

**UNIVERSITI TEKNOLOGI MARA**

**FINAL YEAR PROJECT  
MANAGEMENT  
SYSTEM (FYPMS)**

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**Final Year Project Management  
System (FYPMS)**

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## **STUDENT DECLARATION**

I certify that this thesis and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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## **ABSTRACT**

This project addresses challenges in the current manual Final Year Project (FYP) system at Universiti Teknologi MARA (UiTM) by proposing the development of a Final Year Project Management System (FYPMS). The main problem involves manual processes, inefficient communication, and decentralized coordination. The aim is to streamline the FYP process, enhance collaboration, and improve outcomes for CS230 students and supervisors. Objectives include identifying FYP procedures, designing the FYPMS with data visualization features, and conducting testing. The system's scope covers CS230 students, lecturers, and supervisors, focusing on web-based accessibility. The project's significance lies in its potential to improve communication, efficiency, and project management. While still in planning, the FYPMS holds promise for enhancing the FYP experience at UiTM. Future work involves implementing and evaluating the system for broader application.

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## **LIST OF ABBREVIATIONS**

FYP	Final Year Project
MySQL	Structured Query Language

# **CHAPTER 1**

## **INTRODUCTION**

This chapter commences with a delineation of the problem statement inherent in the Final Year Project Management System (FYPMS) and subsequently articulates the project objectives. Following this, the chapter outlines the project scope, defining the research domain, identifying project users, specifying the programming language, selecting the suitable platform, and elucidating the key features of the system. Additionally, the chapter delves into the significance of the study, Focusing on the comprehensive objectives and the transformative influence of the FYPMS.

### **1.1 Background of Study**

Final Year Project (FYP) subject is required for students in their final year of study in most undergraduate degree programs, as well as the Bachelor of Computer Science study program (CS230) at UiTM. According to CS230 plan of study, FYP is implemented in the last two semesters, namely the fifth and sixth semesters of study. In Semester 5 it is known as the Project Formulation course (code CSP600) and in the 6th semester it is known as the Project course (code CSP650)

FYP is a long process involving students and their supervisors to accomplish a theme-based project (Ramli et al., 2021). The procedure that students and lecturers who engaged in FYP must go through several processes. It begins with the selection of supervisors, a determination of the project title, and then the monitoring of project development and finally the writing of project reports. Usually, a student needs to have at least one supervisor, and they need to find a supervisor who has expertise that is related to their area of final year project. The FYP lecturers will coordinate the student supervision. These lecturers will provide a list of potential supervisors for students to choose from.

The FYP supervisor selection that is currently being used is a manual selection procedure. All available supervisors offered by final-year project lecturers are posted on their respective notice boards. Students are free to choose any available supervisor. Then, students are given the project registration forms to get approval from the chosen supervisor and are required to complete and submit them to the final year project lecturer within the given timeline.

Currently, the student needs to perform all the proposal processes manually until they find their desired supervisor, and all the processes take too much time and are difficult. Furthermore, there is no comprehensive computer system that is in use to track the progress from starting until completing the final year project.

## **1.2 Problem Statement**

In the final year project management, three parties are involved, which is student, supervisor, and FYP lecturer who coordinates the project. The student is responsible for executing the project, conducting research, and implementing the objectives. The supervisor guides and mentors the student, offering feedback and ensuring progress. The FYP lecturer oversees coordination, communication, and assessment to ensure project alignment with academic standards.

The process of undertaking a FYP presents challenges for students in several areas. Identifying a suitable supervisor can be difficult due to considerations like their academic background, research expertise, and availability. Students must carefully assess if the supervisor is willing and competent to provide guidance and support throughout the project. Submitting progress reports or development updates can be a hurdle, as crafting compelling reports requires effective communication skills and clarity in defining research objectives and outcomes. Additionally, obtaining timely and constructive feedback from supervisors is vital for refining the project. However, communication gaps or busy schedules may hinder this process, leaving students feeling unsupported and unsure of their direction.

The existing challenges in the current FYP management system include the inability to instantly access crucial information about supervisors, such as their academic background, willingness, and research interests. This lack of instant updates hinders students from finding their desired supervisors in a timely manner, often resulting in them having to search for alternative lecturers independently (Muhammad Adib Zikri & Darul Ridzuan, 2021). To address this issue, the proposed system aims to provide a platform that publicizes supervisor availability status, ensuring students can efficiently identify and approach suitable supervisors for their projects.

Furthermore, the current project management system lacks efficiency in managing project timelines, tracking progress, and facilitating communication between students and supervisors. This deficiency results in confusion and delays in project completion, negatively affecting the academic performance of students. With the proposed system, supervisors can effectively monitor project progress through an online platform (Sultan et al., 2019), ensuring a streamlined and more effective project management process for both students and supervisors.

FYP lecturers encounter challenges in monitoring overall project progress and managing FYP for students and supervisors. Coordinating multiple projects simultaneously without a centralized monitoring system can lead to delays and difficulty identifying issues. Balancing guidance and support while maintaining project autonomy can be challenging. A comprehensive FYP management system is essential, providing a centralized platform for real-time project updates and seamless communication between FYP lecturers, students, and supervisors. Such a system streamlines management, allocates resources efficiently, and ensures successful and well-executed Final Year Projects.

Therefore, this project proposed to develop a system with the aim of improving the process of updating supervisor availability, making supervisor selection, allocating the supervisor, keeping track of project deadlines and milestones, and monitor student progress. These features are essential for providing an effective management system, particularly for administering the FYP course.

Moreover, moving from a manual to a systematic approach in the era of IR4.0 is indispensable considering the advancement of technology and changes in the learning environment these days (Tuah et al., 2022).

### **1.3 Project Objective**

1. To identify the procedures and processes that are involved in CS230 FYP.
2. To design and develop the FYP Management System by incorporating suitable data visualization feature.
3. To evaluate the FYP Management System using functionality testing and usability testing.

### **1.4 Project Scope**

- **Semester 5 & 6 students from Bachelor of Computer Science Program (CS230)**

This system is for semester 5 and 6 students from CS230 program that want to perform supervisor selection which include view supervisor list, check supervisor availability and propose the supervisor.

- **FYP (CSP600 & CSP650) lecturer**

Lecturer of FYP course will use this system to assign quota to each potential supervisor. Managing user account of the system which transfers the Final Year Project student account information into the system. Observing and monitoring FYP progress and development.

- **FYP Supervisor**

The system also will be used by the FYP supervisor. The supervisor can accept or reject the student proposal. They also can write description about their expertise on the account information page.

- **FYP Monitoring & Supervision**

This system will assist the FYP lecturers as well as the supervisors to keep track the student's progress in project development and report writing. The system will also provide progress chart and reminders to all parties. It offers

a clear web portal to students, project coordinator and project manager for the management and monitoring of project activities (Soms, 2021).

- **Web Based**

Provides a centralized platform accessible via the web for CS230 students, FYP lecturers, and FYP supervisors to efficiently manage and track the entire FYP process.

## 1.5 Significance of Study

- **Improved Communication and Information Flow:** The FYP management system can significantly enhance communication and information flow between supervisees and supervisors greatly. The system can improve team communication and understanding by offering a centralised platform for sharing project updates, comments, and other relevant information.
- **Increased Efficiency and Effectiveness:** By minimising the manual work that is traditionally performed by the FYP committee for example finding supervisor and check supervisor availability. The FYP management system can increase the efficiency and effectiveness of the entire FYP process. This can lead to faster completion of projects, improved quality of work, and reduced administrative burden for both supervisees and supervisors.
- **Improve Project Management and Time Management:** The FYP management system can provide a comprehensive view of project deadlines, and milestones. This can help supervisees and supervisors to stay on track with their tasks, and manage their time effectively. With better project and time management, the FYP management system can help ensure that projects are completed on time and to a high standard.

## **1.6 Summary**

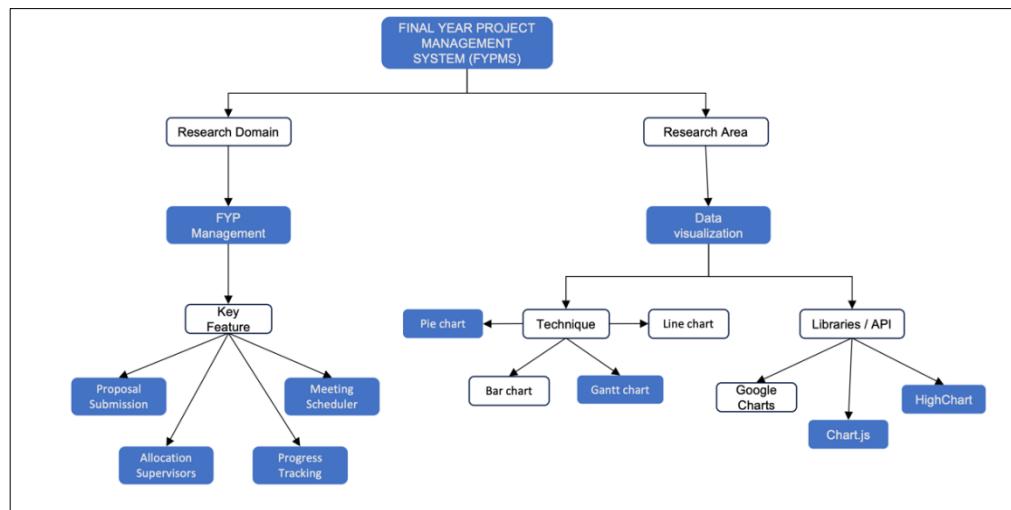
In conclusion, this chapter has been clearly explained about what will be implemented in the future steps. This chapter has explained about the background of study. The problems has been determined as like as stated above to identify the solution to overcome and improve the current problems of common Final Year Project Management System. Then, objectives have been pointed out to know whether the guidelines have been followed and the objectives have been successfully achieved. The project scope focuses on the end- users, activities and platform that will be used. Lastly, the list of benefits this project has been portrayed in the significance section.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter offers a review of the project's literature. This project focuses on the FYP management system, including data visualisation as one of the proposed system's aspects. Following that, this chapter compares the characteristics of current applications that will be used in this project. Figure 2.1 depicts the project's conceptual map.



**Figure 2.1** Conceptual Map

## **2.2 CS230 FYP Management System**

Final-year project management system is an application or platform specifically designed to support and facilitate the management and organisation of final-year projects in academic institutions. It serves as a comprehensive tool that assists students, supervisors, and faculty members in effectively planning, collaborating, tracking, and completing final-year projects.

Bachelor Degree in Computing Sciences at Universiti Teknologi MARA Malaysia often conclude with a final year project. This final year project is the pinnacle of each Bachelor Degree curriculum, since it consolidates and tests the knowledge and skills gained over the academic sessions. Furthermore, this project serves as an important component of the training process for becoming a professional. Its goal is to address the administrative formalities and procedural needs of students beginning the conception stage of their final year project and continuing until project completion. Several advantages come from the content, which provides crucial information about the Computing Sciences department's requirements. The categories include the student who works on the project, the supervisor who oversees the project, the project examiner, and the lecturer who teaches the project courses.

The detailed process for the entire FYP management can be found in the "Essential of Computer Science Project Administrator (4<sup>th</sup> Edition)" manual issued by the FSKM Faculty (now changed to KPPIM) in 2022. The main contents covered in the manual include:

- I. Project Formulative (CSP600) Administrator Process
- II. Project (CSCP650) Administrator Process
- III. Report and Poster Format
- IV. FAQ
- V. Sample of Report Format
- VI. Forms and Rubric
- VII. Research Ethic

A final-year project management system's primary goal is to simplify the whole project lifecycle, from project proposal and subject selection through documentation and assessment. It offers a range of features and functionalities that enhance collaboration, communication, and coordination among project stakeholders. By centralising project-related activities and information, it simplifies the project management process and ensures efficient progress monitoring.

Final Year Project Management Systems are typically found within academic institutions, specifically in departments or programs that require students to undertake final year projects as part of their curriculum. These systems are primarily used by course lecturers, students, supervisors, and faculty members involved in the final year project process.

### **2.3 Data Visualization**

In order to effectively communicate information related to the data to one or more human observers, data visualisation refers to the graphical depiction of the data. (Salvendy et al., 2021). It involves transforming complex datasets into intuitive charts, graphs, maps, and other visual elements, enabling individuals to understand patterns, relationships, and trends that may otherwise remain hidden in raw numbers and statistics. Using colours, shapes, sizes, and interactive features, data visualization aims to convey information effectively and efficiently, enabling users to derive meaningful insights and make informed decisions.

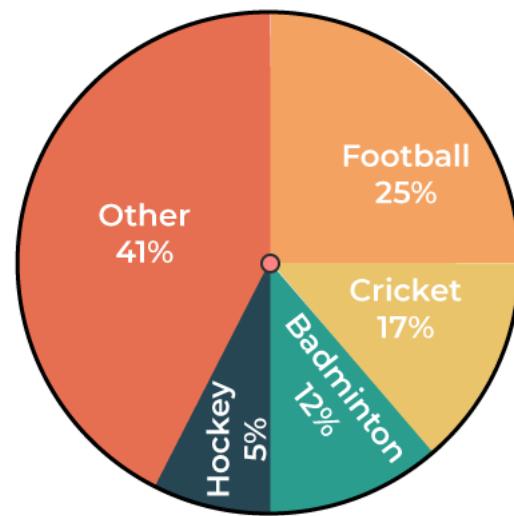
Data visualization is used across various fields such as business, finance, sports, government, and more to effectively represent and communicate information. In business and finance to analyze sales figures, market trends, financial performance, and other key metrics. It helps in making informed decisions, identifying patterns, and spotting anomalies. In sports, data visualization is used to analyze player performance, game statistics, and strategic insights. It helps teams and coaches make informed decisions and engages fans through interactive visualizations. In government and public policy, it helps present data on demographics, economic indicators, crime rates, and social trends, supporting decision-making and communication to the public.

In today's data-driven world, data visualization is crucial as it simplifies complex data, enhances understanding, and facilitates effective communication. By transforming data into visual representations such as charts, graphs, and maps, it enables individuals and organizations to identify patterns, uncover insights, and make informed decisions. Data visualizations not only make data more accessible and relatable but also support data-driven storytelling and exploration. Overall, data visualization plays a vital role in extracting meaningful insights, supporting decision-making, and communicating data effectively in various fields and industries.

### 2.3.1 Pie Chart

Pie charts are an effective approach to show a variety of significant numerical data in documents (De, 2018). It is a circular chart that represents data as slices of a pie. Each slice, or sector, corresponds to a particular category or data point and is proportional to its value or percentage in relation to the whole. 100% of the data are represented by the full pie. Pie charts are frequently used to show how data categories are distributed or composed, making it simple to compare the relative sizes of each group right once. They are especially helpful for highlighting individual components of a whole or when highlighting the proportionality of many data points. Figure 2.2 shows example of pie chart.

**Number of Students**

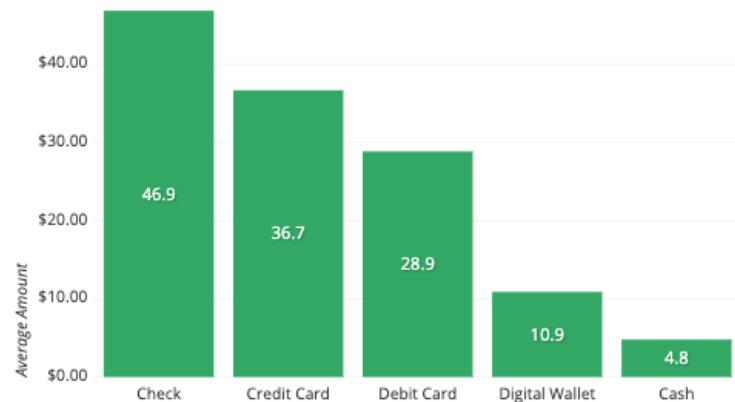


**Figure 2.2** Example of Pie Chart

(Source: <https://www.geeksforgeeks.org/pie-charts/>)

### 2.3.2 Bar Chart

A bar chart is a type of graphic that shows data as rectangular bars. Each bar's length or height represents the value of a specific category or data point. The bars are typically plotted horizontally (in a horizontal bar chart) or vertically (in a vertical bar chart) along an axis, with the length or height indicating the magnitude of the data. Bar charts are one of the most used types of visualisation (Zhao et al., 2019). Bar charts are commonly used to compare and display categorical data or to show the distribution of data across different categories. They provide a visual way to compare the values of different categories, identify trends, and make relative comparisons. Figure 2.3 shows example of bar chart.

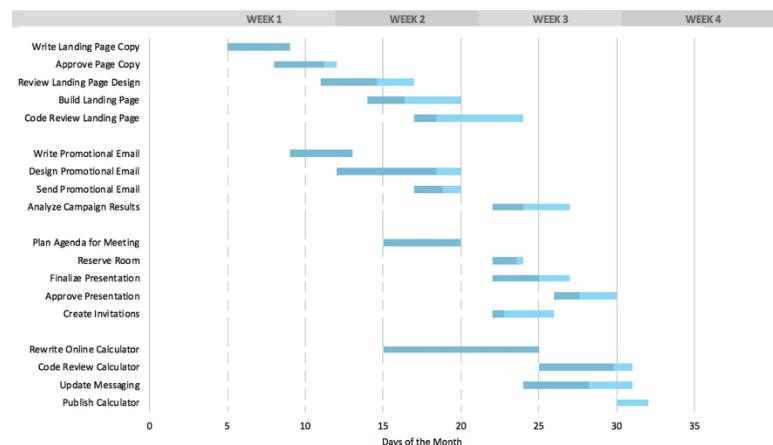


**Figure 2.3** Example of Bar Chart

(Source: <https://chartio.com/learn/charts/bar-chart-complete-guide/>)

### 2.3.3 Gantt Chart

A time-phased dependant demand method to production planning was used by Gantt charts. (Nafianto et al., 2019). Gantt charts are a particular kind of bar chart that show a project timetable. The horizontal axis shows tasks or activities, and the vertical axis shows a time scale. The chart is made up of horizontal bars that stand in for each task, with the length of the bar denoting the task's duration. Project managers may see the timeline and dependencies between various tasks with the use of Gantt charts, which also display the start and end dates of each activity. They help to successfully plan, track, and manage tasks by giving a visual depiction of the project's progress. To schedule and monitor project operations, allocate resources, and monitor progress, Gantt charts are frequently used in project management. Figure 2.4 shows example of gantt chart.

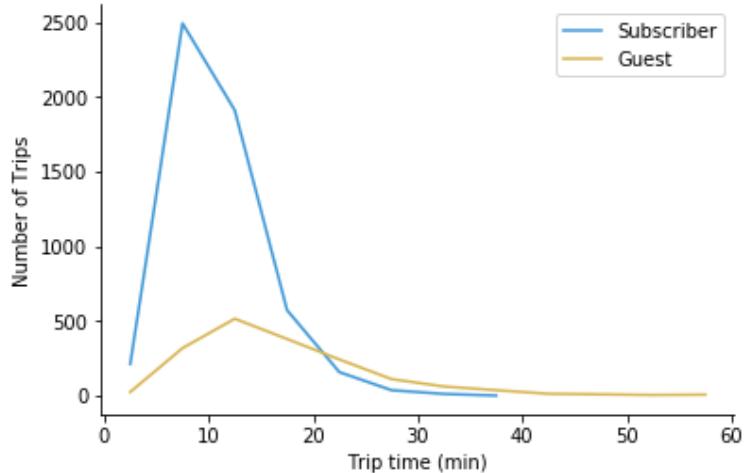


**Figure 2.4** Example of Gantt Chart

(Source: <https://www.teamgantt.com/free-gantt-chart-excel-template>)

#### 2.3.4 Line Chart

Due to their many advantages over textual representations, such as better concept conveying, being perceptible in a short amount of time, and being in memory for a substantial amount of time, line charts are a popular and preferred tool in practise for showing valuable numerical data in documents (Kosemen & Birant, 2020). Data is shown in a line chart as a collection of points connected by straight lines. It is frequently employed to illustrate continuous data or trends and patterns across time. In a line chart, the vertical axis represents the value or quantity being measured, while the horizontal axis often represents time or a continuous variable. The points are joined to form a line by being plotted at the appropriate time or data value for each data point. Line charts are useful for understanding the relationship between variables, spotting patterns, and visualising changes and variations in data over time. They are frequently used to examine stock prices, changes in temperature, demographic patterns, and other time-series data. Figure 2.5 shows example of line chart.



**Figure 2.5** Example of Line Chart

(Source: <https://chartio.com/learn/charts/line-chart-complete-guide/>)

**Table 2.1 Comparison Between Data Visualization Technique**

Technique	Purpose	Representation	Comparison Ability	Suitable Data Types
<b>Pie Chart</b>	Show composition or distribution	Slices of a pie	Proportionality of categories	Categorical, parts of a whole
<b>Bar Chart</b>	Compare categorical data	Rectangular bars	Relative comparison of values	Categorical, discrete data
<b>Line Chart</b>	Display trends and changes	Points connected by lines	Relationship and fluctuations	Time-series, continuous data
<b>Gantt Chart</b>	Illustrate project schedules and dependencies	Horizontal bars	Task durations and dependencies	Project management, task scheduling, timeline

Data visualization is crucial for effectively representing numerical data in documents. Pie charts show proportions and composition, with each slice representing a category. Bar charts use bars to compare categorical data and display distribution. Gantt charts, a specialized type of bar chart, illustrate tasks over time and aid in project management. Line charts are used to analyze trends and relationships in time-based or continuous data. Each of these visualization techniques has its strengths and advantages in representing data, making it easier to interpret and comprehend complex information. Table 2.1 is about comparison between data visualization technique.

## **2.4 Library/API**

The FYPMS project aims to enhance its data visualization capabilities through the integration of the library/API. Seeking to streamline the process of creating interactive and dynamic charts, because to make it present in an intuitive way, the utilization of a library/API is important for FYPMS. The project recognizes the significance of a seamless and user-friendly approach in presenting complex project management data, and therefore explores the integration of the chosen library/API to achieve this goal effectively.

Google Chart is a powerful and user-friendly tool for creating a variety of charts and visualizations. With a wide range of chart types available, it is particularly adept at handling dynamic data and real-time updates. However, one limitation of Google Chart is the relatively limited customization options for data presentation. While it provides a straightforward approach to generating charts, users may find themselves restricted when it comes to tailoring the visual aspects of their data.

Next, Chart.js is a popular JavaScript library that excels in simplicity and versatility. Its straightforward integration and responsive design make it a preferred choice for web developers. Chart.js offers a rich selection of chart types and allows users to customize various aspects of their charts, providing a balance between ease of use and flexibility. With a focus on providing an intuitive interface, Chart.js is often favoured for creating visually appealing pie charts, among other types.

Furthermore, Highcharts is a feature-rich JavaScript library known for its comprehensive charting capabilities. Particularly acclaimed for its Gantt chart visualizations, Highcharts stands out for its extensive customization options and interactive features. Users can modify almost every element of their charts, making it a versatile choice for complex data presentations. Highcharts also supports dynamic updates and is suitable for a wide range of use cases, from simple line charts to intricate Gantt charts.

