make require me to update 70% of the content of my report. At the end, I was able to slowly rectify all the changes by taking one step at a time.

4. COMMENTS (Supervisor / Co-Supervisor / Company Supervisor)

- Complete the business rule before proceeding to create the ERD diagram and write the data dictionary.
- Group the functional requirement into it perspective category based on the system functionalities.
- Consider to let students know if their request application for Research Proposal Defence and Work Completion Defence is being approved or rejected.

.....FFChua.....

Supervisor's Signature



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Student's Signature

...AmyLim.....

Co-Supervisor's Signature
(if applicable)

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Company Supervisor's Signature
(if applicable)

IMPORTANT NOTES TO STUDENTS:

1. Items 1 – 3 are to be completed by the students prior to the meeting. Item 4 is to be completed by the supervisor / co-supervisor / company supervisor.

2. Student has to upload the soft copies of the meeting logs in Google Classroom and also attach them along with interim (FYP1) report.
   Minimum requirement is SIX Meeting Logs (Period: Week 4 to Week 14). Students can have fortnightly meetings with the supervisor.

3. Log sheets provide the basis for evaluating the General Effort (Project Management, Attitude, and Technical Competency) of the student, by the supervisor and also for checking the attendance requirement of the student, by the FYP Committee.

   This also provide the student with feedback from the supervisor / co-supervisor / company supervisor on the tasks done and provide the plan for the upcoming tasks. This can provide the motivation for the student to give consistent and efficient effort throughout the period of FYP.

4. Student who fails to meet the minimum requirement (six nos.) of log sheets will not be allowed to submit FYP report.

Meeting Log 6

FACULTY OF
COMPUTING
& INFORMATICS

TPT3101 Final Year Project (FYP1) Meeting Log
Trimester 1, 2022/23 (Trimester ID:2210)

Meeting Date: -	**Meeting No.:** -
Meeting Mode: -	
Project ID: 2099	**Project Type:** Research-based/Application-based
Project Title : Postgraduate Student Tracking and Management System	
Student ID : 1181203056	**Student Name:** Elton Wong Chun Meng
Student Programme and Specialisation: Bachelor of Computer Science (Hons.) in Software Engineering	
Supervisor Name: Dr. Chua Fang Fang	**Co-Supervisor Name:** **(if applicable)** Dr. Amy Lim Hui Lan
Collaborating Company: **(if applicable)**	**Company Supervisor Name:** **(if applicable)**

1. WORK DONE
[Please write the details of the work done, after the last meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review / Requirement Analysis or Theoretical Framework / Design or Research Methodology / Prototype Development or Proof of Concept~~ / Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

There is no meeting throughout the week, as most of the students are unable to attend the meeting and the meeting was canceled at the end. However, there are some tasks I have completed.

Below are the details of the work done.

- Chapter 4

  Completed the Chapter 4 - Proposed Solution ERD Diagram, Data Dictionary as well as the business rule of the system.

- Chapter 5

  Completed 80% of the report for this chapter.

2. WORK TO BE DONE
[Please write the details of the work to be done, before the next meeting]

Tasks: ~~Problem Formulation and Project Planning / Background Study or Literature Review / Requirement Analysis or Theoretical Framework / Design or Research Methodology / Prototype Development or Proof of Concept/~~ Draft Report Completion

(Please strike out the tasks, which are not applicable)

Details (in point form):

- Finalized the interim report for FYP1.
- Prepare the presentation slide.

3. PROBLEMS ENCOUNTERED AND SOLUTIONS

[Please write the details of the problems encountered, after the last meeting and provide the solutions / plan for the solutions]

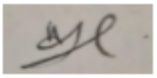
The biggest problem I have encountered during my work progress is that I faced some issues while thinking of the business rules for my system. At the end, I was able to collect ideas on writing up the business rule for my system after going through the postgraduate handbook of MMU, provide by my supervisor.

4. COMMENTS (Supervisor / Co-Supervisor / Company Supervisor)

- Complete the draft asap so then review can be done earlier
- Please send the draft report for approval to submit and also please start preparing the presentation slides (not more than 30 slides) for review

FFChua

Supervisor's Signature



Student's Signature

Amy Lim

Co-Supervisor's Signature
(if applicable)

Company Supervisor's Signature
(if applicable)

IMPORTANT NOTES TO STUDENTS:

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2. Student has to upload the soft copies of the meeting logs in Google Classroom and also attach them along with interim (FYP1) report.
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   This also provide the student with feedback from the supervisor / co-supervisor / company supervisor on the tasks done and provide the plan for the upcoming tasks. This can provide the motivation for the student to give consistent and efficient effort throughout the period of FYP.

4. Student who fails to meet the minimum requirement (six nos.) of log sheets will not be allowed to submit FYP report.

Appendix B: Turnitin Report Result

Interim Report

by Elton Wong Chun Meng

Submission date: 31-Jan-2023 08:43AM (UTC+0800)
Submission ID: 2002911179
File name: 1181203056_EltonWongChunMeng_FYP1_InterimReport.pdf (2.19M)
Word count: 15864
Character count: 81050

Interim Report

ORIGINALITY REPORT

7%	6%	1%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.coursehero.com Internet Source	2%
2	eprints.utar.edu.my Internet Source	1%
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7	Mariko Suzuki. "LEGS system in a zoo", Proceedings of the 8th International Conference on Interaction Design and Children - IDC 09 IDC 09, 2009 Publication	<1%
8	download.atlantis-press.com Internet Source	<1%