In summary, Google Chart offers a user-friendly interface but lacks extensive customization options. For the FYPMS project, the library/API choices reflect the need

for customization Chart.js is utilized for pie chart visualizations due to its balance between simplicity and flexibility, while Highcharts is selected for Gantt chart visualizations, leveraging its rich features and advanced customization capabilities. This combination ensures that the FYPMS project can present data in a tailored and visually impactful manner.

## **2.5 Existing System Related to FYP**

This is a quick summary of many applications similar to this project.

### **2.5.1 An Implementation of Final Year Project Management System: A Case Study at Universiti Sultan Zainal Abidin**

The Final Year Project Management System is a software solution designed to help students and faculty manage final year projects more efficiently and effectively. This system provides a systematic approach to project management and includes features such as progress tracking, task assignment, and communication tools. The system also generates reports that allow supervisors and heads of department to view student supervision reports. By implementing this system, universities can improve the quality of final-year projects by providing students with the necessary tools to complete their projects on time and with high quality.

The implementation of the Final Year Project Management System at Universiti Sultan Zainal Abidin has shown promising results in terms of improving the overall quality of final year projects. The system has helped lecturers manage projects more efficiently by providing them with a centralized platform for communication and progress tracking. Students have also benefited from this system by having access to a comprehensive set of tools that help them complete their projects on time and with high quality. Overall, the Final Year Project Management System is an important tool for universities looking to improve the quality of their final year projects and provide students with practical skills needed in industry.

The main interface of the case study final year project management system at Universiti Sultan Zainal Abidin is seen in Figure 2.6. It functions as a login website for the informational access of the Head of Department, Supervisor, and Students Home (Mohamed et al., 2017).



**Figure 2.6: Main Page**

(Source: Mohamed et al., 2017)

Figure 2.7 states that you have the power to add, modify, and remove activities that are given to final-year students. Additionally, you can assign students to a particular lecturer's watch list on this page, and then create reports (Mohamed et al., 2017).

**Figure 2.7 Administering Student Activity Page**

(Source: Mohamed et al., 2017)

## **2.5.2 Final Year Project Supervisor Management System**

The Faculty of Computer Science and Information Technology (FCSIT) of the University Malaysia Sarawak (UNIMAS) has developed the Final Year Project Supervisor Management System, an automated tool to assist undergraduate students in finding an appropriate supervisor for their final year project. The system provides a list of potential supervisors along with their basic information, such as their area of expertise, research interests, and availability. This helps students make an informed decision when selecting a supervisor for their project. The system also allows supervisors to enter their information into the system, making it easier for students to find them.

The development of the Final Year Project Supervisor Management System was necessary due to the inefficiencies in the previous method used by UNIMAS to assign supervisors to students. The proposed system presents an automated solution that streamlines the process of finding a supervisor for the FYP 1 course. The system's significance lies in its ability to provide a more efficient and effective way for students to find suitable supervisors, which can ultimately lead to better project outcomes. Additionally, the project schedule is described graphically using a Gantt chart that presents all tasks involved in the development process, making it easier for stakeholders to monitor progress and ensure timely completion of the project.

The supervisor/lecturer interface for the Final Year Supervision Management System used at UKM is shown in Figure 2.8. Tajuk Projek Akhir, Status Projek, Nama Penyelia, Tarikh Mula, Nama Pelajar, No.Matrik Pelajar, Hubungan Projek, and Penghapusan Projek are all presented on this page in table format (A/P Kannan, 2019).



**Figure 2.8** Project Management Interface for Lecturer/Supervisor

(Source: Kannan, 2019)

The user interface for following the progress of a student project is shown in Figure 2.9. Based on the tasks allocated, which can be divided into software development and thesis project authoring, the supervisor may give a general summary of a student. Depending on how well each work is performing, the status of each is shown by colour coding (Kannan, 2019).

Pembangunan Sistem	Status Skedul	Tarikh Tamat	Sebelum/Selepas Dari Tarikh Tamat (Hari)	Tarikh Siap	Awal/Lewat Dari Tarikh Siap (Hari)	Serahan Dokumentasi	Muat Naik/Turun Dokumentasi	Komen	Hapus Tugas
Sorotan Kesusastraan/Kajian Sistem Semasa	Tamat	10/06/2010	-15	09/06/2010	1	* Borang usulan projek.	<a href="#">Muat Naik/Turun Dokumen</a>	<a href="#">Comments[0]</a>	<a href="#">Remove</a>
Spesifikasi Sistem	Sedang Berjalan	28/06/2010	3	00/00/0000			<a href="#">Muat Naik/Turun Dokumen</a>	<a href="#">Comments[1]</a>	<a href="#">Remove</a>
Rekabentuk Antaramuka/Skrin	Belum Bermula	01/07/2010	6	00/00/0000		* Bab 2	<a href="#">Muat Naik/Turun Dokumen</a>	<a href="#">Comments[2]</a>	<a href="#">Remove</a>
Rekabentuk Sistem (ERD, DFD dll)	Lewat	07/06/2010	-18	00/00/0000			<a href="#">Muat Naik/Turun Dokumen</a>	<a href="#">Comments[0]</a>	<a href="#">Remove</a>
Memahirkan Diri Dengan Persekutuan Pembangunan	Belum Bermula	14/06/2010	-11	00/00/0000		* Bab 3	<a href="#">Muat Naik/Turun Dokumen</a>	<a href="#">Comments[0]</a>	<a href="#">Remove</a>
Pembangunan Sistem Utama (Versi Alpha)	Belum Bermula	21/06/2010	-4	00/00/0000			<a href="#">Muat Naik/Turun Dokumen</a>	<a href="#">Comments[0]</a>	<a href="#">Remove</a>

**Figure 2.9:** Project Status Interface

(Source: Kannan, 2019)

### **2.5.3 Final Year Student Project Allocation Archiving and Management System**

The Final Year Student Project Allocation Archiving and Management System is a comprehensive platform that streamlines the process of project allocation, supervision, and management for final-year students. The system consists of five modules: allocation, archiving, submission, grading, and resource sharing. It allows students to submit their project proposals, receive timely feedback from their supervisors, and track their progress throughout the project. The system also enables supervisors to manage student projects, allocate project topics, schedule appointments, share resources, and compute and manage results.

The final year student project allocation, archiving, and administration system is split into two sections: admin and student. Figure 2.10 depicts the system's home page. The supervisor logged in using his staff number as a user name and a password, while the student logged in with his matriculation number as a user name and a password (Adamu, 2020).



**Figure 2.10** Project Allocation, Archiving and Management System Home Page

(Source: Adamu, 2020)

Supervisors may use the dashboard to assign project subjects to students, examine project proposals, and accept/reject requested topics, as illustrated in Figure 2.11. As illustrated in Figures 2.12 and 2.13, students may submit projects, read project reviews from supervisors, request changes to project

topics, arrange appointments with supervisors, search and view prior final year student projects, and examine project rules (Adamu, 2020).

The dashboard features two main sections: 'Allocated Project' and 'Declined Proposed Project'. The 'Allocated Project' section displays a table with columns for 'Allocated To', 'Project Title', and 'Case Study', showing entries like '115110000007' and 'Hotel Management system'. The 'Declined Proposed Project' section shows a table with columns for 'Project title', 'Case Study', and 'Reason For Declining The Proposal'.

**Figure 2.11 Dashboard Displaying Modules and Sub Modules.**

(Source: Adamu, 2020)

The screenshot shows a 'Project Upload Page' with a teal header. It includes fields for 'Project Title' (set to 'PROJECT'), 'Project Abstract', and a file upload area for 'Project document [docx or pdf file]'. On the right, there is a search interface with a 'Search' button.

**Figure 2.12 Submitting and Viewing Previous Final Year Project.**

(Source: Adamu, 2020)

The left panel, 'PROPOSAL WRITING GUIDELINES', contains sections for 'Length' (approx. 2000 words / 5 pages), 'Structure' (list of points), and 'Title'. The right panel, 'PROJECT WRITING GUIDELINES', contains sections for 'Length' (a temporary social system), 'Structure' (list of points), and 'Title'.

**Figure 2.13 Viewing Guidelines for Writing Proposal and Project.**

(Source: Adamu, 2020)

Table 2.2 shows a summary of comparison between these three existing FYP management system.

**Table 2.2** Comparison Between Existing FYP Management System.

Aspect	Final Year Student Project Allocation Archiving and Management System	Final Year Project Supervisor Management System	An Implementation of Final Year Project Management System: A Case Study at Universiti Sultan Zainal Abidin	Final Year Project Management System
Purpose	Streamline project allocation, supervision, and management for final-year students	Help students find suitable supervisors for their final year project	Improve management and quality of final-year projects at the university level	Efficient final year project management within academia.
Modules/ Functionalities	Allocation, archiving, submission, grading, resource sharing	Supervisor listing, information management	Progress tracking, task assignment, communication, report generation	Streamlined tasks, submissions, progress tracking, and communication.
Target Users	Final-year students, supervisors	Final-year students, potential supervisors	Students, faculty members, heads of department	Students, supervisors, and FYP lecturers.
Key Features	Project proposal submission, feedback system, progress tracking	Supervisor availability, research interests, information entry	Progress tracking, task assignment, communication tools, report generation	User-friendly dashboard, task Gantt chart customization, seamless submissions, and comprehensive insights.

<b>Significance</b>	Comprehensive platform for final-year project management	Automated system for supervisor selection	Enhanced project quality, practical skills development	Enhances project management efficiency in academic institutions.
---------------------	--	---	--	--

These papers (Mohamed et al., 2017; *Kannan, 2019*; Adamu, 2020) introduce the idea of a final-year project management system in this subtopic, highlighting its benefits for academic institutions. It emphasises that the system is designed to assist students, supervisors, and faculty members in managing and organising final-year projects effectively. The system offers various features and functionalities that facilitate collaboration, communication, and coordination throughout the project lifecycle. By centralising project-related activities and information, it simplifies project management and ensures efficient progress monitoring. Final-year project management systems are commonly found in academic institutions, specifically in departments or programmes that require final-year projects.

## 2.6 Related Research

Table 2.3 discuss and compare for three different research domain and research area based on data FYP management and data visualization. Firstly, a dashboard-based system is proposed to effectively manage and monitor the progress of such projects, offering real-time feedback and enabling seamless communication between students and faculty members. Secondly, the focus shifts to the design of learning analysis dashboards for online education, highlighting the significance of data visualization in enhancing learner success rates and facilitating decision-making. Finally, the Development of a Final Year Project Management System for Information Technology Programmes is discussed, with the goal of streamlining the final year project process by automating tasks, providing modules for project management, file sharing, submission, and grading, and reducing workload for both supervisors and students.

**Table 2.3** Summary of Literature Review

Title	Author	year	Method	Findings
A Dashboard-based System to Manage and Monitor the Progression of Undergraduate IT Degree Final Year Projects	Tuah, N. M., Yoag, A., Nizam, D. N. M., & Chin, C. W.	2022	Used a Rapid Application Development (RAD) methodology for system development	Dashboard-based system improved student self-monitoring, progress tracking, and information management.
Experimental Design of Learning Analysis Dashboards for Teachers and Learners	Safsouf, Y., Mansouri, K., & Poirier, F.	2021	Conducted a study on learning analysis dashboards in higher education.	Dashboard improved student engagement and success rates.
The Development of a Final Year	Leung, C.-H., Lai, C.-L., Yuan, T.-K.,	2015	The development of an online	The platform was found to be convenient and

Project Management System for Information Technology Programmes	Pang, W.-M., Tang, J. K. T., Ho, W.-S., & Wong, T.-L.		platform for managing final year projects.	helpful, but some students experienced technical difficulties.
---	---	--	--	--

## **2.7 Justification**

The pie chart, Gantt chart, and bar chart have been selected as data visualisation tools in the context of an FYP management system. The pie chart method is employed to visually depict the distribution of evaluation criteria such as technicality, presentation, innovation, and impact. By utilising colour-coding, labelling, and proportional slice sizes, the pie chart effectively justifies the allocation of weightage to each criterion. This enables stakeholders to easily comprehend the relative importance placed on each aspect and promotes transparency in the evaluation process. The pie chart aids in conveying the evaluation rationale, facilitating a clear understanding of the evaluation criteria and their significance within the FYP management system.

The Gantt chart method is ideal for visualizing project timelines and task dependencies in an FYP management system. It provides a comprehensive view of project deadlines, milestones, and the interrelationships between tasks. By plotting tasks and activities along a timeline and representing them with bars that span their duration, the Gantt chart presents a clear visual representation of project progress. Additionally, dependencies between tasks are depicted through linking lines, allowing project members and supervisors to easily identify critical paths and potential bottlenecks. The Gantt chart is an effective tool for project planning, scheduling, and tracking within the FYP management system.

On the other hand, the bar chart method is particularly suitable for representing and comparing quantitative data related to project progress in the FYP management system. The length of the bars in the chart provides a visual representation of values, enabling students and supervisors to track and analyse the status of tasks easily. Bar charts can be used to show such things as task completion percentages. By visually presenting such data, the bar chart facilitates effective monitoring, decision-making, and communication within the FYP management system.

## **2.8 Summary**

The conclusion that can be drawn from a literature review is that knowledge was gained from the journals and research that has certification in the related area of the studies. All the findings will be used in the development of a successful prototype of the final year project management system. A study has been done regarding an area of research interest, which is data visualization. Furthermore, this chapter discusses data visualization approaches, The project utilizes pie charts and Gantt charts as effective methods for displaying submission progress and aiding students in time management. Pie charts offer a visually intuitive representation of submission progress, allowing students to easily gauge their accomplishments. Additionally, Gantt charts provide a comprehensive view of the time required to complete specific tasks, empowering students to manage their development effectively by visualizing timelines and optimizing their workflow. The comparison of three similar existing systems has been made to understand the important features or elements to be implemented during the development of this project.

## CHAPTER 3

### METHODOLOGY

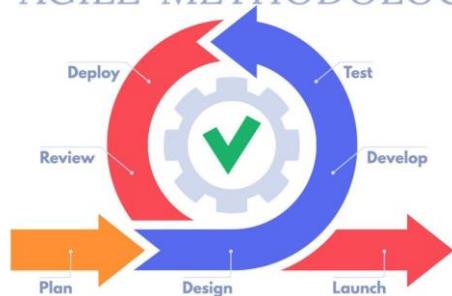
#### 3.1 Introduction

This chapter contains the project's methodology. This project will use the agile development technique by including an illustrated of agile methodology. Furthermore, this chapter also explains the system architecture of FYPMS to acknowledge the flow of the system. Hardware and software specifications are also listed in this chapter.

#### 3.2 Project Methodology

The agile methodology presents a highly effective framework for the development of a final year management system. Agile methods are appropriate for overcoming a variety of obstacles in the web system development process of today (Al-Ratrou et al., 2019). By embracing its principles of flexibility, collaboration, and adaptability, the project can progress smoothly through the stages of planning, design, development, testing, deployment, review, and launch. With an iterative approach, tasks are prioritized based on stakeholder requirements, allowing for continual refinement and adjustment. Thorough testing ensures the system's quality, while regular reviews and user feedback contribute to continuous improvement. Ultimately, the agile methodology facilitates the successful development of a final year management system that meets the evolving needs of its users and delivers valuable results. Figure 3.1 shows the Agile Phases.

AGILE METHODOLOGY



**Figure 3.1** The Agile Phases

(Source: <https://www.vectorstock.com/royalty-free-vector/agile-development-process-infographic-software-vector-25691902>)

### 3.3 Planning

In the planning phase of the Final Year Project management system (FYPMS), several activities take place. These include identifying the problem statement, establishing the project objective, scope, and significance, studying the research area and domain, identifying the processes involved in the CS230 FYP operation, and selecting a suitable methodology. These activities collectively lay the foundation for a well-defined and purposeful FYP management system.

Table 3.1 shows the Planning Phase of the system.

**Table 3.1** Planning Phase

Phase	Activities	Technique/Software	Deliverable
Planning	1. Identify the problem statement. 2. Identify the project objective, scope, and significance.		Chapter 1
	Study the research area and research domain		Chapter 2
	Identify the process involves in CS230 FYP operation		
	Identify the suitable methodology		Chapter 3

#### 3.3.1 Design

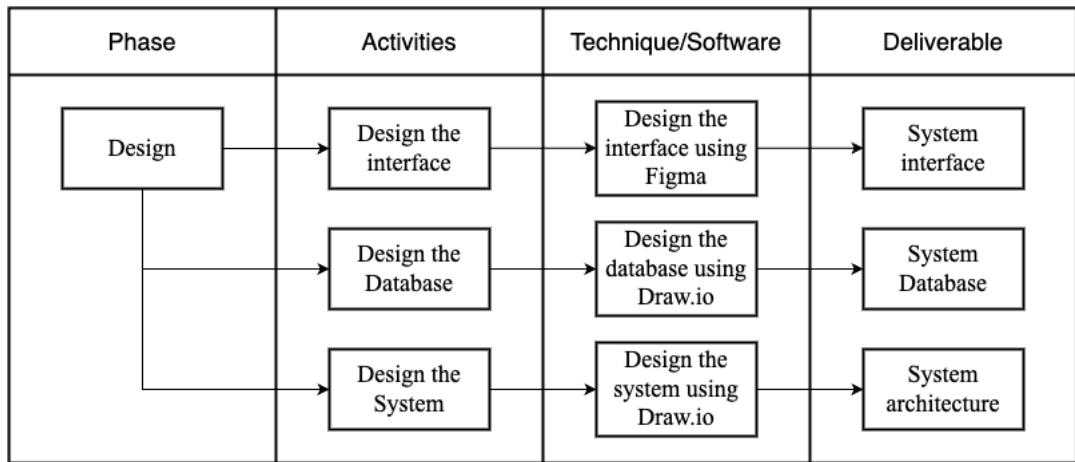
Design phases describe the system's elements, parts, and interactions (Alfawair, 2022). Design sessions play a critical role in establishing the system architecture, user interfaces, and workflows. During these sessions, careful consideration is given to aspects such as usability, scalability, and user

experience. The design is continuously refined based on feedback and evolving project requirements. In the system interface design phase, Figma will be utilized for designing the interface. The user interface of the website should be tailored to the specific needs of Uitm Tapah students. By utilizing Figma, designers can create an attractive and user-friendly interface that simplifies the user experience. Figma's collaborative features allow for seamless iteration and feedback, ensuring that the final interface design meets the desired aesthetic and usability standards.

In the phase of system design, the focus shifts to designing the database structure that will underpin the entire system. Draw.io emerges as the tool of choice for this stage, offering a versatile platform for creating detailed and comprehensive database diagrams. Designers meticulously define the relationships between different data entities, ensuring the integrity and efficiency of the database.

Moving forward, the system architecture takes center stage in the design process. Draw.io proves instrumental in illustrating the intricate connections and interactions between various system components. Designers utilize this platform to craft detailed system architecture diagrams, elucidating how different elements work together seamlessly. Table 3.2 shows the design phase of the system. Table 3.2 presents an overview of the design phases, highlighting the comprehensive activities involved in crafting the interface, database, and system architecture.

**Table 3.2** Design Phase



### 3.3.2 Develop

The development phase employs an iterative approach to tackle the project incrementally. Divide the project into manageable sprints or iterations, each focusing on delivering a specific set of features. Prioritize tasks based on main processes and customer needs. Continuously communicate progress, challenges, and blockers to user. Visual Studio Code will be utilized for creating a Final Year Project Management System (FYPMS). The system will consist of three distinct interfaces, one for FYP Lecturer, for Supervisor and for Student. Additionally, MySQL software will be essential for implementing the database functionality of the system. By leveraging the capabilities of Visual Studio Code and MySQL, the FYP management system will be developed with robust functionality and efficient data storage. Table 3.3 shows the development phase of the system.

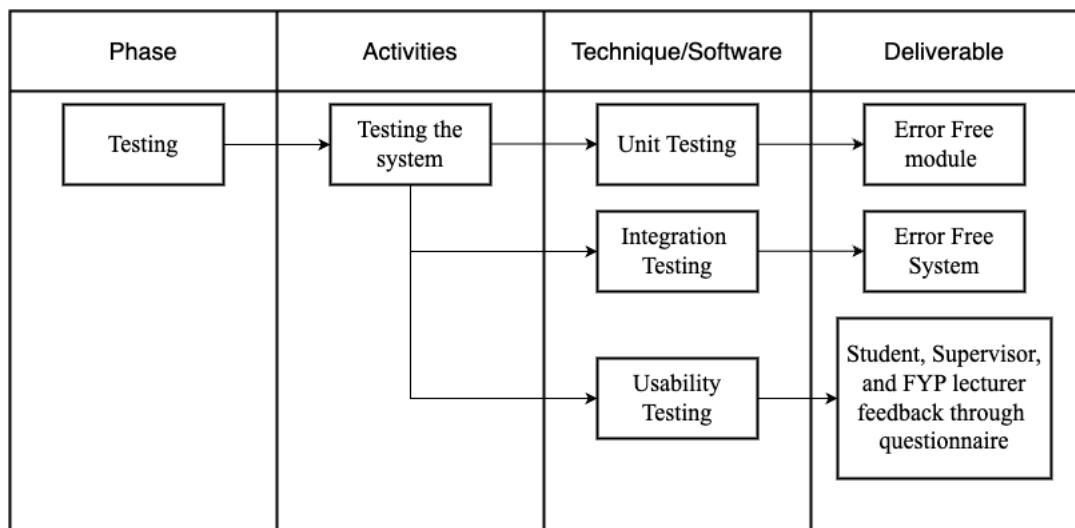
**Table 3.3** Development Phase

Phase	Activities	Technique/Software	Deliverable
Development	write the programme	using Visual Studio Code	Complete FYP Management System

### 3.3.3 Test

In the testing phase of the FYP management system, Unit Testing ensures error-free modules by thoroughly examining their correctness and functionality. Integration Testing combines these modules to ensure seamless integration, resolving compatibility issues and inconsistencies. Usability Testing focuses on assessing the system's user-friendliness, allowing real users to provide feedback on design and navigation for an error-free user experience. These testing activities collectively contribute to the development of an error-free FYP management system that meets technical accuracy requirements while providing a seamless and satisfactory user experience.

**Table 3.4** Testing Phase



### 3.3.4 Deploy

Deployment involves preparing the project management system for production release. Conduct thorough testing in a staging environment to validate functionality and identify any issues. Ensure a smooth transition to the live environment by providing appropriate documentation and support materials.

### 3.3.5 Review

After the system has been developed, it is reviewed by combining the different modules into a single system. Regular reviews are crucial for assessing progress and gathering feedback. Conduct frequent retrospectives to reflect on completed iterations and identify areas for improvement. Seek feedback from

users to incorporate valuable insights into future iterations. Use the review phase to evaluate project performance, adherence to goals, and overall satisfaction. The review process will be conducted systematically, encompassing an in-depth assessment of functionality and usability. This comprehensive evaluation involves scrutinizing each module's performance, ensuring that functionalities align with project goals. Simultaneously, usability aspects are thoroughly examined, focusing on the user experience and interface effectiveness. This holistic review, integrating functionality and usability considerations, aims to refine the system based on insights gathered during the development and usage phases.

### **3.3.6 Launch**

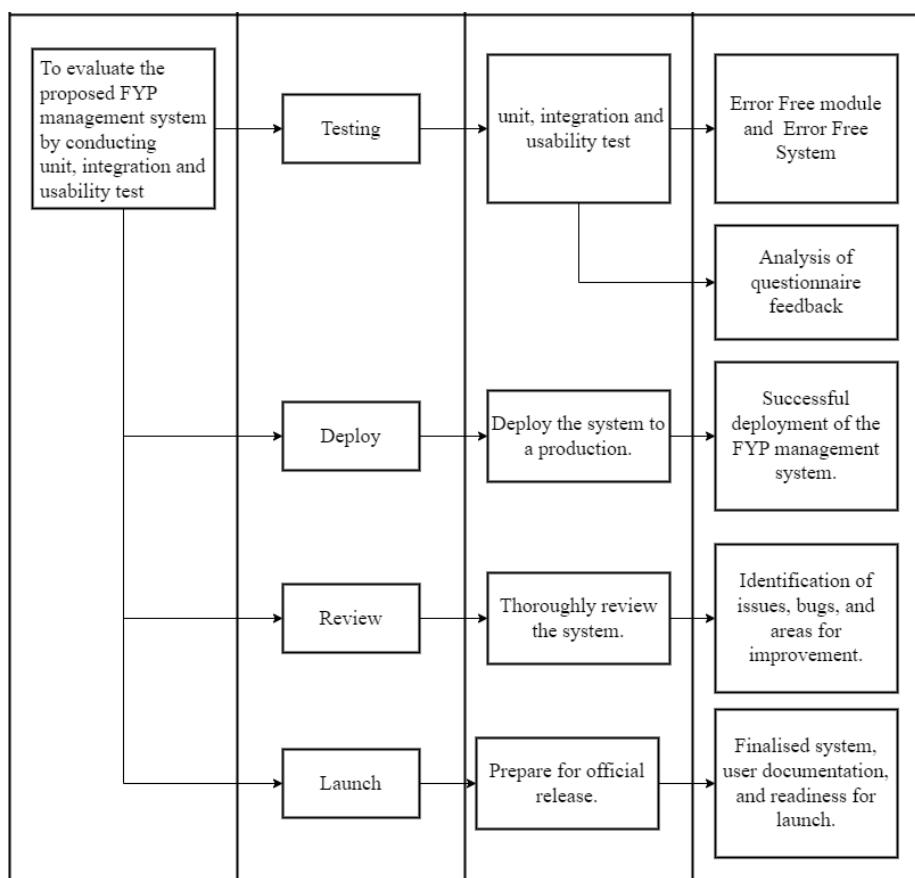
The launch of the FYPMS marks a significant milestone in its journey. Set to be deployed on a robust web server, the launch signifies the system's readiness to serve its purpose efficiently. Collaborative efforts in development, testing, and refinement have led to a user-friendly and feature-rich platform. This launch represents the culmination of meticulous planning, coding, and testing, bringing the FYPMS to its intended users students, supervisors, and FYP lecturers. The web server infrastructure ensures accessibility, reliability, and scalability, laying the foundation for a successful and seamless user experience.

### 3.4 Summary of The Project

The project aims to develop a FYP management system that revolutionizes the management and coordination of final year projects. By adopting the Agile methodology, the development process prioritizes collaboration, flexibility, and iterative development. The system allows for continuous stakeholder feedback, enabling quick adjustments and improvements to meet evolving requirements. Through frequent iterations of planning, development, testing, and deployment, the FYP management system ensures efficient communication, streamlined workflows, and effective tracking of project progress. Table 3.5 shows the summary of project methodology.

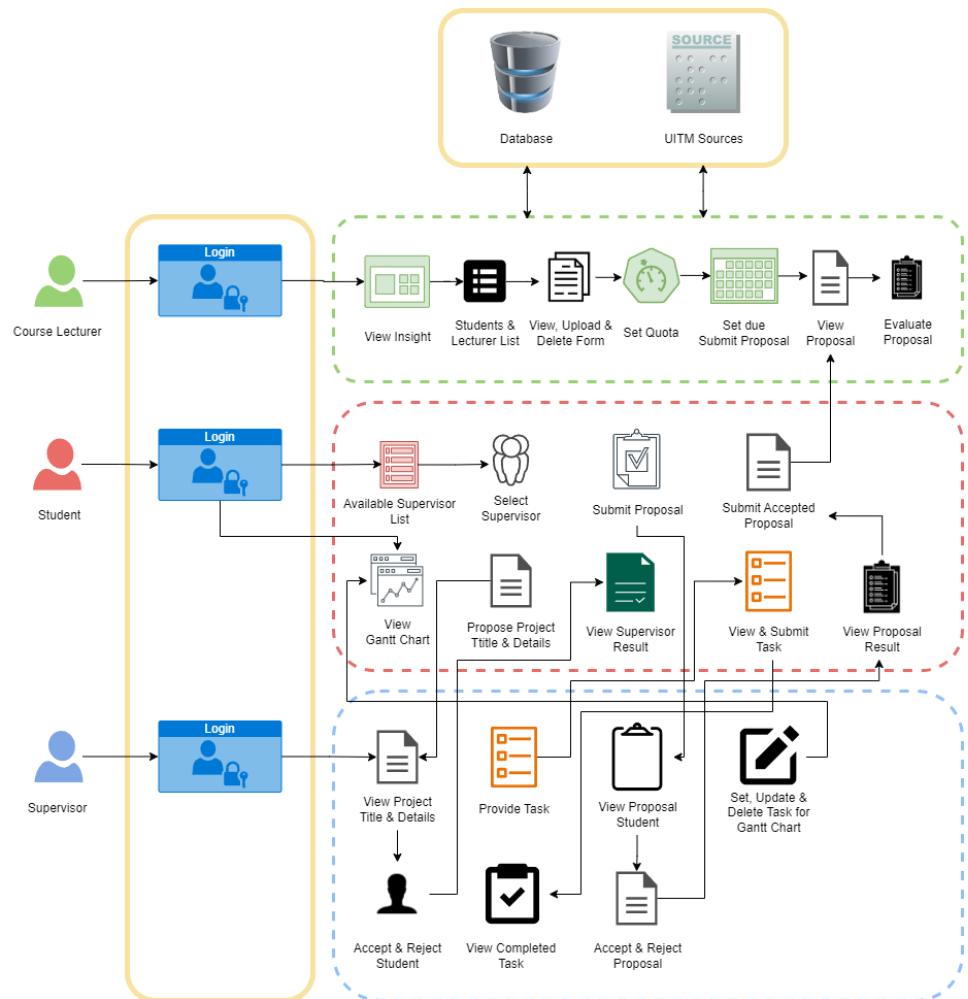
**Table 3.5** Summary of the Project Methodology

Project's Objective	Phase	Activities	Outcome
To identify the process involve in CS230 FYP management operation	<div style="text-align: center;"> <pre> graph TD     A["To identify the process involve in CS230 FYP management operation"] --&gt; B[Planning]     B --&gt; C1["1. Identify the problem statement."]     B --&gt; C2["2. Identify the project objective, scope, and significance."]     B --&gt; C3["Study the research area and research domain"]     B --&gt; C4["Identify the suitable methodology"]     C1 --&gt; D1["Chapter 1"]     C2 --&gt; D2["Chapter 2"]     C3 --&gt; D3["Chapter 3"]     C4 --&gt; D3   </pre> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div>	
To design and develop the CS230 FYP management system by incorporating suitable data visualization feature	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div>



### 3.5 System Architecture

The general layout and structure of the software components is referred to as the system architecture of a web-based system. This section demonstrates the Final Year Project Management System's system architecture to demonstrate the flow of project's implementation. The system architecture's objective is to help in the study of how the proposed project will be run once development is concluded. The system architecture of the FYPMS is shown in Figure 3.2 below.



**Figure 3.2** System Architecture

In a Final Year Project management system (FYPMS), there are three main user groups CSP600 & CSP650 course Lecturers, Students, and Supervisors. The system provides a streamlined process for managing and tracking the progress of FYPs.

FYP course lecturers are essential for guiding and evaluating FYPs within the system. Upon registration and secure storage of their relevant information, lecturers gain access to a range of features. They can view profiles of both students and fellow lecturers. Lecturers can review, make updates, and even remove specific forms related to FYPs. They can define due dates for proposal submission, ensuring students adhere to necessary milestones and maintain progress. Lecturers can conveniently access, and review all submitted proposals and evaluate the proposals.

Students, the primary beneficiaries of the FYP management system, need to register using their student credentials. Students need to log in using their student credentials. Upon successful login, they can select their preferred supervisor from a list of available and provide the necessary project title and details. Students eagerly await feedback, as the system notifies them of their chosen supervisor's acceptance or rejection. After the accept of proposed project, student can no longer go to choose supervisor page so after login they will go to student dashboard where at this point student can view their progress with pie chart and timeline with Gantt chart.

Students can submit their FYP proposals for approval, select a preferred supervisor from the available options, and track the status of their proposals. Once approved, they can update their project milestones, upload necessary documents, and communicate with their supervisors. The system also facilitates the scheduling of meetings, submission of progress reports, and notification of important deadlines. This transparent and informative process enables students to remain engaged and well-informed throughout the FYP journey, enabling them to make informed decisions and take appropriate actions based on the proposal results.

Moreover, the FYP management system facilitates effective communication and collaboration between students and supervisors. They can submit tasks assigned to them by their supervisor. Additionally, the system serves as a

convenient platform for scheduling meetings, enabling students to efficiently create, update, and cancel appointments as needed.

Supervisors have the capability to access the system and view the project titles and details submitted by students, gaining an overview of the proposed projects. This allows supervisors to evaluate the relevance and alignment of the projects with their areas of expertise. Supervisors also hold the authority to accept or reject students who have expressed their interest in working under their supervision. This ensures that supervisors can carefully select students whose projects resonate with their expertise and capacity.

Once a supervisor accepts a student, they can provide them with tasks and assignments related to their FYP. This enables supervisors to set clear expectations and guide students in achieving project milestones. As students submit their completed tasks, supervisors can review and assess their work, ensuring that they are making effective progress and meeting project requirements. Moreover, supervisors can utilize the system to view the complete proposal submitted by the student. This gives them the opportunity to assess the feasibility and potential of the project, providing valuable feedback and suggestions for improvement. Based on their evaluation, supervisors can accept or reject the proposal, ensuring that only viable projects proceed.

Furthermore, supervisors have the capability to set, update, and delete progress within the system. This allows them to monitor and track students' progress, adjusting as necessary to ensure steady development and successful project completion. In addition, supervisors can confirm appointments that made by their student in the system.

### 3.6 Hardware & Software Requirement

The development of an application depends on both hardware and software. The PC or laptop is the most useful hardware to use while designing a system. A few essential components of software must be installed for the computer to work effectively in terms of software. As a result, hardware and software throughout the development process are supposed to make sure that everything goes as planned and that the system performs as expected. Table 3.6 shows the hardware requirements for this project.

**Table 3.6** Hardware Requirement

Hardware	Specification
Laptop 	<ul style="list-style-type: none"><li>- Core i-7</li><li>- 8GB RAM</li><li>- 64-bit Operating System</li></ul>

The equipment shown in the previous table was used for this project. The laptop's specifications fulfil the requirements for all the software and apps used in this project. Table 3.7 shows the software requirements for this project.

**Table 3.7** Software Requirement

No	Software	Specification
1	MySQL 	<ul style="list-style-type: none"><li>- Store the data</li></ul>
2	Visual Studio Code	<ul style="list-style-type: none"><li>- Text editor and source code editor</li></ul>

		
3	Figma 	<ul style="list-style-type: none"> <li>- Design web pages</li> </ul>
4	Draw.io 	<ul style="list-style-type: none"> <li>- Design the flow chart.</li> <li>- Design use case diagram</li> </ul>

This project will be built with the support of the software listed in the above table. The table provides a clear description of each software component.

### **3.7 Summary**

In summary, the Agile methodology has been chosen as the project methodology for building the FYP management system, as it offers the most effective approach. The Agile methodology encompasses key phases, including planning, design, development, testing, deployment, review, and launch. Each phase is carefully executed to ensure the success of the project. Additionally, an iterative and incremental development approach is adopted to enable continuous improvement and adaptation based on stakeholder feedback. By following the Agile methodology, the project aims to deliver a high-quality system that meets the needs of FYP stakeholders. The hardware and software requirements have also been identified to support the development of the system.

## **CHAPTER 4**

### **IMPLEMENTATION**

This chapter provides a comprehensive overview of the implementation phase of the FYPMS. It details the step-by-step procedures undertaken during the system development process. The outlined stages encompass Preliminary Activities, Interface Design, Project Implementation, Testing Procedure, Deployment, and finding. The chapter aims to clarify on the intricacies of translating conceptual design into a fully functional and deployable project management system. This chapter provides a comprehensive overview of the implementation phase of the FYPMS. It details the step-by-step procedures undertaken during the system development process. The outlined stages encompass Preliminary Activities, Interface Design, Project Implementation, Testing Procedure, Deployment, and Review. The chapter aims to clarify on the intricacies of translating conceptual design into a fully functional and deployable project management system.

#### **4.1 Preliminary Activities**

In laying the groundwork for the FYPMS, Preliminary Activities are pivotal. This phase includes installing essential technologies like Tailwind CSS framework for styling, Chart.js library for Pie charts, and Highcharts library for Gantt charts. These installations form the bedrock, setting the stage for subsequent development and ensuring a sturdy technical foundation for the FYPMS.

##### **4.1.1 CSP230 Find Year Project (FYP) Procedure and Process**

The primary source of information concerning CS230 Final Year Project (FYP) procedures and processes derived from the “Essentials of Computer Science Project Administration (4<sup>th</sup> Edition)” document, issued by the Faculty of Computer and Mathematical Sciences at Universiti Teknologi MARA in 2022. Following a comprehensive review of the document, three key actors or users emerge in the overall process: FYP lecturers, supervisors, and students. Each

user has distinct responsibilities, functions, and actions within the FYP framework. FYP lecturers are tasked with coordinating the entire FYP process, supervisors guide and oversee students (supervisees), and students are required to propose, develop, and report on a project related to the computer science field.

In summary, the examination of the document reveals that FYP lecturers and supervisors collectively engage in 53 distinct actions, representing 53 directly involved processes. Meanwhile, students have 32 actions, equivalent to 32 processes. For a detailed understanding of these procedures and processes, the document can be referenced at the provided link, <https://fypms.my-coding.com/FYP-Computing-Essential.pdf>. Due to its extensive content, the document's specifics cannot be included in this report.

#### 4.1.2 Tailwind CSS Installation

For the development of the FYPMS interface utilizing Tailwind CSS, it is imperative to have Node.js and Node Package Manager (npm) installed on the local machine. Figure 4.1 shows the installation page for both components. This dynamic duo empowers developers to seamlessly integrate and leverage the capabilities of Tailwind CSS, ensuring a smooth and efficient development experience for the system's interface.

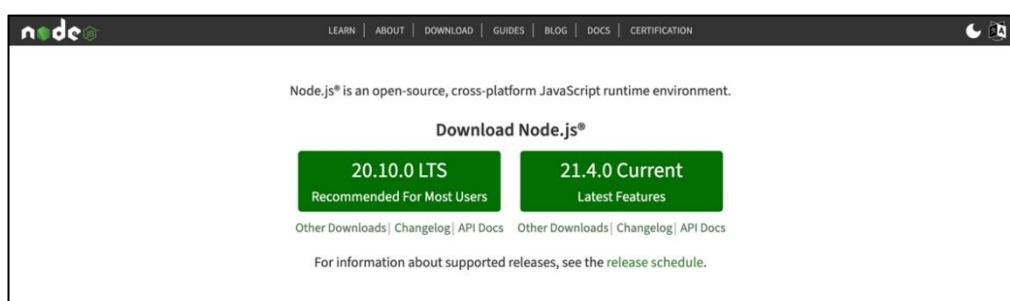


Figure 4.1 Node.js Download Page

Figures 4.1 through 4.6 delineate the sequential installation steps essential for the integration of Tailwind CSS into the project directory. The process commences with the installation of the Tailwind CSS CLI in the root project, followed by the creation of a `tailwind.config.js` file through a designated command. Within this configuration file, the `content` property

assumes significance, allowing specification of the paths to the template files to be analysed and processed by Tailwind CSS. Subsequently, the integration involves adding Tailwind directives to the project's CSS. The final steps encompass initiating the Tailwind CLI build process and executing the CLI tool, as demonstrated in Figure 4.6, to scan template files for classes and generate the requisite CSS. This meticulous process ensures the seamless incorporation of Tailwind CSS, facilitating its operational use within the project structure.

```
● (base) helmiashraf@Helmis-MacBook-Air FYP-management-sysrem % npm install -D tailwindcss
added 84 packages in 8s
15 packages are looking for funding
```

**Figure 4.2** Install Tailwind CSS

```
● (base) helmiashraf@Helmis-MacBook-Air FYP-management-sysrem % npx tailwindcss init
Created Tailwind CSS config file: tailwind.config.js
```

**Figure 4.3** Create a tailwind.config.js File by Run Command.

```
1  /** @type {import('tailwindcss').Config} */
2  module.exports = {
3    content: ['./build*.php'],
4    theme: {
5      extend: {},
6    },
7    plugins: [],
8 }
```

**Figure 4.4** Configure Paths to All of php Files in the Project

```
1  @tailwind base;
2  @tailwind components;
3  @tailwind utilities;
```

**Figure 4.5** Tailwind directives

```
○ (base) helmiashraf@Helmis-MacBook-Air FYP-management-sysrem % npx tailwindcss -i ./src/input.css -o ./dist/output.css --watch
Rebuilding...
```

**Figure 4.5** Tailwind CLI Build Process

```
1  <link rel="stylesheet" href="../dist/output.css">
```

**Figure 4.6** Compiled CSS File at the <head>

#### 4.1.3 Library Installation

##### i. Chart.js Library installation

To enable Pie chart functionality in FYPMS, the installation of Chart.js is essential, and this is achieved through a streamlined process leveraging a Content Delivery Network (CDN). The choice of this approach is rooted in its simplicity, expediting the development process without the need to download the entire bundle onto the local machine. The utilization of the CDN not only enhances the effectiveness of the installation but also ensures a seamless integration with Chart.js, facilitating the creation of Pie charts within the FYPMS interface.

Figure 47 shows script code of Chart.js library.

```
1  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
```

**Figure 4.7** Inclusion of Chart.js Library via CDN

## ii. Highcharts Library installation

To enable Gantt chart functionality in FYPMS through the integration of Highcharts, a streamlined process is adopted, leveraging Content Delivery Networks (CDNs). In Figure 4.9, the incorporation of the Highcharts library and its Gantt chart module is seamlessly achieved using specified script tags. These scripts efficiently retrieve the required components directly from designated CDN locations, enhancing the integration process. This approach not only simplifies development but also eliminates the need to download and locally host the complete Highcharts library, exemplifying an expedited and resource-efficient implementation. Figure 4.8 shows the three Highcharts script.

```
1 <script src="https://code.highcharts.com/highcharts.js"></script>
2 <script src="https://code.highcharts.com/modules/gantt.js"></script>
3 <script src="https://code.highcharts.com/modules/exporting.js"></script>
```

**Figure 4.8** Integration of Highcharts Gantt Chart Module

## 4.2 Interface Design

The design process for the FYPMS unfolds in two well-defined phases, each contributing to the creation of a sophisticated and user-centric interface. These phases encompass the meticulous crafting of a comprehensive draft using Figma software, followed by the subsequent development journey. The multifaceted design addresses the diverse needs of FYPMS users, from FYP lecturers and students to supervisors.

### 4.2.1 Interface Design Drafting with Figma

At the core of the design initiative lies the intricate drafting process carried out with Figma software. This draft includes a total of 39 interfaces, encompassing all three types of FYPMS users. Figure 4.10 delineates 13 dedicated pages for FYP lecturer, Figure 4.11 encapsulates 14 interfaces for student, and Figure 4.12 tailors 12 distinct interfaces catering to supervisor. The utilization of Figma ensures a seamless and collaborative approach to interface design, setting the stage for the subsequent phases of development.

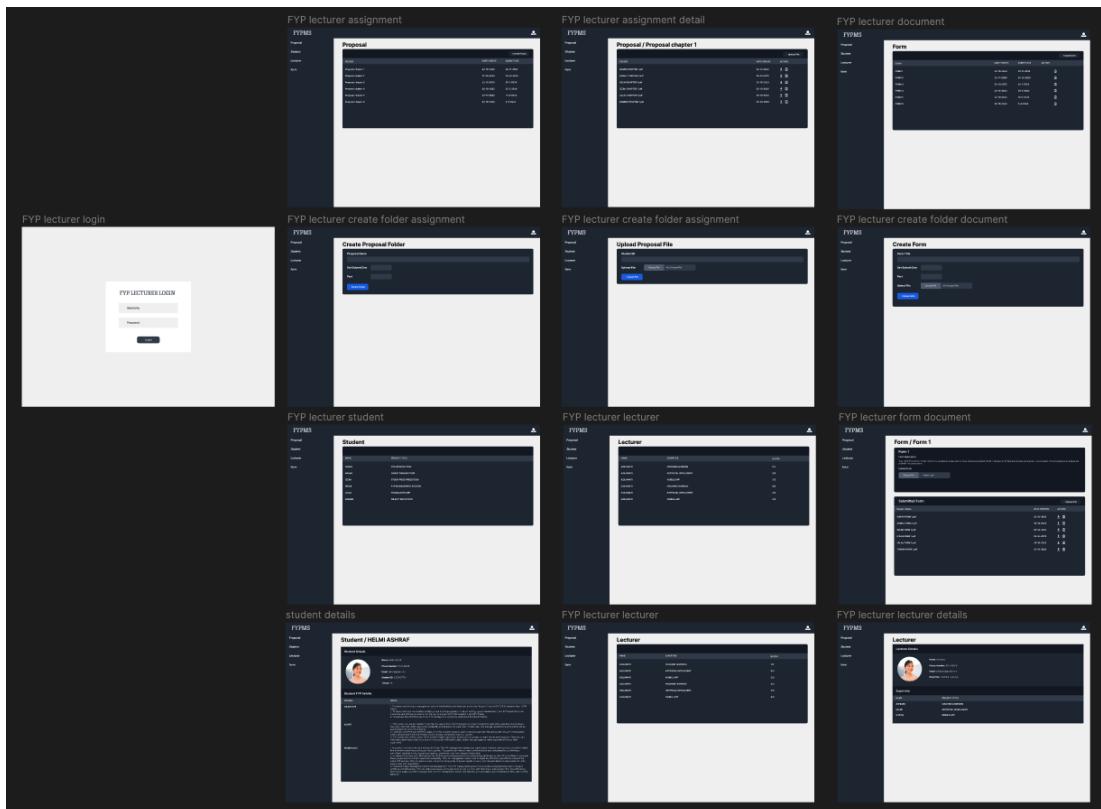
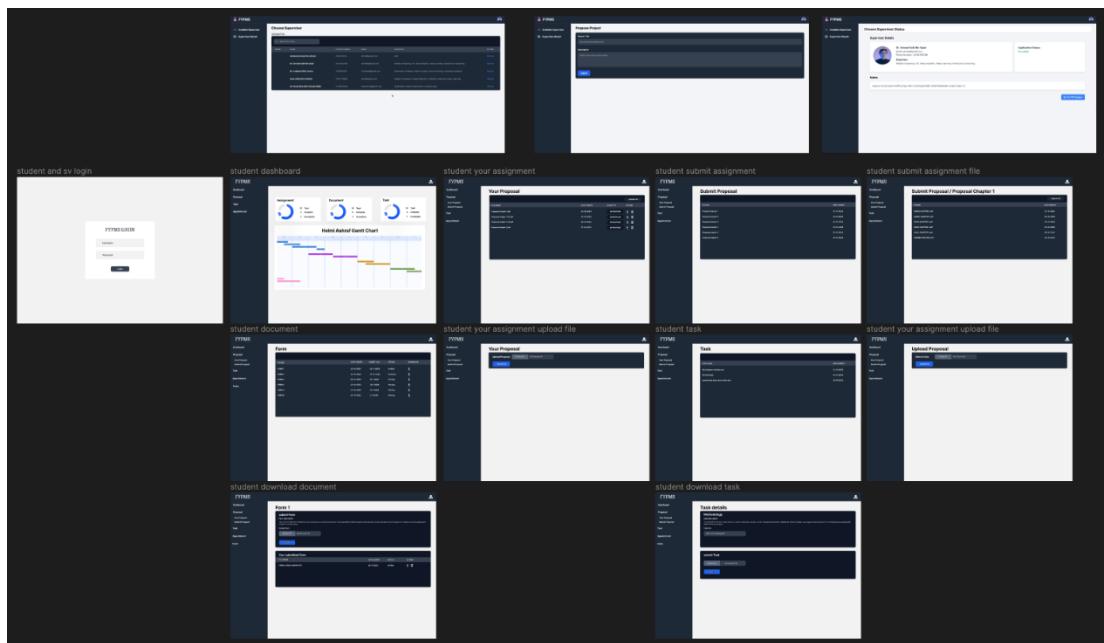
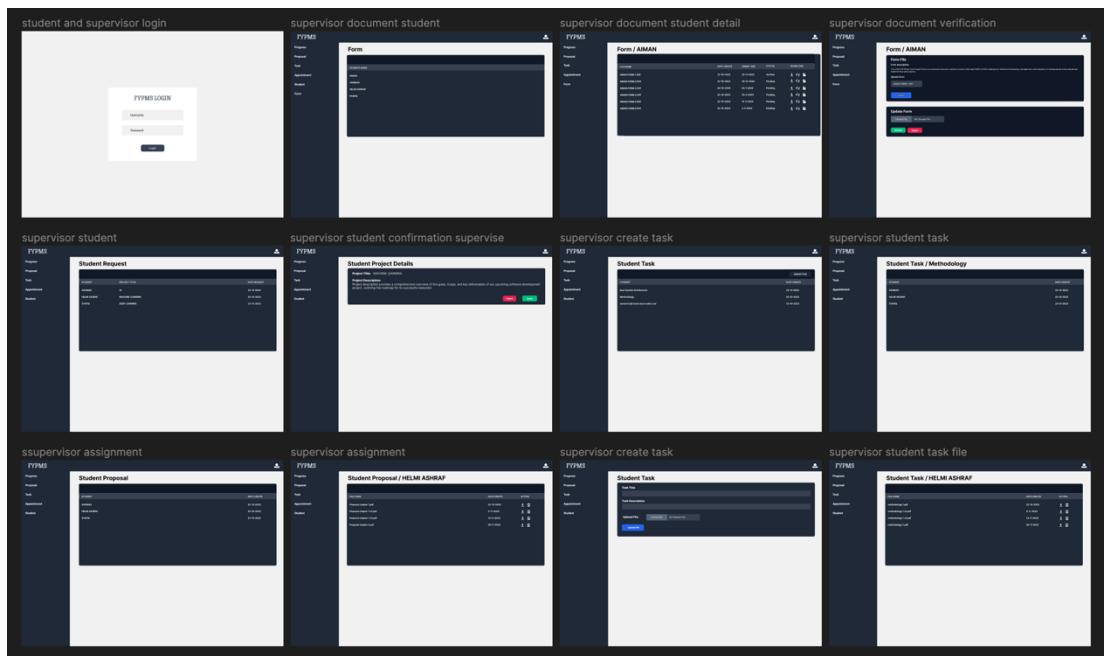


Figure 4.9 FYP Lecturer Interface Design



**Figure 4.10** Student Interface Design



**Figure 4.11** Supervisor Interface Design

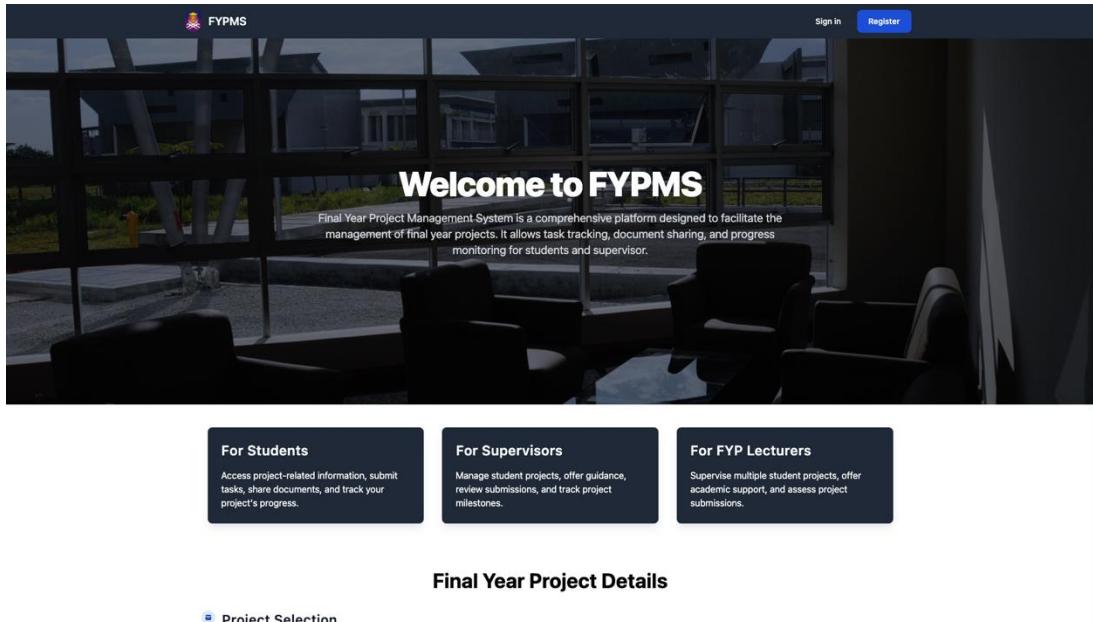
#### **4.2.2 Interface Design of FYPMS**

Following the meticulous drafting process, the development journey kicks off, commencing with the creation of the FYPMS landing page. Subsequent interfaces for FYP lecturers, students, and supervisors are then sequentially implemented. Throughout this developmental phase, the design interfaces undergo continual refinement, responding to iterative feedback and evolving requirements. Despite the dynamic nature of this design process, the result is an aesthetically appealing interface that effectively caters to the needs of FYPMS users, ensuring a seamless and intuitive user experience.

##### **i. Landing Page FYPMS**

The landing page of FYPMS as in Figure 4.13 is designed to engage users with a vibrant and visually appealing interface. Featuring a colour scheme characterized by bold and contrasting hues, the main section immediately departs attention. In the centre of this main section a welcoming text introduces user to the purpose of FYPMS. Strategically placed on the left, the FYPMS logo is complemented by the ‘Sign In’, and ‘Register’ options on the right. This layout ensures an intuitive user experience, promoting effortless navigation and interaction.

Moreover, at the bottom of the landing page, brief yet distinctive statement provides information about the three primary types of FYPMS user, student, FYP Lecturer and Supervisor. This section servers as a quick reference, offering users insights into the platform diverse user roles. Together, these elements create welcoming and informative landing page, setting the tone for a positive user experience with FYPMS.



**Figure 4.12** Landing Page of FYPMS

## ii. FYP Lecturer

In the FYP lecturer interface, Figure 4.14 offers an insight within the FYPMS, presenting key metrics such as total assignments and tasks, the student count in CSP600 and CSP650 categories, and supervisor rejections. This figure goes a step further by showcasing submission statistics like total submission, late submission, and missing submission for assignments, documents, and tasks, providing FYP lecturers with a comprehensive overview of the progress and engagement within their respective course.

In Figure 4.15, this segment of the interface is dedicated to batch management, presenting key details such as batch name, start and end dates, and the existing CSP600, CSP650, and graduate batches. This visualization provides FYP lecturers with a clear snapshot of the current batch configurations. Figure 4.16, it features a streamlined form for updating batch information, specifically catering to the CSP600 course. The form simplifies the process by requiring input for batch name, start date, and end date. This efficient batch management, ensuring that FYP lecturers can effortlessly handle updates and configurations for FYPMS.

The screenshot shows the 'Insight' section of the FYPMS system. At the top, there are four cards: 'Assignment' (4 for CSP600, 3 for CSP650), 'Document' (7 for CSP600, 3 for CSP650), 'Student' (7 CSP600, 2 CSP650 active), and 'Task' (2 CSP600, 2 CSP650 Assignment rejected by supervisor). Below these are three tables: 'Assignment Submission', 'Document Submission', and 'Task Submission'. The 'Assignment Submission' table shows the following data:

Assignment	Submit	Late	Missing
Assignment Chapter 1 CSP600	2	1	5
Full Report Submission CSP600	1	0	6
Assignment Chapter 4 CSP650	0	0	2
Assignment Chapter 5 CSP650	0	0	2
Assignment Chapter 3 CSP600	2	1	5
Final Report Submission CSP650	0	0	2

The 'Document Submission' table shows the following data:

Document	Submit	Late	Missing
Project Plan CSP600	1	1	6
Design Document CSP600	1	1	6
Risk Assessment Form CSP600	1	0	6
Risk Assessment Form CSP650	0	0	2
Implementation Document CSP650	0	0	2

The 'Task Submission' table shows the following data:

Task	Submit	Late	Missing
Preparation for Presentations CSP650	0	0	2
Poster Idea CSP650	0	0	2
Research and Data Collection CSP600	0	0	7
Poster Creation CSP650	0	0	2
Implementation and Coding CSP650	0	0	7

Figure 4.13 FYP Lecturer Insight Page

The screenshot shows the 'Batch' setting page. It includes sections for 'Course: CSP600', 'Course: CSP650', and 'Graduate Batch'. The 'Course: CSP600' section shows a single batch from March 2023 to February 2024. The 'Course: CSP650' section shows a single batch from September 2022 to August 2023. The 'Graduate Batch' section shows a single batch from March 2022 to February 2023. There is a 'Update Batch' button at the top right.

BATCH	START BATCH	END BATCH
Mac23-Feb24	6 March 2023	2 February 2024

BATCH	START BATCH	END BATCH
Sep22-ago23	5 September 2022	4 August 2023

NO	BATCH	START BATCH	END BATCH
1	Mac22-Feb23	7 March 2022	3 February 2023

Figure 4.14 FYP Lecturer Batch Setting Page

FYPMS Setting

Login as: Final Year Project Lecturer

Dr. Azliewati Binti Azizan 

Insight > Batch > Batch Update

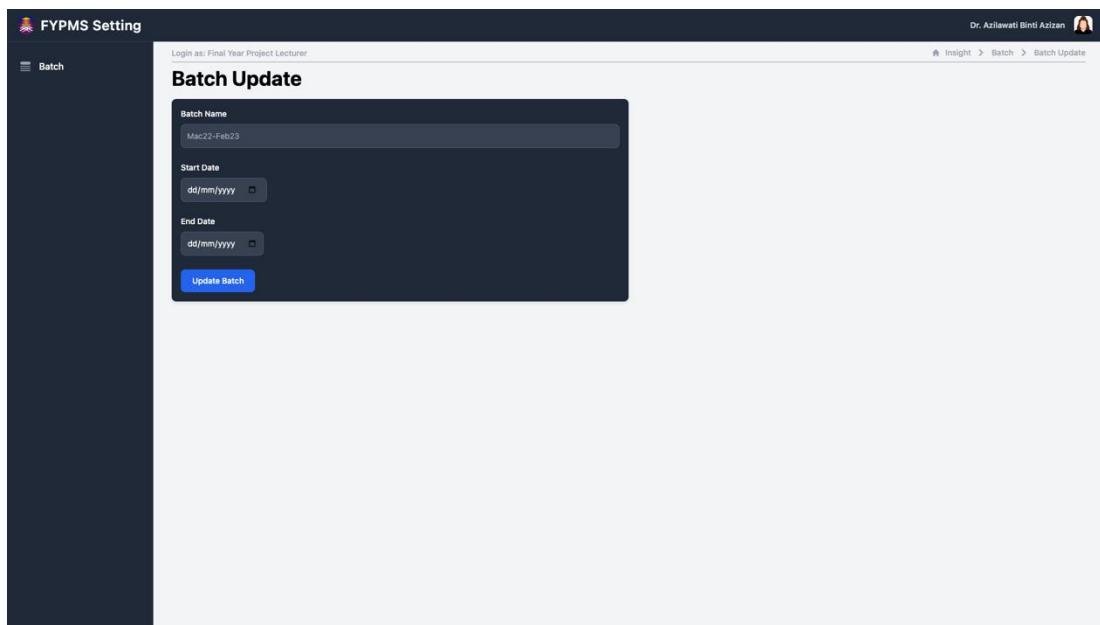
**Batch Update**

Batch Name  
Mac22-Feb23

Start Date  
dd/mm/yyyy

End Date  
dd/mm/yyyy

**Update Batch**



**Figure 4.15** FYP Lecturer Create New Batch Page

### iii. Student

In Figure 4.17, the student interface is thoughtfully crafted to provide a comprehensive dashboard view. The dashboard succinctly summarizes critical information through intuitive data visualizations. A pie chart offers a quick glance at the total number of incomplete assignments and tasks, aiding students in managing their workload effectively. Additionally, the dashboard highlights document completion status and incorporates a Gantt chart generated by the respective supervisors, offering students a visual representation of their project timelines.

Figure 4.18, the interface zooms in on assignment submissions. This section provides comprehensive information, including assignment details, submission dates, and status updates. The status indicates whether the assignment has been approved, rejected by supervisor, or deleted by the FYPL lecturer. This student-centric design ensures a user-friendly experience, empowering students with valuable insights and facilitating streamlined interactions with their assignments.

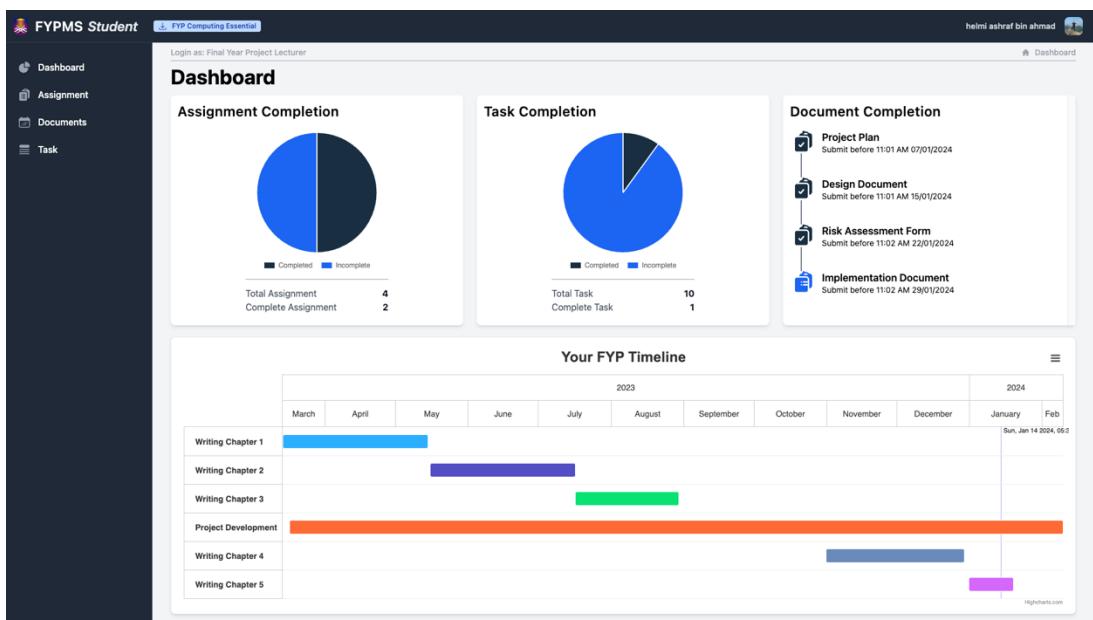
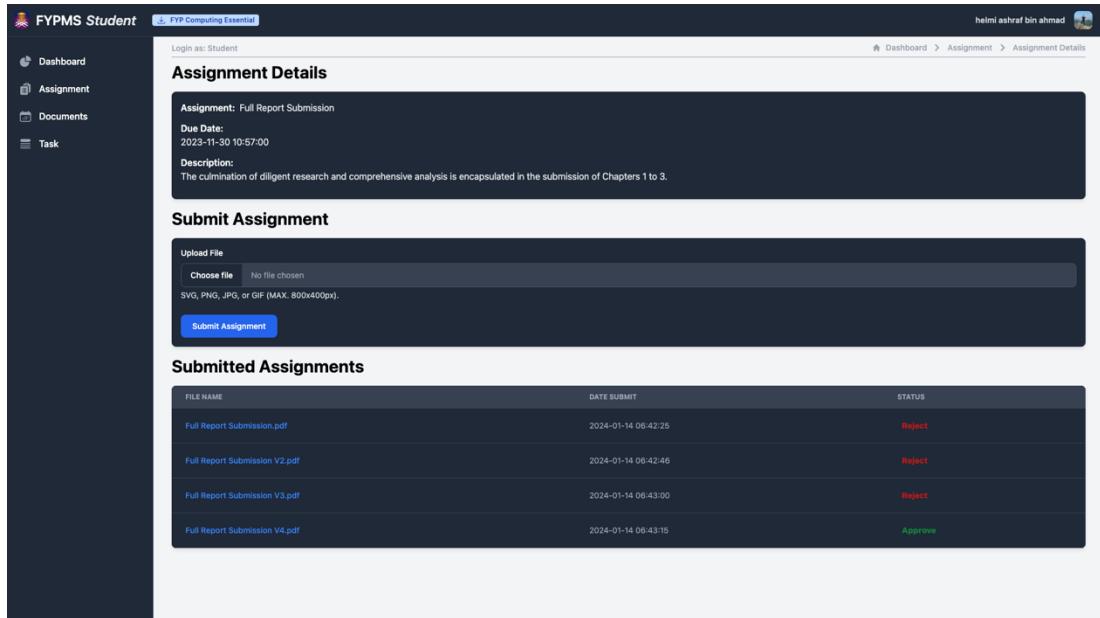


Figure 4.16 Student Dashboard Page



**Figure 4.17 Assignment Submission Page**

The student interface, illustrated in Figure 4.19, provides an integral platform for students to select their project supervisors. This interface offers a comprehensive overview, showcasing essential details such as supervisor name, contact information, expertise, and the current quota status for each available supervisor. The design prioritizes clarity and accessibility, ensuring that students can make informed choices based on their preferences and project requirements.

Upon selecting a supervisor and confirming that the quota limit has not been reached, Figure 4.20 seamlessly guides students to a submission page. Here, students can furnish the necessary details for their proposed projects, facilitating a structured submission process. This ensures that students can efficiently communicate their project ideas to their chosen supervisors, fostering a transparent and collaborative environment. Subsequently, Figure 4.21 elegantly concludes the process by presenting students with a dedicated page to view their chosen supervisor and the submitted details of their proposed project. This cohesive interface workflow streamlines the student's journey, providing an intuitive and user-friendly experience in selecting their project supervisor.

The screenshot shows a list of available supervisors. Each supervisor entry includes a small profile picture, the name, phone number, email, expertise, current student quota, and a 'Choose' button.

IMAGE	NAME	PHONE NUMBER	EMAIL	EXPERTISE	CURRENT STUDENT / QUOTA	ACTION
	Helmi Ashraf Ahmad	011909000	helmisraff022@gmail.com	php	0 / 3	<a href="#">Choose</a>
	Dr. Azilawati Binti Azizan	Azilawati@gmail.com	Azilawati@gmail.com	information retrieval / search engine / text processing / sentiment analysis IOT	3 / 4	<a href="#">Choose</a>
	Dr. Ahmad Fadli Bin Saad	0134753796	Ahmad@gmail.com	Mobile computing, IoT, Data analytics, Deep Learning, Enterprise Computing	2 / 3	<a href="#">Choose</a>
	Itaza Afiani Binti Mohtar	0195101078	Itaza@gmail.com	Image Processing / Image Detection / Machine Learning / Deep Learning	0 / 3	<a href="#">Choose</a>

Figure 4.18 Chose Supervisor Page

The screenshot shows a form for proposing a project. It includes fields for 'Project Title' (with placeholder 'Your final year project title') and 'Description' (with placeholder 'Write some project description'). A 'Submit' button is at the bottom.

Figure 4.19 Submit Propose Project Page

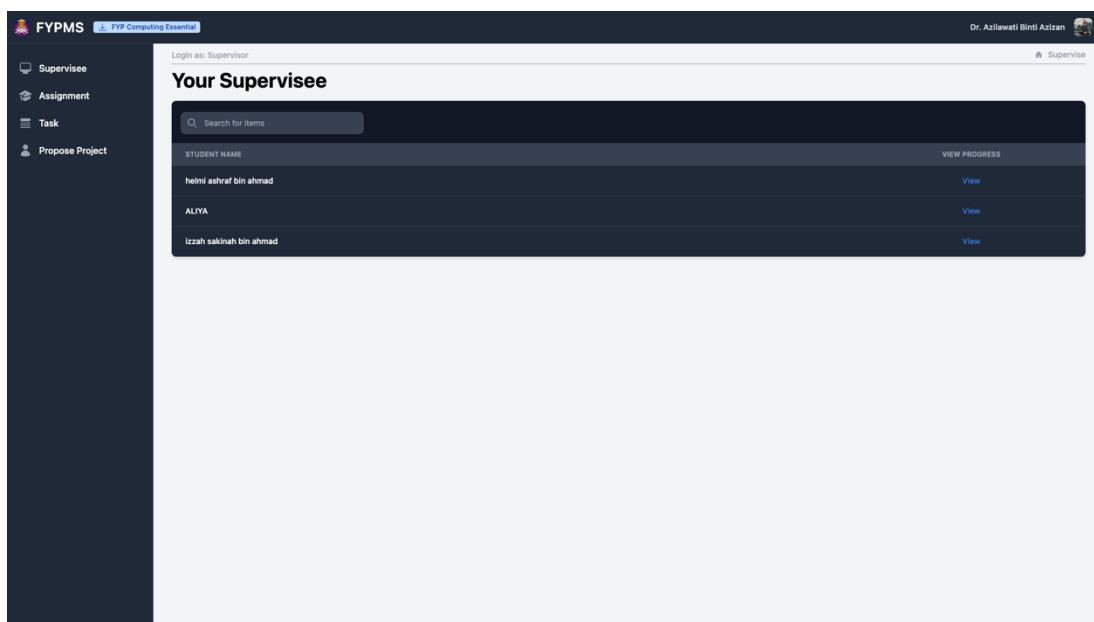
The screenshot shows a dark-themed web application interface. At the top, there's a header bar with the text "FYPMS Student" and "FYP Computing Essential". On the right side of the header, it says "Muhammad Safuan" with a small profile icon. Below the header, there are two navigation items: "Available Supervisor" and "Supervisor Result". The main content area is titled "Supervisor Details". It features a profile picture of a woman, Dr. Azilawati Binti Azizan, with her name and contact information listed: Email: Azilawati@gmail.com and Phone Number: Azilawati@gmail.com. To the right of this information is the "Application Status" which is "Pending". Below the contact info, there's a section titled "Expertise" with the text: "information retrieval / search engine / text processing / sentiment analysis IOT".

**Figure 4.20** Submit Propose Project Page

#### iv. Supervisor

In Figure 4.22, the supervisee interface offers a comprehensive list of supervisees, empowering supervisors with key functionalities. Supervisors can seamlessly access supervisee profiles, create timelines for project milestones, and utilize the unlink feature strategically. The unlink function is purposefully integrated to allow supervisors to disassociate a student from their supervision. This flexibility enables students to explore alternative supervisory arrangements, fostering an adaptable and supportive environment. Figure 4.23, the interface provides supervisors with a detailed task of student Gantt charts. Within this interface, supervisors can effortlessly manage and oversee various aspects, including creating, deleting, and updating task details.

Moreover, Figure 4.24 introduces a streamlined form dedicated to the creation of new tasks for the student Gantt chart. This form allows supervisors to efficiently add up to 10 tasks simultaneously, streamlining the process of creating a comprehensive and well-structured timeline for student projects. Finally, Figure 4.25 facilitates easy updates to the Gantt chart timeline, offering an intuitive interface for supervisors to modify task details, including task names, start dates, and end dates. Together, these figures underscore the thoughtful design considerations embedded in the supervisor interface, enhancing the overall supervisory experience within the FYPMS.



The screenshot shows the 'Your Supervisee' page in the FYPMS system. The top navigation bar includes the FYPMS logo, a 'FYP Computing Essential' link, a 'Logout' button, and a user profile for 'Dr. Azizawati Binti Azizan'. On the left, a sidebar menu lists 'Supervisee', 'Assignment', 'Task', and 'Propose Project'. The main content area is titled 'Your Supervisee' and features a search bar labeled 'Search for items'. Below the search bar is a table with three rows, each representing a supervisee:

STUDENT NAME	VIEW PROGRESS
helmi ashraf bin ahmad	<a href="#">View</a>
ALIYA	<a href="#">View</a>
izzah sakinah bin ahmad	<a href="#">View</a>

Figure 4.21 Supervisor Supervise Page

DELETE	TASK NAME	START DATE	END DATE	ACTION
	Writing Chapter 1	2023-03-14	2023-05-15	
	Project Development	2023-03-17	2024-02-10	
	Writing Chapter 2	2023-05-16	2023-07-17	
	Writing Chapter 3	2023-07-17	2023-08-30	
	Writing Chapter 4	2023-11-01	2023-12-30	
	Writing Chapter 5	2024-01-01	2024-01-20	

Figure 4.22 Supervise Gantt Chart Details Page

Login as: Supervisor
Dr. Azizwati Binti Azizan

# Supervisor 2 Supervisor Details
Create task

### Gantt Chart Details

DELETE	TASK NAME	START DATE	END DATE	ACTION
	Writing Chapter 1	2023-03-14	2023-05-15	
	Project Development	2023-03-17	2024-02-10	
	Writing Chapter 2	2023-05-16	2023-07-17	
	Writing Chapter 3	2023-07-17	2023-08-30	
	Writing Chapter 4	2023-11-01	2023-12-30	
	Writing Chapter 5	2024-01-01	2024-01-20	

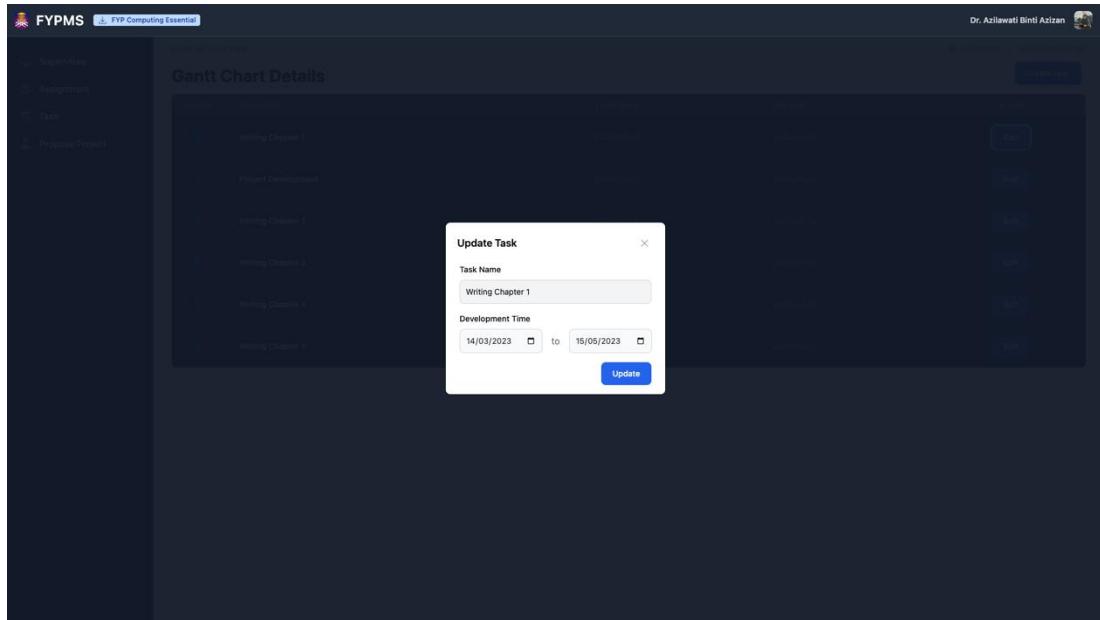
#### New Task

dd/mm/yyyy 
 dd/mm/yyyy

dd/mm/yyyy 
 dd/mm/yyyy

+ Add Task
Create

Figure 4.23 Create New Task for Gantt Chart Page



**Figure 4.24** Update Task for Gantt Chart Page

In Figure 4.26, the interface is dedicated to the crucial task of reviewing and processing student assignments. Supervisors are presented with the responsibility to carefully read and evaluate each assignment before making the decision to approve or reject it. This thoughtful design ensures that supervisors maintain an active role in the approval process, emphasizing the importance of thorough assessment to maintain the quality and integrity of the FYPMS. Additionally, Figure 4.27 introduces an assignment history interface, providing supervisors with a comprehensive view of all assignments that have been both approved and rejected. This feature enhances transparency and accountability within the system, allowing supervisors to refer back to historical assignment data, ensuring a record of decisions made throughout the evaluation process. Together, these interfaces create a robust and user-friendly system for supervisors to effectively manage and track student assignments within the FYPMS.

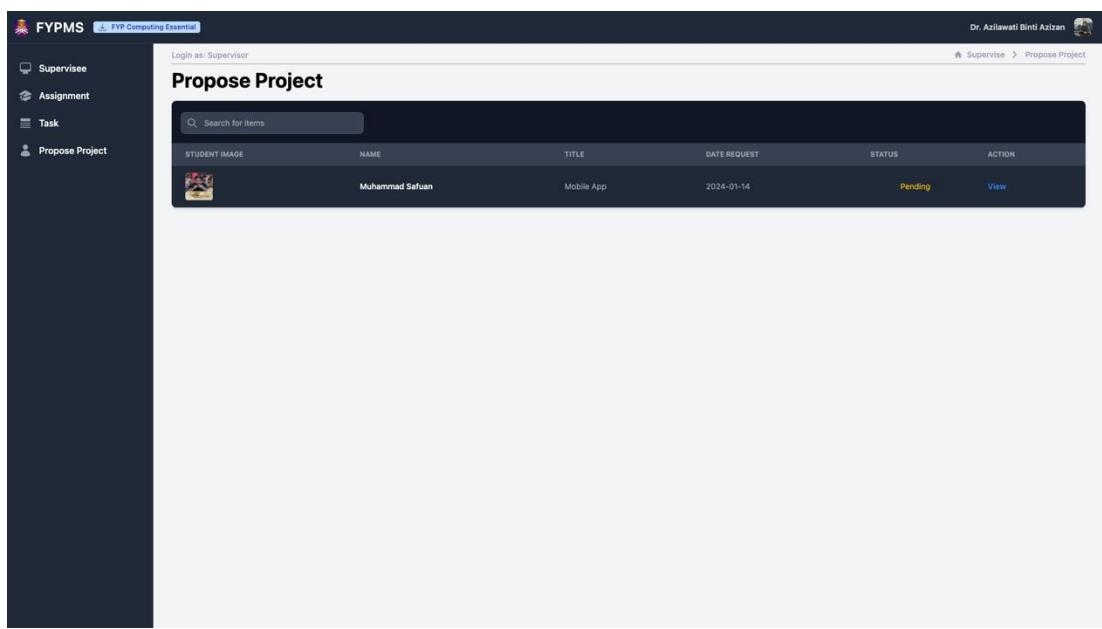
STUDENT NAME	ASSIGNMENT NAME	VIEW PDF	DUUE DATE	ACTION
Helmi Ashraf bin Ahmad	Assignment Chapter 2	TASK ST SUBMIT FYPL 2.pdf	2023-12-16 16:18:00	<button>Approve</button> <button>Reject</button>
Helmi Ashraf bin Ahmad	Assignment Chapter 2	design document.pdf	2023-12-16 16:18:00	<button>Approve</button> <button>Reject</button>

Figure 4.25 Approval Assignment Page

STUDENT NAME	ASSIGNMENT NAME	VIEW PDF	DUUE DATE	STATUS
Helmi Ashraf bin Ahmad	Assignment Chapter 3	assignment SV3.pdf	2024-01-26 12:54:00	Accept
Muhammad Akmal bin Ahmad	Assignment Chapter 3	assignment SV3.pdf	2024-01-26 12:54:00	Accept
Muhammad Akmal bin Ahmad	Assignment Chapter 1	TASK ST SUBMIT FYPL 2.pdf	2023-12-02 10:56:00	Accept
Muhammad Akmal bin Ahmad	Full Report Submission	chap 4.pdf	2023-11-30 10:57:00	Accept
Helmi Ashraf bin Ahmad	Assignment Chapter 1	TASK ST SUBMIT 3.pdf	2023-12-02 10:56:00	Reject
Helmi Ashraf bin Ahmad	Assignment Chapter 1	doc 3 s.pdf	2023-12-02 10:56:00	Reject
Helmi Ashraf bin Ahmad	Assignment Chapter 1	doc 3 s2.pdf	2023-12-02 10:56:00	Accept
Helmi Ashraf bin Ahmad	Full Report Submission	design document.pdf	2023-11-30 10:57:00	Reject
Helmi Ashraf bin Ahmad	Full Report Submission	Full Report Submission.pdf	2023-11-30 10:57:00	Reject
Helmi Ashraf bin Ahmad	Full Report Submission	risk assesment.pdf	2023-11-30 10:57:00	Reject
Helmi Ashraf bin Ahmad	Full Report Submission	Full Report Submission V2.pdf	2023-11-30 10:57:00	Reject
Helmi Ashraf bin Ahmad	Full Report Submission	PROJECT PLAN.pdf	2023-11-30 10:57:00	Reject
Helmi Ashraf bin Ahmad	Full Report Submission	Full Report Submission V3.pdf	2023-11-30 10:57:00	Reject

Figure 4.26 Assignment History Page

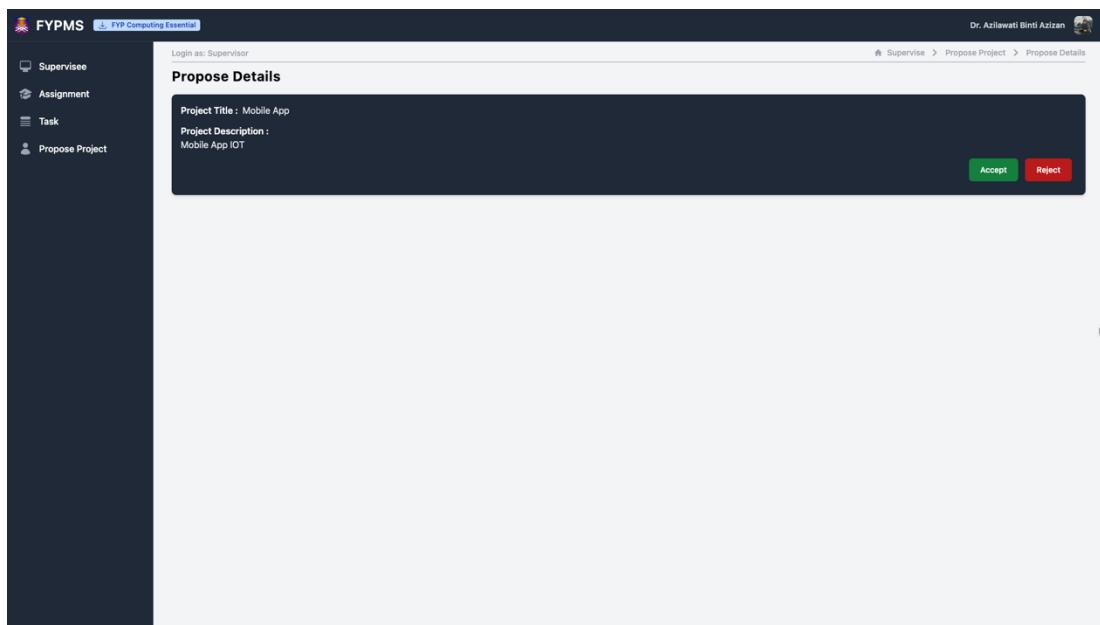
In Figure 4.28, the interface focuses on presenting a list of proposed projects submitted by students, providing supervisors with essential details such as profile pictures, names, project titles, submission dates, and the current status of each proposal. Complementing this, Figure 4.29 provides an interface dedicated to the detailed examination of individual proposed projects. Supervisors can delve into specific project details, making informed decisions by either accepting or rejecting the proposals. This two-tiered interface design ensures that supervisors can navigate through project submissions with ease, facilitating efficient decision-making processes and fostering effective communication between students and supervisors in the FYPMS. Upon acceptance of a proposed project, the student is automatically assigned as the supervisee of the corresponding supervisor, streamlining the allocation process within the FYPMS.



The screenshot shows the 'Propose Project' page in the FYPMS system. The top navigation bar includes the FYPMS logo, 'FYP Computing Essential', and a user profile for 'Dr. Azizawati Binti Azizan'. The left sidebar has links for 'Supervisee', 'Assignment', 'Task', and 'Propose Project'. The main content area is titled 'Propose Project' and features a search bar. Below it is a table with columns: STUDENT IMAGE, NAME, TITLE, DATE REQUEST, STATUS, and ACTION. One row is visible, showing a student named Muhammad Safuan with a mobile app project, dated 2024-01-14, in a 'Pending' status with a 'View' action link.

STUDENT IMAGE	NAME	TITLE	DATE REQUEST	STATUS	ACTION
	Muhammad Safuan	Mobile App	2024-01-14	Pending	<a href="#">View</a>

**Figure 4.27** Student Propose Project Page



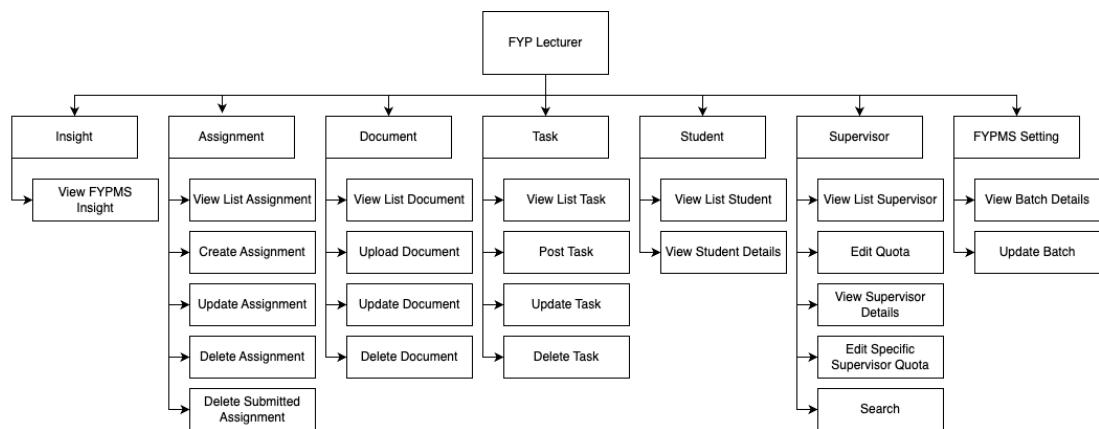
**Figure 4.28** Propose Project Details Page

## v. Menu Hierarchy

The menu hierarchy in the FYPMS is thoughtfully designed to streamline user interactions and cater to the distinct needs of FYP lecturers, students, and supervisors. The hierarchical structure provides a clear and organized navigation system, allowing users to access relevant functionalities seamlessly. This ensures that each user group can easily locate and utilize the functionalities pertinent to their roles, contributing to a user-friendly and efficient experience within the FYPMS platform.

### • FYP Lecturer

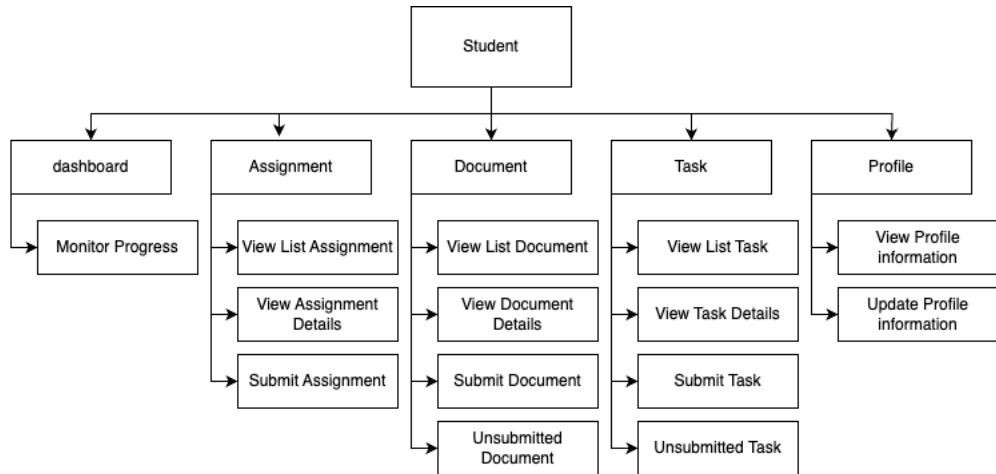
In the FYPMS menu for FYP lecturers, the central Insight provides analytics, while Assignment, Document, and Task modules manage submissions. Student and Supervisor oversee individual student and supervisor details. FYPMS Setting offers configuration options, allowing lecturers to tailor the system to their preferences. This concise hierarchy ensures efficient navigation for FYP lecturers in overseeing and managing final year projects.



**Figure 4.39** FYP Lecturer Menu Hierarchy

### • Student

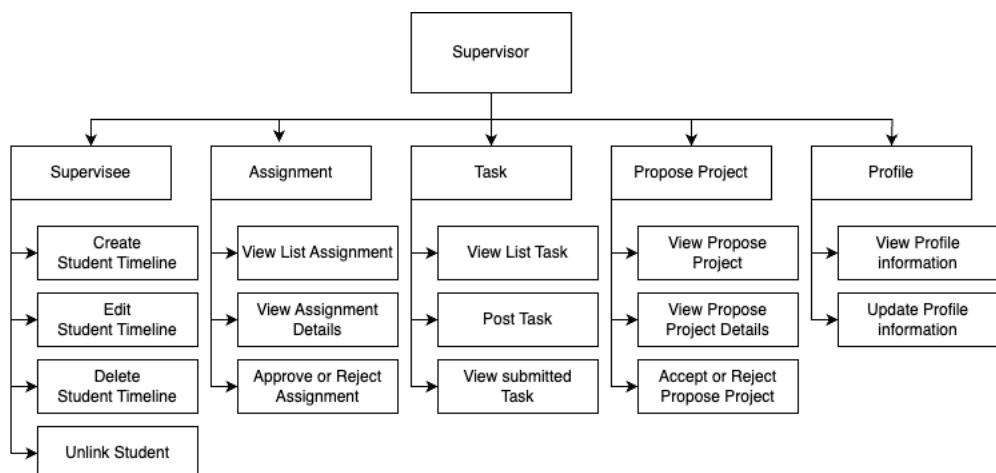
In the student interface of FYPMS, the menu includes Dashboard for project progress overview, Assignment, Document, and Task for submission and tracking, and Profile for personal information management. This concise hierarchy facilitates seamless navigation for effective project management.



**Figure 4.30** Student Menu Hierarchy

### • Supervisor

In the FYPMS supervisor menu, key functionalities include Supervisee for student management, Assignment and Task for evaluation, Propose Project for project review, and Profile for personal information. This streamlined hierarchy facilitates efficient navigation for supervisors overseeing student projects.



**Figure 4.31** Supervisor Menu Hierarchy

## **4.3 Project Implementation**

Project Implementation reveals vital aspects of FYPMS development. The Subsection of Main Use Case offers a comprehensive view, the Entity Relationship Diagram (ERD) structures the database, and the Main Algorithm guides task flows. This concise section outlines critical elements shaping FYPMS functionality and structure.

### **4.3.1 Main Use Case**

The Manage functions, encompassing Assignment, Task, and Document, exhibit distinct workflows tailored to the roles of FYP Lecturers, Students, and Supervisors. In Assignment management, FYP Lecturers are empowered to create submission spaces and assignment details, while students can seamlessly submit their assignments. Prior to reaching FYP Lecturers, Supervisors play a crucial role by approving or rejecting the submitted reports, only upon approval, FYP Lecturers gain access to view the submitted assignments. Document management involves collaboration between FYP Lecturers and students. FYP Lecturers upload documents, and students can subsequently download and submit the required documents. In Task management, both FYP Lecturers and Supervisors can create tasks. FYP Lecturers extend visibility to all students in the chosen course to view the tasks. For Supervisors, tasks are selectively visible and accessible only to students under their supervision, who have been chosen by the supervisor to submit the task.

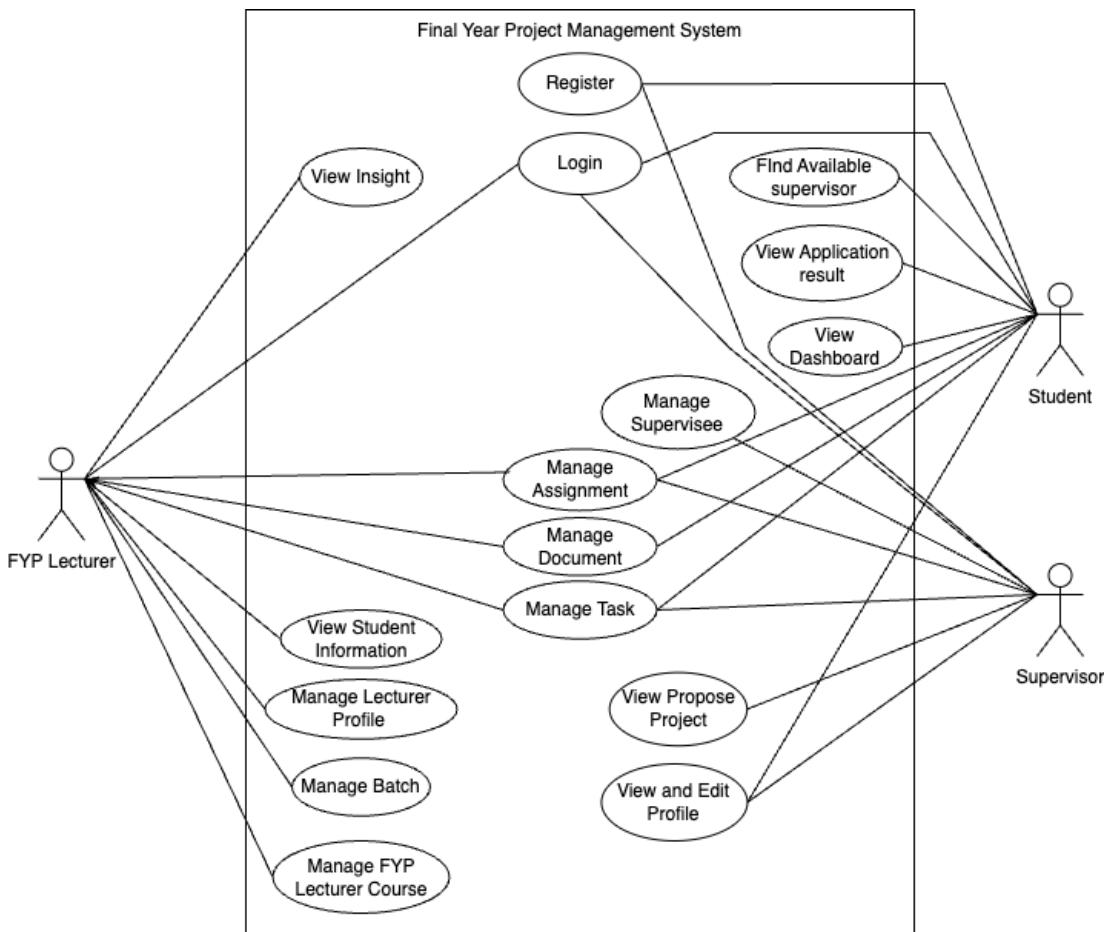


Figure 4.32 FYPMS Main Use Case

### 4.3.2 Entity Relationship Diagram (ERD)

The provided entity-relationship diagram (ERD) for the FYPMS reveals a comprehensive data model. Core entities such as "Student" and "Supervisor" capture essential details, while the central "Project" entity intricately connects students, supervisors, tasks, documents, assignments, and files. This interconnected structure reflects the dynamic nature of project management. The inclusion of "Task," "Document," and "Assignment" entities ensures a systematic approach to project activities, delineating timelines and submission details. The "File" entity enhances versatility by organizing and storing project-related materials, and the "Batch" entity categorizes students by graduation cohorts. Relationships in the ERD, like that between "Student" and "Project," depict dependencies, highlighting the adaptability of students across multiple projects. This ERD serves as a visual roadmap, fostering data integrity and

efficient collaboration within the complex landscape of a Final Year Project ecosystem.

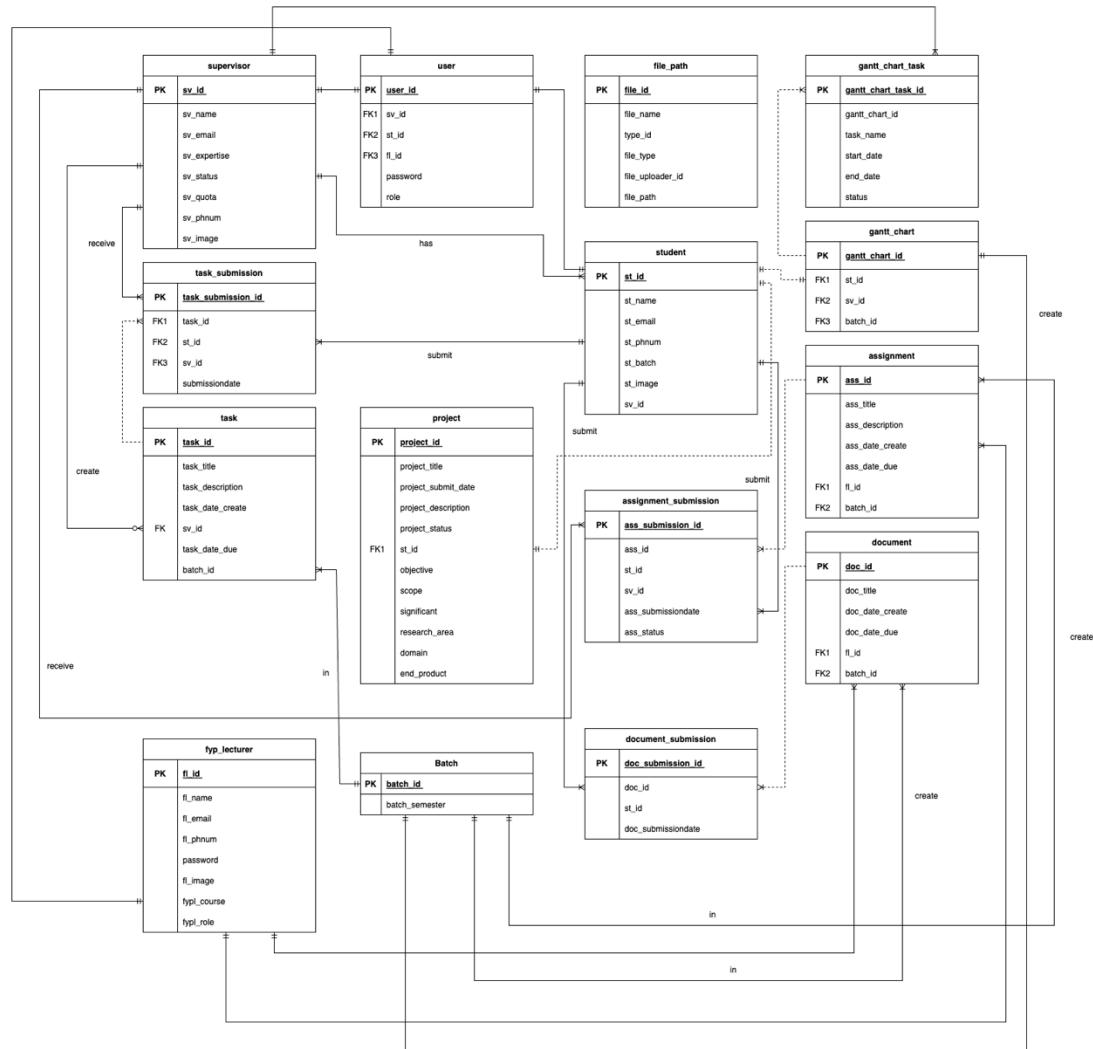


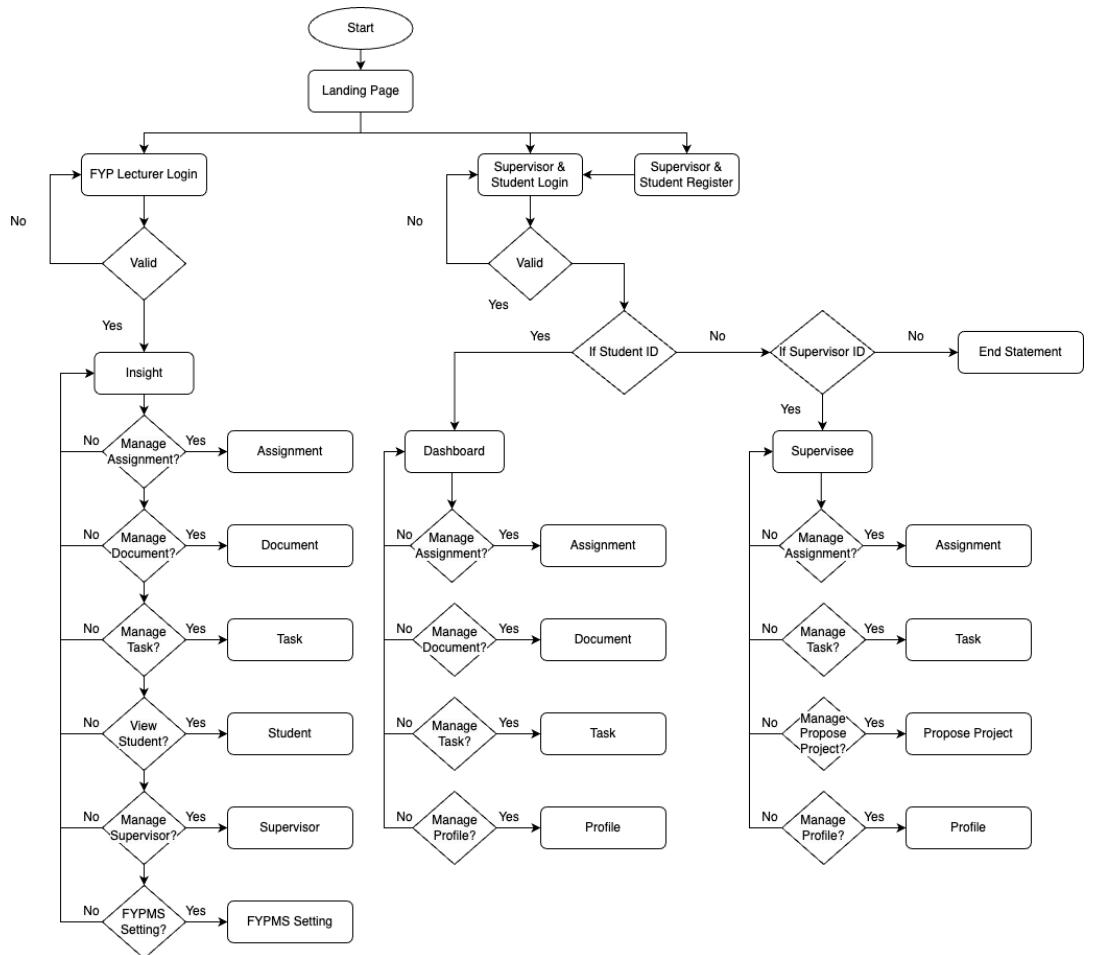
Figure 4.33 FYPMS Entity-Relationship Diagram

### 4.3.3 Main Algorithm

The project's main algorithm outlines how tasks function for every user, FYP Lecturers, Students, and Supervisors. This is explained on each web page, providing clear details about the specific roles of each user in the workflow.

#### i. General Flowchart

The flowchart in Figure 4.32 illustrates the general flow starting from the landing page and navigation after successful login, based on the respective user types.



**Figure 4.34** FYPMS entity-relationship diagram

After successfully logging in, FYP lecturers will be directed to the Insight page, providing them with valuable analytical data. Students, on the other hand, will land on the Dashboard page, offering a comprehensive overview of their FYP related information. Meanwhile, upon logging in, supervisors are seamlessly

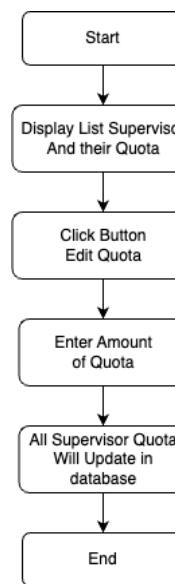
directed to the Supervisee page, their central hub for effortlessly viewing and managing students under their supervision.\

## ii. FYP Lecturer Flowchart

In this section of FYP lecturers flowchart focus on two key functionalities, Manage Supervisor Quota and Manage Task and Batch Information.

- **Manage Supervisor Quota**

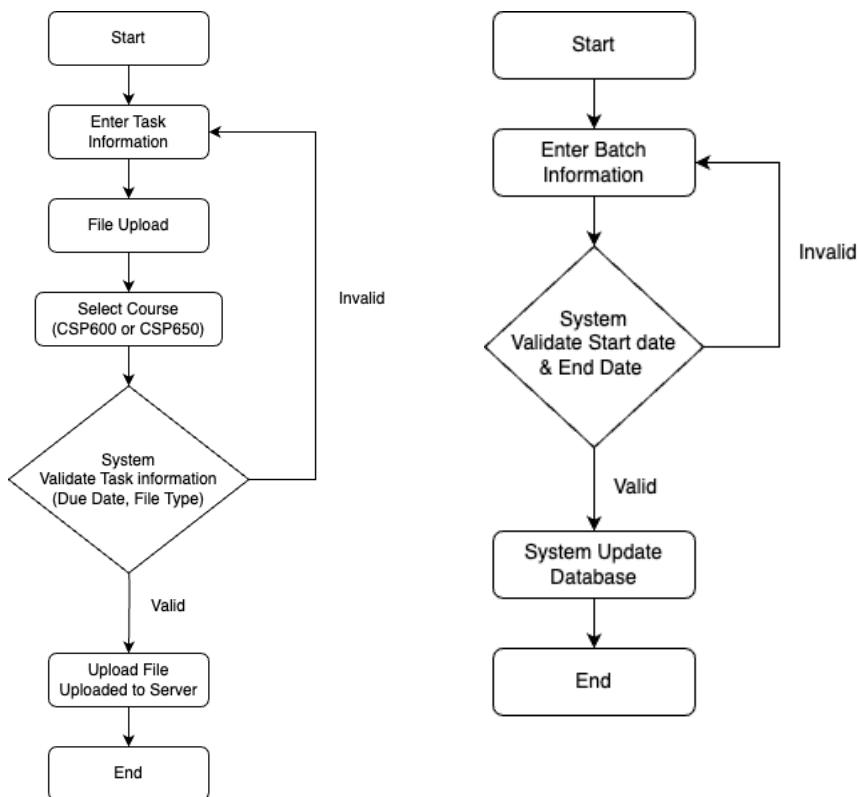
Figure 4.36 outlines the process through which FYP lecturers can seamlessly edit quotas for supervisors, providing a visual guide to the steps involved in adjusting and managing supervisory allocations within the system.



**Figure 4.35** FYP Lecturer Edit Quotas Supervisor

- **Manage Task and Batch Information**

Figure 4.37 illustrates the process where FYP lecturers create new tasks by entering task information and selecting the course. The system subsequently validates the task information, ensuring it includes the required file types. In Figure 4.38, the depicted process showcases how FYP lecturers create new batches, providing a comprehensive visual guide to the steps involved in initiating and validating these essential components within the Final Year Project Management System.



**Figure 4.36** FYP Lecturer Create Task

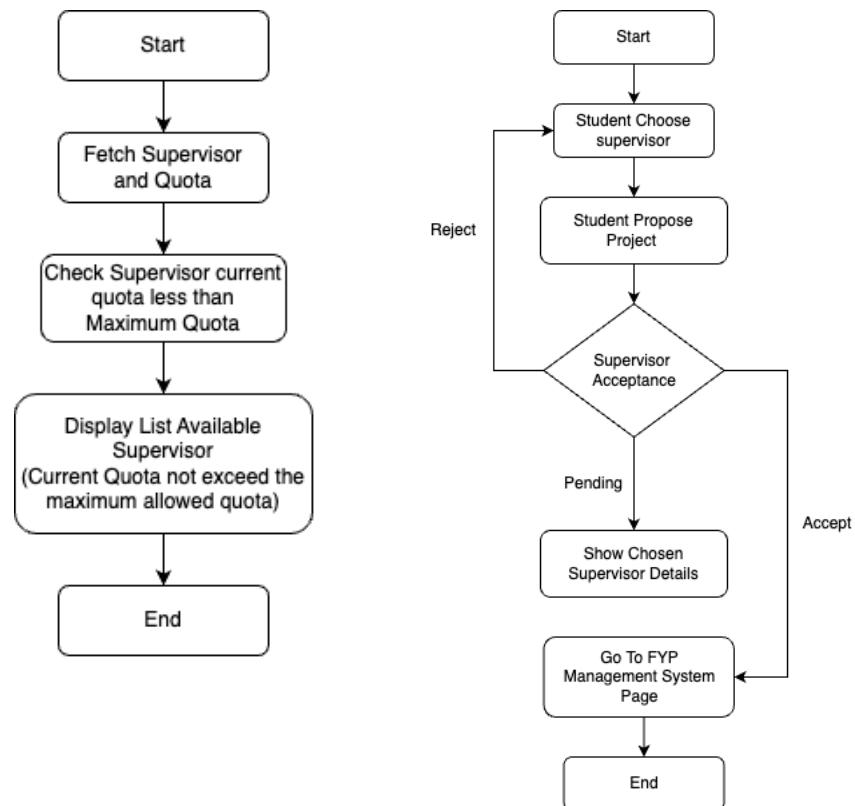
**Figure 4.37** FYP Lecturer Update Batch

### iii. Student

In this section, the flowchart illustrates the supervisory process for students, providing a visually engaging representation of how supervisors interact with students throughout the supervision process.

- **Supervisor Application**

In Figure 4.39, the visual depiction precisely outlines how the system showcases the page for students to choose their supervisors, providing a clear and illustrative insight into the process of displaying data within the system interface. Moving to Figure 4.40, the process unfolds as students make their supervisor selections, and upon the supervisor's acceptance of the proposed project, students seamlessly transition to the Student FYP Management System. This visual representation elucidates the user experience in an intuitive and engaging manner.



**Figure 4.38** Student Apply Supervisor

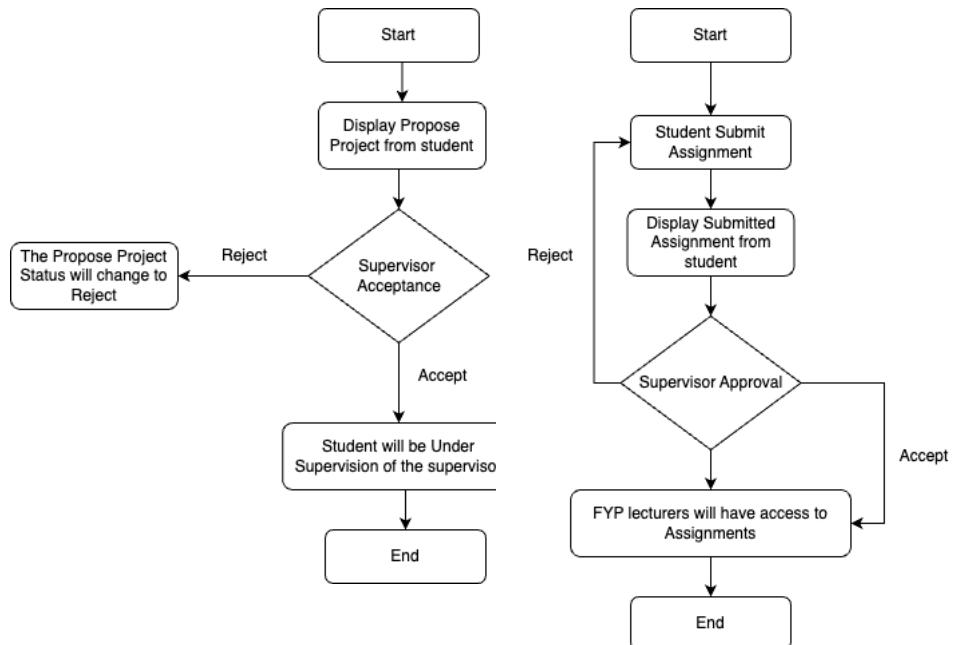
**Figure 4.39** Supervisor Application Result

#### iv. Supervisor

In this section, the spotlight is on two pivotal aspects for supervisors: "Supervision Acceptance and Assignment Approval" and "Supervisor Creating Task." These highlighted features encapsulate critical functionalities, emphasizing the supervisor's role in accepting supervisions and approving assignments, as well as their pivotal involvement in creating tasks.

- **Supervision Acceptance and Assignment Approval**

Figure 4.41 outlines the flow of proposed projects within the supervisor's interface. If rejected, the project remains in the proposal project list with status reject however, upon acceptance, the proposing student seamlessly transitions into the role of a supervisee under the respective supervisor. Moving to Figure 4.42, the depicted process revolves around approving submitted student assignments, presenting a clear and intuitive representation of the approval workflow within the Final Year Project Management System.

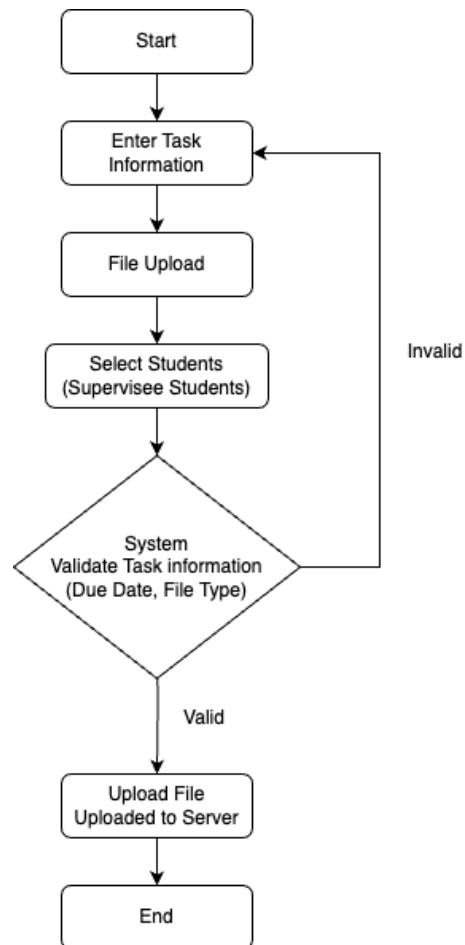


**Figure 4.40** Supervision Acceptance

**Figure 4.41** Supervisor Approval of Submitted Student Assignments

- **Supervisor Creating Task**

Figure 4.43 gracefully illustrates the step-by-step process wherein a supervisor creates tasks for their supervisees. In this workflow, supervisors seamlessly enter task information and select specific students to assign tasks. This visual representation provides a clear and intuitive insight into the meticulous steps involved in the task creation process within the Final Year Project Management System.



**Figure 4.42** Supervisor Create Task for Their Desired Supervisee

#### 4.3.4 Code Snippet

This section explores intricate aspects of FYPMS development, featuring selected code snippets that demanded meticulous attention and substantial time investment for completion. While numerous complex codes contributed to the system, only a few snippets are highlighted here to illustrate the challenges encountered and the solutions devised. These excerpts encapsulate crucial functionalities and intricate operations, offering insights into the technical intricacies inherent in the coding process.

```
1 function getBatchIdByCategory($batchCategory, $conn)
2 {
3     $sql = "SELECT batch_id FROM batches WHERE batch_category = ?";
4     $stmt = $conn->prepare($sql);
5
6     if (!$stmt) {
7         die("Error preparing the statement: " . $conn->error);
8     }
9
10    $stmt->bind_param("s", $batchCategory);
11    $stmt->execute();
12
13    $result = $stmt->get_result();
14
15    if ($result->num_rows == 1) {
16        $row = $result->fetch_assoc();
17        return $row['batch_id'];
18    }
19
20    return null;
21 }
```

Figure 4.43 Function to Get batch\_id from the Selected batch\_category

```
1 // Get the default batch_id for CSP600
2 $defaultBatchId = getBatchIdByCategory('CSP600', $conn);
3
4 // If no batch_category is selected, set the default to CSP600 batch_id
5 $selected_option = isset($_GET['batch_category']) ? $_GET['batch_category'] : $defaultBatchId;
```

Figure 4.44 Default batch\_category If No Batch Selected from the User

```

1 <div class="bg-gray-900 flex items-center">
2   <label for="batchForm" class="block text-xl font-sm text-gray-300 mr-4">Course:</label>
3   <form id="batchForm" method="GET">
4     <select name="batch_category" id="countries"
5       class="text-sm rounded-md block p-2 bg-gray-700 border-gray-600 placeholder-gray-400 text-white"
6       onchange="submitForm()">
7       <?php
8         // Fetch batch_id based on batch_category
9         $csp600BatchId = getBatchIdByCategory('CSP600', $conn);
10        $csp650BatchId = getBatchIdByCategory('CSP650', $conn);
11      ?>
12      <option
13        value="<?php echo $csp600BatchId; ?>" <?php echo ($selected_option == $csp600BatchId) ? 'selected' : ''; ?>>CSP600
14      </option>
15      <option
16        value="<?php echo $csp650BatchId; ?>" <?php echo ($selected_option == $csp650BatchId) ? 'selected' : ''; ?>>CSP650
17      </option>
18    </select>
19  </form>
20 </div>
21 <script>
22   function submitForm() {
23     document.getElementById("batchForm").submit();
24   }
25 </script>

```

**Figure 4.45 Option Tag to Select batch\_category**

In Figure 4.41, the PHP function `getBatchIdByCategory` is introduced, revealing the intricacies of retrieving the `batch_id` from the database based on a specified `batch_category`. This pivotal function, integral to the FYPMS, employs parameterized SQL queries for accurate result retrieval. The development of this function involved numerous trial-and-error iterations to fine-tune SQL queries, reflecting the challenges in seamlessly integrating PHP with database interactions.

Figure 4.42 demonstrates the implementation of a default batch category selection, emphasizing the complexity of handling user choices and defaults within the system. Providing a default `batch_id` for the 'CSP600' category required meticulous testing and adjustment, reflecting the persistent efforts in overcoming challenges associated with user selection defaults. Lastly, Figure 4.43 illustrates the user interface for selecting batch categories, showcasing the intricate integration of PHP and JavaScript to dynamically generate options based on unique `batch_id` values. The development of this dynamic user interface involved multiple iterations and troubleshooting sessions to refine the interaction between PHP and JavaScript.

```

1
2 <?php
3   $sql = "SELECT
4     t.task_id,
5     t.task_title,
6     t.task_date_due,
7     b.batch_category,
8     t.task_sv_id,
9     COUNT(ts.task_submission_id) AS num_submitted,
10    SUM(CASE WHEN ts.submissiondate > t.task_date_due THEN 1 ELSE 0 END) AS num_late_submission,
11    (SELECT COUNT(*) FROM student s WHERE s.st_batch = t.batch_id) - COUNT(ts.task_submission_id) AS num_missing_submission
12  FROM
13    task t
14  JOIN
15    batches b ON t.batch_id = b.batch_id
16  LEFT JOIN
17    task_submission ts ON t.task_id = ts.task_id
18  WHERE
19    t.task_sv_id = ?
20  GROUP BY
21    t.task_id, t.task_title, t.task_date_due, b.batch_category, t.task_sv_id;
22  ";
23
24 $stmt = $conn->prepare($sql);
25 $stmt->bind_param("i", $supervisor_id);

```

**Figure 4.46** SQL Query to Generate Insight for FYP Lecturer Task Submission Statistic

In Figure 4.44, a sophisticated SQL query is presented, contributing to the insightful functionalities for FYP lecturers within the FYPMS. This query intricately calculates and compiles statistics, including total submitted tasks, instances of late submissions, and the count of missing submissions. It offers FYP lecturers a comprehensive overview of student task submissions, emphasizing the system's capability to provide detailed insights into student progress and adherence to deadlines. In Figure 4.45, a pivotal SQL query is presented, facilitating the display of tasks assigned to students from both their supervisors and FYP lecturers within the FYPMS. This query combines results using a UNION operation, retrieving task details such as task ID, title, creation and due dates, supervisor/FYP lecturer information, and the student's batch. The query demonstrates the system's versatility in handling tasks assigned by different entities and contributes to a seamless user experience for students seeking an overview of their assigned tasks.

```

1 $student_id = $_SESSION['user_id'];
2 $batch_id = $_SESSION['batch_id'];
3
4 $sql = "SELECT t.task_id, t.task_title, t.task_date_create, t.task_date_due, t.task_sv_id, sv.sv_name, st.st_batch
5 FROM task t
6 JOIN task_student ts ON t.task_id = ts.task_id
7 JOIN student st ON ts.student_id = st.st_id
8 JOIN supervisor sv ON t.task_sv_id = sv.sv_id
9 WHERE ts.student_id = ?
10 UNION
11
12 SELECT t.task_id, t.task_title, t.task_date_create, t.task_date_due, t.task_sv_id, fl.fl_name AS sv_name, NULL AS st_batch
13 FROM task t
14 LEFT JOIN fyp_lecturer fl ON t.task_sv_id = fl.fl_id
15 WHERE t.task_sv_id = fl.fl_id AND t.batch_id = ?
16
17 ORDER BY task_date_create DESC;
18 ";
19
20
21 $stmt = $conn->prepare($sql);
22 $stmt->bind_param("ii", $student_id, $batch_id);

```

**Figure 4.47** SQL Query to Print Tasks from Student's Supervisor and FYP Lecturer

```

1 $countTaskQuery = "SELECT
2     s.st_id,
3     COUNT(DISTINCT ts.task_id) AS total_complete_task,
4     COUNT(DISTINCT t.task_id) + COUNT(DISTINCT tstu.task_id) AS total_assigned_task
5 FROM
6     student s
7 LEFT JOIN
8     task_submission ts ON s.st_id = ts.student_id
9 LEFT JOIN
10    (
11        SELECT t1.task_id, t1.batch_id
12        FROM task t1
13        JOIN student s ON t1.batch_id = s.st_batch
14    UNION
15        SELECT t2.task_id, t2.batch_id
16        FROM task_student tstu
17        JOIN task t2 ON tstu.task_id = t2.task_id
18        JOIN student s ON tstu.student_id = s.st_id
19        ) t ON t.batch_id = s.st_batch
20 LEFT JOIN
21     task_student tstu ON s.st_id = tstu.student_id
22 WHERE
23     s.st_id = ?
24 GROUP BY
25     s.st_id";

```

**Figure 4.48** SQL Query for Generating Pie Chart Visualization of Student Tasks

Figure 4.46 showcases a separate SQL query tailored for generating a pie chart visualization within the FYPMS interface. This chart serves as a valuable tool for students, enabling them to visually monitor their task completion progress. The query efficiently retrieves data related to completed and assigned tasks, showcasing the

system's commitment to delivering a user-friendly and informative experience for both FYP lecturers and students.

On the other hand, Figure 4.47 encapsulates essential PHP code responsible for storing files on the server. This code segment is integral to the FYPMS operation, ensuring that uploaded files associated with tasks are appropriately handled and saved. The code orchestrates the insertion of file details, such as file name, type, uploader ID, and file path, into the database. Additionally, it manages the physical movement of the uploaded file to the server directory, guaranteeing successful storage. This process, crucial for the system's file management functionality, highlights the meticulous handling of file-related operations within the FYPMS.

```
1 if ($stmtTask->execute()) {
2     // Get the task_id that was just inserted
3     $task_id = $pdo->lastInsertId();
4
5     $file_name = $_FILES["files"]["name"];
6     $file_path = $uploadDirectory . $file_name;
7
8     $file_type = 'tfypl'; // tfypl = task fyp lecturer
9     $file_name = $file_type . '_' . $task_id . '_' . $_FILES["files"]["name"];
10
11    // Insert file data into the file_path table using the retrieved task_id and updated file name
12    $sqlFile = "INSERT INTO file_path (file_name, type_id, file_type, file_uploader_id, file_path)
13        VALUES (?, ?, ?, ?, ?)";
14    $stmtFile = $pdo->prepare($sqlFile);
15    $stmtFile->bindParam(1, $file_name);
16    $stmtFile->bindParam(2, $task_id);
17    $stmtFile->bindParam(3, $file_type);
18    $stmtFile->bindParam(4, $uploader_id);
19    $stmtFile->bindParam(5, $file_path);
20
21    // Move the uploaded file to the server directory with the updated file name
22    if (move_uploaded_file($_FILES["files"]["tmp_name"], $uploadDirectory . $file_name)) {
23        if (!$stmtFile->execute()) {
24            $uploadSuccessful = false;
25            $Message = 'Error: Failed to insert file details into the ok.';
26        }
27    } else {
28        $uploadSuccessful = false;
29        $Message = 'Error: Failed to move the uploaded file to the server directory.';
30    }
```

Figure 4.49 PHP Code for Storing Files on the Server

## 4.4 System Testing

During this phase, a systematic approach is employed to verify whether the system performs its intended functions effectively for the main users, FYP Lecturers, students, and supervisors. Emphasis is placed on evaluating system functionality to ensure that each user can navigate the system effortlessly and carry out essential tasks without encountering issues. Rigorous testing is conducted to identify and address any potential problems, ensuring the system's reliability and user-friendliness.

- **Testing Session Overview:**

The system testing session, conducted on January 26, 2024, was executed through an online platform using Google Meet. The session extended for more than an hour and engaged a total of 18 participants, encompassing two FYP lecturers, five supervisors, and 10 students-representing all three main user types of the FYPMS. The primary objectives of the session were to gather feedback on the system's functionality and usability. Figure 4.50 shows the Google Meet session.

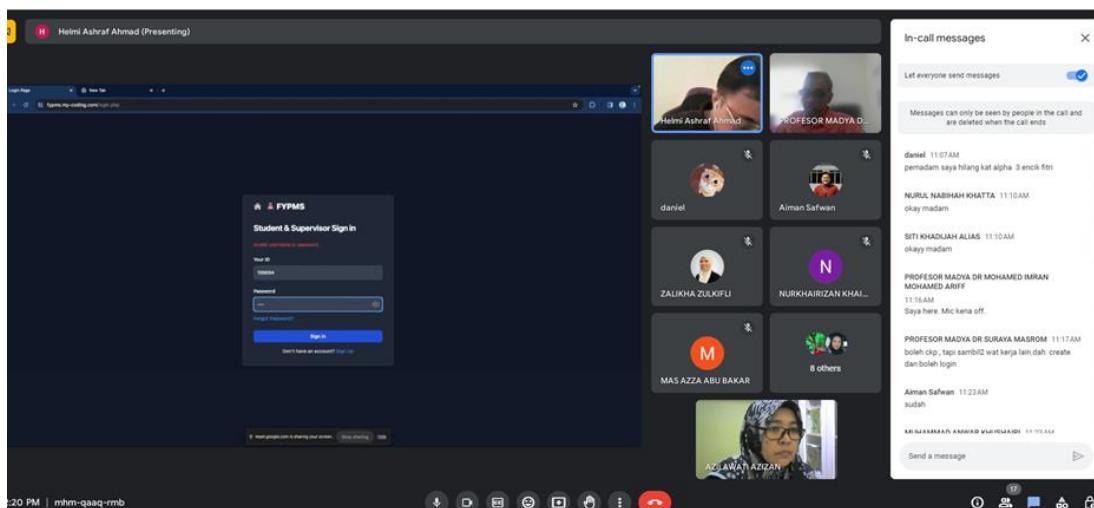


Figure 4.50 FYMS Testing Session Through Google Meet

- **Testing Environment:**

The decision to conduct the testing session online via Google Meet was strategic. This approach aimed to simulate the real-world scenario where the system can be accessed from various locations simultaneously. It is intrinsic to the system's nature, particularly once it is published and fully functional. Moreover, the online testing was consolidated

into a single time slot, gathering all users concurrently. This deliberate choice showcased real-time processing and system responses.

- **Consent Form:**

Before commencing the testing session, participants were presented with a consent form, as illustrated in Figure 4.51 and Figure 4.52. This step ensured ethical considerations were met, and participants willingly agreed to take part in the testing process.

 <p style="margin: 0;">UNIVERSITI TEKNOLOGI MARA</p>	<p style="margin: 0;">Cawangan Perak Kampus Tapah</p>						
<b>SYSTEM TESTING PARTICIPATION CONSENT FORM</b>							
							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;"><b>Project title</b></td> <td style="width: 70%; padding: 5px;">FINAL YEAR PROJECT MANAGEMENT SYSTEM (FYPMS)</td> </tr> <tr> <td style="padding: 5px;"><b>Researcher</b></td> <td style="padding: 5px;">HELMI ASHRAF BIN AHMAD</td> </tr> <tr> <td style="padding: 5px;"><b>Participants name</b></td> <td style="padding: 5px;"></td> </tr> </table>		<b>Project title</b>	FINAL YEAR PROJECT MANAGEMENT SYSTEM (FYPMS)	<b>Researcher</b>	HELMI ASHRAF BIN AHMAD	<b>Participants name</b>	
<b>Project title</b>	FINAL YEAR PROJECT MANAGEMENT SYSTEM (FYPMS)						
<b>Researcher</b>	HELMI ASHRAF BIN AHMAD						
<b>Participants name</b>							
<p>Thank you for agreeing to be involved as participant of the above system project testing. The testing estimated 30-60 minutes to be completed. This testing form is crucial for assessing and validating the functionalities of the Final Year Project Management System. Through this comprehensive evaluation, the researcher aims to ensure the reliability, efficiency, and seamless performance of the system. Your input and feedback are invaluable in enhancing the overall quality and user experience of the project management platform.</p>							
<p>By signing this form, I agree that:</p>							
<ul style="list-style-type: none"> <li>• I am voluntarily taking part in this system project testing.</li> <li>• I don't expect to receive any benefit or payment for my participation.</li> <li>• I have been able to ask any questions.</li> </ul>							
<b>Participant signature</b>							
<b>Date</b>							

**Figure 4.51** System Testing Participation Consent Form

Researcher signature	
Date	

**Figure 4.52** System Testing Participation Consent Form (Cont.)

#### 4.4.1 Functionality Test

The aim of the functionality test for the FYPMS is to thoroughly assess the system's operational capabilities and ensure that it fulfills its intended functions effectively. This testing phase is designed to validate the functionality across all user types - FYP Lecturers, Supervisors, and Students. By systematically evaluating each feature and aspect outlined in the test forms, the goal is to guarantee a reliable and user-friendly experience for all users interacting with the FYPMS.

In preparation for the testing session, three distinct sets of functionality test questions were carefully designed to cater to the diverse needs of FYP lecturers, supervisors, and students. The functionality test questionnaires were distributed to the participants through an online survey form using jotform.com services. The subsequent section outlines the specific functionality test items and questions that were prepared and utilized during the testing session.

- **FYP Lecturer Functionality Test**

Table 4.1 presents the functionality test form specifically crafted for FYP Lecturer. Comprising 8 main sections, it encompasses a comprehensive evaluation of 26 functionality terms.

**Table 4.1** Functionality testing for FYP lecturer

Section	Function	Expected Result	Actual Result		Comment/ Remark
			✓	X	
Authentication	Login	can log in using valid credentials			
Insight	View insight details	can view detailed insights and analytics related to the final year projects.			
Assignment	Create assignment	can create a new assignment for students.			
	View assignment details	can view details of a specific assignment.			
	View submitted assignment	can view a list of assignments submitted by students.			
	Delete assignment	can delete an assignment.			

	Update assignment	can edit and update assignment details.		
Document	Upload document	can upload documents related to the final year project.		
	View document details	can view details of a specific document.		
	View submitted document	can view a list of documents submitted by students.		
	Delete document	can delete a document.		
	Update document	can edit and update document details.		
Task	Create task	can create a new task for students.		
	View task list	can view a list of tasks.		
	View task details	can view details of a specific task.		
	View submitted task	can view a list of tasks submitted by students.		
	Delete task	can delete a task.		
	Update task	can edit and update task details.		
Student	View student list	can view a list of students participating in the final year project		
	View student details	can view detailed information about a specific student.		
Lecturer	View lecturer	can view a list of other lecturers.		
	View Lecturer details	can view detailed information about a specific lecturer.		
	Update all lecturer quota	can update the quota for all lecturers.		
	Update specific lecturer	can update the quota for a specific lecturer.		
FYPMS Setting	View Batch	can view information about the batch of final year projects.		
	Update Batch (FYP Lecturer Admin)	FYP lecturer, with administrative privileges, can update batch information		

- **Supervisor Functionality Test**

In a parallel manner, Table 4.2 exhibit the functionality test form tailored for supervisors. This form also consists of 8 main sections, covering a total of 18 functionality items.

**Table 4.2** Functionality Testing for Supervisor

Section	Function	Expected Result	Actual Result		Comment/ Remark
			✓	✗	
Register	Register and verify via email	Successfully registers with valid information. An email is sent for verification. Upon verification, the user gains access to the system.			
Authentication	Login	Can log in using valid credentials, gaining access to the system dashboard.			
Forgot Password	Send new password via email	Requests a new password, and a reset link is sent to their registered email. The user can use the link to set a new password.			
Supervisee	View supervisee	Can view a list of their supervisees.			
	View, create, update, and delete supervisee timeline	Can view, create, update, and delete timelines for their supervisees.			
	Unlink supervisee	Can unlink a supervisee from their profile, removing the supervisory relationship.			
Assignment	View submitted assignment	Can see a list of assignments submitted by supervisees.			
	Approve or reject assignment	Can review assignments and choose to approve or reject them, providing feedback if necessary.			
	View assignment history	Can access a history log of all assignments, including their status and any comments.			
Task	Post task	Can create and post a new task for supervisees.			
	View task created	Can see a list of tasks they have created.			

	View task submitted	Can see a list of tasks submitted by supervisees.		
	Delete task	Can delete a task they created.		
Propose project	View proposes project	Can view a list of proposed projects from supervisees.		
	Accept or reject propose project	Can review proposed projects and choose to accept or reject them, providing feedback if necessary.		
Profile	View profile	Can view their profile information.		
	Update profile	Can edit and update their profile information.		
	Change password	Can change their password for account security.		

- **Student Functionality Test**

Concurrently, Table 4.3 provides insights into functionality test form designed for students. With an extensive scope, it is organized into sections, encompassing the testing of 21 functionality items.

**Table 4.3** Functionality Testing for Student

Section	Functions	Expected Result	Actual Result		Comment/ Remark
			✓	✗	
Register	Register and verify via email	successfully registers with valid information. An email is sent for verification. Upon verification, the student gains access to the system.			
Authentication	Login	can log in using valid credentials, gaining access to the system dashboard.			
Forgot Password	Send new password via email	requests a new password, and a reset link is sent to their registered email. The student can use the link to set a new password.			
Available supervisor	Choose supervisor	can choose a supervisor from the available list.			
	Propose project	can propose a project to their chosen supervisor.			
Application Result	View application status	can view the status of their project proposal/application.			
Dashboard	Pie chart for assignment and task	can view a graphical representation (pie chart) of their assignments and tasks.			
	Visualization list document	can see a list of visualized documents related to the final year project.			
	View Gantt chart provided by supervisor	can view a Gantt chart provided by their supervisor for project timeline visualization.			
Assignment	View assignment and the details	can view details of assignments they have been given.			
	Submit assignment	can submit completed assignments.			

	View submitted assignment and status	can view a list of submitted assignments along with their status		
Document	View document and the details	can view details of documents related to the final year project.		
	Submit and view submitted document	can submit documents and view a list of submitted documents.		
	Unsubmitted document	can view a list of documents that have not been submitted.		
Task	View task and the details	can view details of tasks assigned to them.		
	Submit and view submitted task	can submit tasks and view a list of submitted tasks.		
	Unsubmitted task	can unsubmitted a tasks that have been submitted		
Profile	View profile	can view their profile information.		
	Update profile and FYP details	can update their profile information and Final Year Project details.		
	Change password	can change their password for account security.		

#### **4.4.2 Usability Test**

In this section, the usability questionnaire is presented, tailored to gather insights from three distinct user groups: FYP lecturers, students, and supervisors. All the questionnaires were administered through Google Forms, ensuring a streamlined and efficient data collection process.

- FYP lecturer Usability Test**

In this section, Table 4.4 presents a questionnaire meticulously tailored for FYP lecturers, encompassing a total of 9 thoughtfully crafted questions.

**Table 4.4** FYP Lecturer Questionnaire

No.	Questioners	Strongly Disagree					Strongly Agree				
		1	2	3	4	5	6	7	8	9	10
1	How easy was it for you to log in and authenticate into the system?	<input type="radio"/>									
2	Did you find it straightforward to view detailed insights into the final year projects?	<input type="radio"/>									
3	Were you able to easily create, update, delete and view submitted assignments?	<input type="radio"/>									
4	Rate your experience in uploading, updating, deleting and view submitted documents.	<input type="radio"/>									
5	Rate the ease of creating, updating, deleting and view submitted tasks.	<input type="radio"/>									
6	Evaluate the process of viewing the student list and details.	<input type="radio"/>									
7	Rate your experience in viewing and updating lecturer details and quota.	<input type="radio"/>									
8	Evaluate the ease of viewing batch information.	<input type="radio"/>									
9	Are you the FYP lecturer admin? if yes, evaluate the ease of viewing and updating batch information.	<input type="radio"/>									

- Student Usability Test**

Table 4.5 presents a questionnaire tailored for students, encompassing 8 thoughtfully curated questions.

**Table 4.5** Student Questionnaire

No.	Questioners					
		Strongly Disagree	1	2	3	4
1	How user-friendly was the registration and login process?	<input type="radio"/>				
2	Were you able to easily reset your password if needed?	<input type="radio"/>				
3	Rate the process of choosing a supervisor and proposing a project.	<input type="radio"/>				
4	How straightforward was it to view the status of your project application?	<input type="radio"/>				
5	Rate the user-friendliness of the dashboard, including pie charts, visualize done document and Gantt charts.	<input type="radio"/>				
6	Evaluate the ease of submitting and viewing status, assignments.	<input type="radio"/>				
7	Evaluate the ease of viewing, submitting, and managing documents, and tasks.	<input type="radio"/>				
8	Evaluate the process of viewing and updating your profile and FYP details.	<input type="radio"/>				

- **Supervisor Usability Test**

Table 4.6 displays a questionnaire designed for supervisors, featuring 8 carefully formulated questions.

**Table 4.6** Supervisor Questionnaire

No.	Questioners					
		Strongly Disagree	1	2	3	4
1	How user-friendly was the registration and login process?	<input type="radio"/>				
2	Were you able to easily reset your password if needed?	<input type="radio"/>				
3	Rate your experience in viewing proposed projects and accept or reject them.	<input type="radio"/>				
4	Rate your experience in viewing, creating, updating, and deleting supervisee timelines.	<input type="radio"/>				
5	How straightforward was it to unlink a supervisee?	<input type="radio"/>				
6	Evaluate the process of viewing, approve or reject assignment and view assignment history.	<input type="radio"/>				
7	Evaluate the process of posting, viewing, deleting tasks and view submitted of the item.	<input type="radio"/>				

8	How easy was it to view and update your profile information?	<input type="radio"/>				
---	--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

## 4.5 Deployment

To facilitate the widespread deployment of the FYPMS, catering to the needs of FYP lecturers, supervisors, and final year students, the platform is strategically hosted through JOMHosting, as illustrated in Figure 4.48. The chosen hosting plan, a 5GB option priced at RM90.00 per year, provides a robust infrastructure for optimal performance. Efficient database management, as demonstrated in Figure 4.49, is facilitated through the use of phpMyAdmin on the hosting server. The deliberate selection of shared hosting proves to be a strategic decision, enabling the creation of unlimited subdomains at a reasonable cost. Consequently, the designated domain for FYPMS is [www.fypms.my-coding.com](http://www.fypms.my-coding.com), as depicted in Figure 4.50.

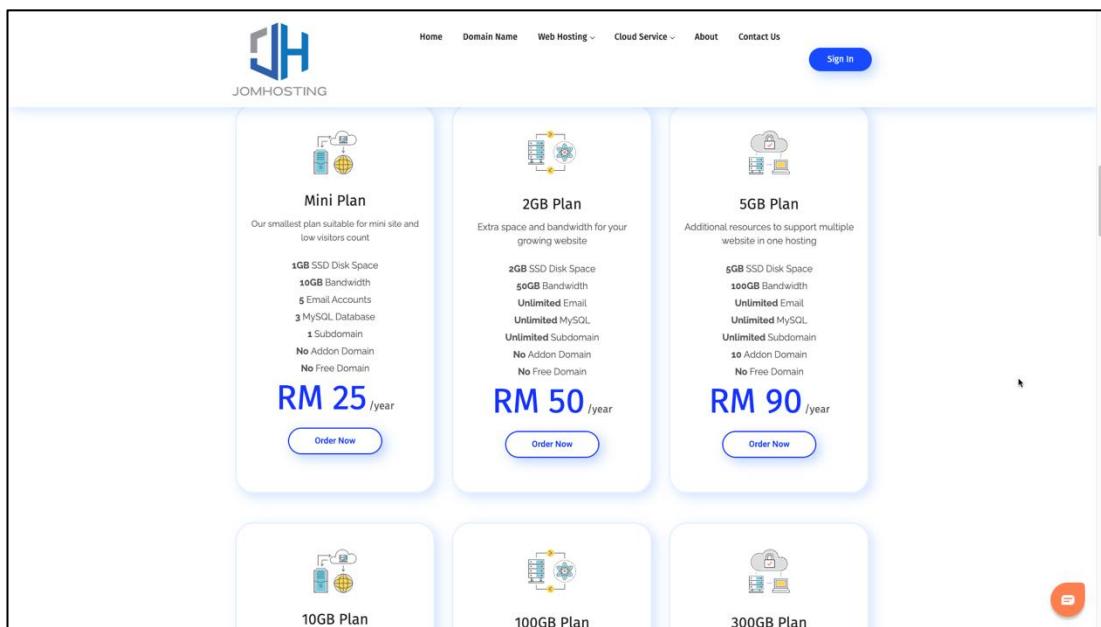


Figure 4.53 JOMHosting Web Hosting plan for the FYPMS

This hosting plan also offers the advantage of unlimited email accounts, as illustrated in Figure 4.51, providing a valuable resource for future FYPMS enhancements, including the prospective implementation of notification systems and communication notices for users. This comprehensive hosting strategy establishes a reliable and scalable foundation, ensuring continuous improvement and enhanced accessibility for the FYPMS platform.

Server: localhost:3306 > Database: mycoding\_fypms

Table	Action	Rows	Type	Collation	Size	Overhead
assignment	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
assignment_submission	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
batches	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
document	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
document_submission	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
file_path	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
fyp_lecturer	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	2	InnoDB	utf8mb4_general_ci	16.0 KiB	-
gannt_chart	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	1	InnoDB	utf8mb4_general_ci	32.0 KiB	-
gannt_chart_task	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
project	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
student	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	4	InnoDB	utf8mb4_general_ci	16.0 KiB	-
supervise	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
supervisor	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	5	InnoDB	utf8mb4_general_ci	16.0 KiB	-
task	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
task_student	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
task_submission	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
user	<a href="#">Browse</a> <a href="#">Structure</a> <a href="#">Search</a> <a href="#">Insert</a> <a href="#">Empty</a> <a href="#">Drop</a>	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<b>17 tables</b>		<b>Sum</b>			<b>39 InnoDB latin1_swedish_ci 320.0 KiB</b>	<b>0 B</b>

With selected:

Figure 4.56 FYPMS Database in phpMyAdmin on the Hosting Platform

cPanel

- Tools
- WP Toolkit
- Site Quality Monitoring
- WordPress Manager by Softaculous

Domains

List Domains

Use this interface to manage your domains. For more information, read the [documentation](#).

Displaying 1 through 1 out of 1 item

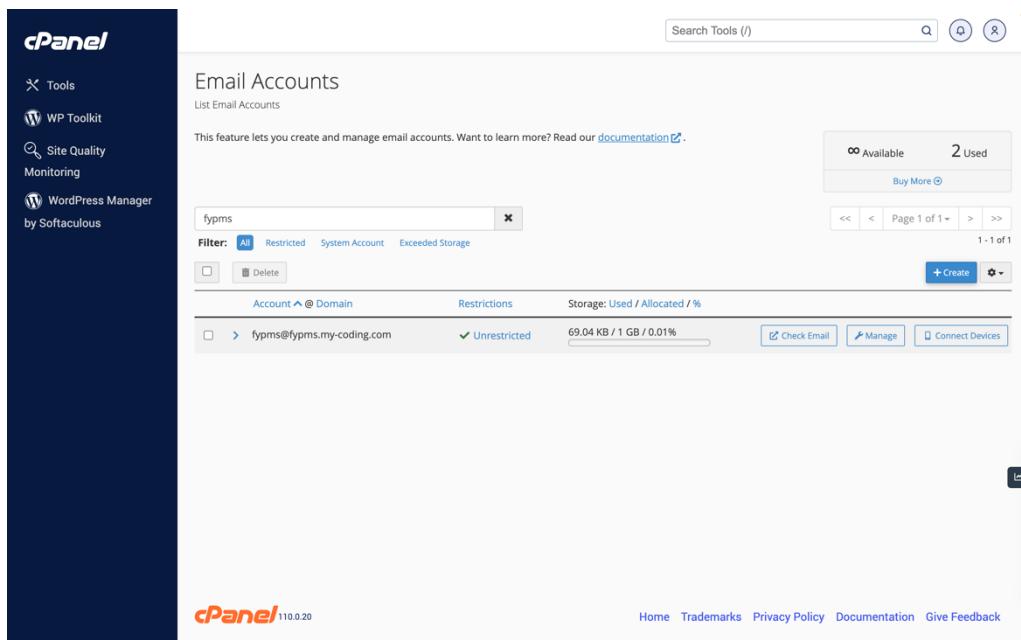
Enable Force HTTPS Redirect

Domain	Document Root	Redirects To	Force HTTPS Redirect	Actions
<a href="#">fypms.my-coding.com</a>	<a href="#">/fypms</a>	Not Redirected	<input checked="" type="checkbox"/> On	<a href="#">Manage</a> <a href="#">Create Email</a>

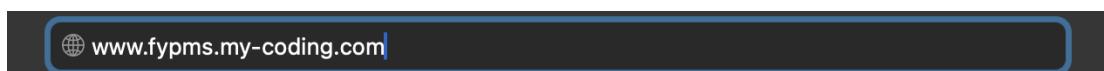
cPanel 110.0.20

Home Trademarks Privacy Policy Documentation Give Feedback 1,439 833

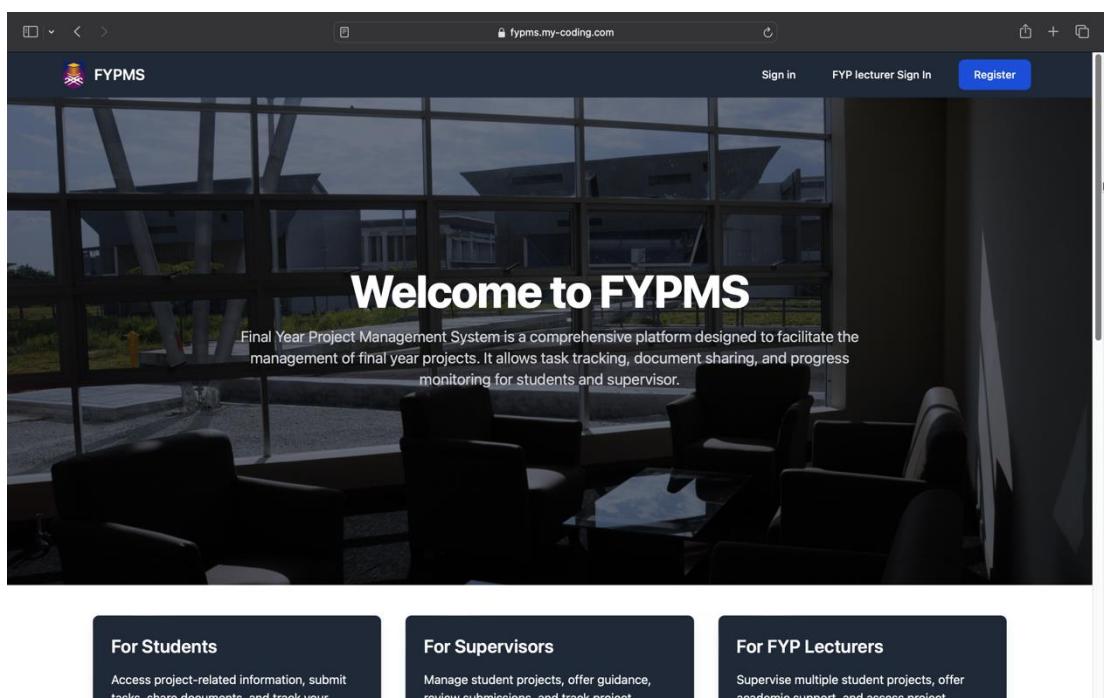
Figure 4.57 FYPMS Domain Name



**Figure 4.58** Email Account for FYPMS



**Figure 4.59** Domain for FYPMS in the browser



**Figure 4.60** Landing Page of FYPMS After Search the Domain Name

## **4.6 Result and Finding**

In this section, present the results and findings encompassing functionality, usability, and overall evaluation for the FYPMS.

### **4.6.1 Functionality test Result**

During the functionality testing phase, the FYPMS exhibited promising results with feedback from 10 respondents, including 2 from FYP lecturers, 3 from students, and 5 from supervisors. The majority expressed satisfaction with the system's functionality. Some participants provided constructive suggestions for improvement, including the ability to create three accounts with the same email and the incorporation of labels for "start date" and "end date" when creating and updating tasks in the Gantt chart for students. Furthermore, participants emphasized the importance of allowing supervisors to add comments or upload commented documents to submitted tasks.

### **4.6.2 Usability test result**

Usability testing unequivocally affirmed the user-friendly design of the FYPMS, eliciting notable satisfaction from FYP lecturers, supervisors, and final-year students regarding the system's interface. Of the 18 respondents, the majority strongly agreed, giving a rating of 5 for questions across all user types. This underscores the clarity and logical organization of navigational elements, contributing significantly to an overwhelmingly positive usability experience.

### **4.6.3 Overall Findings**

Despite suggestions for improvement in specific areas, the overall respondent sentiment toward the FYPMS was positive. The system's intuitive and appealing design across FYP lecturer, supervisor, and student interfaces garnered appreciation. The findings underscore the system's effectiveness and highlight opportunities for refinement to enhance user experiences further.

#### **4.7 Summary**

In summary, this chapter provides an overview of the development journey undertaken for the FYPMS. It begins with preliminary activities, encompassing the installation of foundational technologies like Tailwind CSS framework, Chart.js library, and Highcharts library. The subsequent phase involves interface design, transitioning from initial drafts using Figma to the finalized web appearance. Project implementation follows, detailing essential elements such as main use cases, Entity-Relationship Diagrams (ERD), general flowcharts, and detailed flowcharts for specific operations. Notably, crucial and intricate code snippets are also presented. Post-development, thorough testing is conducted to ensure the system meets the functional needs of FYPMS users. The deployment phase follows, allowing the system to be publicly accessible. The final segment delves into a comprehensive finding, incorporating user testing data and discussing results pertaining to functionality and usability.

# **CHAPTER 5**

## **CONCLUSION AND RECOMMENDATION**

This chapter offers a thorough exploration of the FYPMS, providing a comprehensive overview and reflective analysis of the entire research journey. The chapter commences with a concise summary of the project's objectives and methodologies, seamlessly transitioning into an insightful discussion on pivotal findings and contributions. It critically assesses project limitations, offering a roadmap for future work and enhancing the reader's understanding of the FYPMS's evolution, accomplishments, challenges, and prospects.

### **5.1 Project Summary**

Embarking on the journey to enhance the efficiency of final year project management, the project introduced a comprehensive platform to empower the FYP Lecturers, supervisors, and students. For FYP lecturers, the project aimed to streamline the coordination of the overall FYP process. The system provides FYP lecturers with a centralized platform to manage and oversee the various stages of final year projects. This includes features for supervising batch of students and tracking project timelines. The FYPMS offers valuable insights through overall analytics, providing FYP lecturers with essential information for effective coordination and management. Additionally, FYP lecturers can utilize the platform to assign assignments, tasks, and documents, as well as manage student and supervisor details, including supervision quotas. The goal is to empower FYP lecturers in efficiently guiding students through their projects, fostering collaboration, and ensuring a smooth and organized FYP process.

The FYPMS project extends its benefits to supervisors by offering them tools to guide and supervise their students effectively. Supervisors have access to view student's project timelines and provide feedback. Moreover, FYPMS provides a proper supervisee selection process, enabling supervisors to make informed decisions when choosing students to guide through their final year projects. Additionally, supervisors

can leverage the platform to create assignments and tasks. These features enhance the overall supervisory experience, ensuring efficient communication between supervisors and students, and giving a more streamlined and collaborative FYP experience for supervisors.

Furthermore, the project provides a user-friendly platform to enhance final year projects for students. This platform allows easy access to important information about potential supervisors, including availability, academic backgrounds, and specific research expertise. These help the students to make better decisions based on their preferences. Additionally, a dedicated dashboard assists students in tracking assignment and project progress efficiently. The project aims to create a seamless and enhanced final year project experience by simplifying the supervisor selection process and providing a centralized hub for progress monitoring within the FYPMS.

## 5.2 Project Findings

The project objectives and findings are documented in Table 4.7, showcasing the results obtained from the three predefined objectives. The first objective was accomplished upon the identification of all FYP procedures and processes. Subsequently, the second objective was achieved following the successful deployment of the FYPMS. Finally, the third objective was attained after the FYPMS underwent meticulous testing and evaluations.

**Table 4.7** Project Objective and Findings

Project Objective	Findings
<b>Objective 1:</b> To identify the procedures and processes there are involved in CS230 FYP.	<b>Deliverable 1:</b> Referencing the book "Essentials of Computer Science Project Administration (4th Edition)," the procedure is identified and outlined in accordance with the insights and methodologies provided in this authoritative source.

	<p><b>Finding 1:</b> One significant observation is the presence of an extensive set of documents that must be submitted at various stages throughout the FYP development process. These documents serve as essential artifacts, capturing the progress, methodologies, and outcomes of the FYP. They include project proposals, progress reports, and final documentation. Navigating through these documentation requirements demands a thorough understanding of the procedural intricacies inherent in the CS230 FYP.</p>
<p><b>Objective 2:</b> To design and develop the FYP Web Management System by incorporating suitable data visualization features.</p>	<p><b>Deliverable 1:</b> involves the completion of a Figma draft, meticulously crafted prior to the commencement of actual interface development. This comprehensive draft encompasses a total of 39 designs, thoughtfully divided into 13 for FYP lecturers, 14 for supervisors, and 12 for students.</p> <p><b>Deliverable 2:</b> the successful creation of the entire user interface for FYPMS, meticulously crafted with the utilization of Tailwind CSS. This comprehensive achievement encompasses a total of 45 user interfaces, thoughtfully categorized into 18 for users, 14 for students, and 13 for supervisors.</p>

	<p><b>Deliverable 3:</b> Exploration of chart libraries commenced with Chart.js for pie charts and Gantt charts, but the latter proved challenging. Subsequently, a shift to Google Chart ensued, although limitations in customization were noted, particularly in the Gantt chart. The ultimate success was achieved by leveraging the Highchart library, which offered a seamless and aesthetically pleasing solution for data presentation.</p> <p><b>Finding 1:</b> The project has made significant strides across three key stages. Initially, a Figma draft was meticulously crafted, comprising 39 designs tailored for FYP lecturers, supervisors, and students. Subsequently, the entire user interface for FYPMS was successfully developed using Tailwind CSS, totaling 45 interfaces strategically categorized for users, students, and supervisors. In the exploration of chart libraries, challenges were encountered with Chart.js and Google Chart, particularly in customizing Gantt charts. The project ultimately triumphed with the Highchart library, offering a seamless and aesthetically pleasing solution for data presentation.</p>
<p><b>Objective 3:</b> To evaluate the FYP Web Management System using functionality testing and usability testing.</p>	<p><b>Deliverable 1:</b> comprehensive functionality testing phase was undertaken with a total of 11</p>

	<p>respondents, comprising 2 FYP lecturers, 7 supervisors, and 2 students. This rigorous testing process involved evaluating the system's functionalities across diverse user roles to ensure its seamless performance and effectiveness.</p> <p><b>Deliverable 2:</b> A thorough usability testing initiative engaged 17 respondents, including 2 FYP lecturers, 5 supervisors, and 11 students, who actively participated in answering the questionnaire. This process aimed to assess the user-friendliness and overall usability of the system, gathering valuable insights from diverse user perspectives.</p> <p><b>Finding 1:</b> Comprehensive functionality and usability testing highlighted the commendable performance of the FYPMS. Feedback from respondents emphasized the need for improvements, particularly in displaying accurate files and facilitating clearer communication flow between supervisors and students. Despite these suggestions, overall sentiment towards the FYPMS was positive. Respondents acknowledged the system's effectiveness and expressed appreciation for its intuitive and appealing design across FYP lecturer, supervisor, and student interfaces.</p>
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### **5.3 Contributions**

The project's objective is to develop a comprehensive solution for FYPMS, and throughout its completion, the following contributions were made:

- Constructed and integrated interactive Gantt charts into the FYPMS, overcoming challenges through dedicated research and API exploration.
- Developed solutions for complex data display within the FYPMS interface, enhancing system capabilities to present diverse and intricate information retrieved from the database.
- Introduced and designed user-friendly features, ensuring seamless functionality such as supervisor availability updates, project progress tracking, and task management.
- Contributed to the enhancement of system usability through logical organization and clear design, resulting in a positive experience for FYP lecturers, supervisors, and final year students.
- The successful deployment of FYPMS marks a significant milestone, ensuring that the platform is accessible and functional for all users.
- The meticulous testing and the evaluation undertaken for FYPMS contribute to its reliability, usability, and overall effectiveness in supporting final.

### **5.4 Limitation & Future Work**

While the FYPMS demonstrates robust functionality, it is essential to acknowledge certain limitations that warrant attention for future enhancements. Firstly, the system currently lacks responsiveness for mobile phones, potentially limiting user accessibility and convenience. Additionally, there is a notable absence of an evaluation mark feature for FYP lecturers, impeding the comprehensive assessment of student performance. Another constraint is the inability to insert more than one file simultaneously in assignments, documents, and tasks, whether during their creation or submission. Addressing these limitations will contribute significantly to the system's usability and effectiveness.

To propel the FYPMS towards greater efficiency and user satisfaction, several avenues for future work can be explored. Enhancing dashboard customization emerges as a critical area, with the potential to incorporate advanced features such as filters and interactive elements for pie charts and Gantt charts. Expanding the dashboard's functionality should involve enriching it with diverse project metrics, ensuring a more comprehensive overview for users. Furthermore, the inclusion of enhanced reporting and analytics capabilities would empower students and lecturers alike. Allowing FYP lecturers to assign submitted student assignments to examiners based on their expertise would facilitate collaboration and ensure a more comprehensive evaluation of the student's project reports. These future developments promise to elevate the FYP Management System, offering a more tailored and comprehensive solution for academic project management. Table 4.8 shows the project's fact and figure

**Table 4.8** Project's Fact and Figures

Fact	Figures
The total number of processes involved in FYPMS.	75 processes
The quantity of UIs designed for FYPMS.	45 UIs
The number of tables in the database constructed for FYPMS.	15 table
The count of lines of code in its entirety.	11,250 lines
The number of software tools utilized.	4
The storage size used on the webserver.	26MB
The variety of user types in FYPMS.	3

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## APPENDIX



### SYSTEM TESTING PARTICIPATION CONSENT FORM



<b>Project title</b>	FINAL YEAR PROJECT MANAGEMENT SYSTEM (FYPMS)
<b>Researcher</b>	HELMI ASHRAF BIN AHMAD
<b>Participants name</b>	Dr. Azilawati Azizan

Thank you for agreeing to be involved as participant of the above system project testing. The testing estimated 30-60 minutes to be completed. This testing form is crucial for assessing and validating the functionalities of the Final Year Project Management System. Through this comprehensive evaluation, the researcher aims to ensure the reliability, efficiency, and seamless performance of the system. Your input and feedback are invaluable in enhancing the overall quality and user experience of the project management platform.

By signing this form, I agree that:

- I am voluntarily taking part in this system project testing.
- I don't expect to receive any benefit or payment for my participation.
- I have been able to ask any questions.

Participant signature	 Signed at: 2024-01-26 18:15:41
Date	01/26/2024

Researcher signature	
Date	



#### SYSTEM TESTING PARTICIPATION CONSENT FORM



<b>Project title</b>	FINAL YEAR PROJECT MANAGEMENT SYSTEM (FYPMS)
<b>Researcher</b>	HELMI ASHRAF BIN AHMAD
<b>Participants name</b>	Nurfatin Masyura Binti Esamustafaruden

Thank you for agreeing to be involved as participant of the above system project testing. The testing estimated 30-60 minutes to be completed. This testing form is crucial for assessing and validating the functionalities of the Final Year Project Management System. Through this comprehensive evaluation, the researcher aims to ensure the reliability, efficiency, and seamless performance of the system. Your input and feedback are invaluable in enhancing the overall quality and user experience of the project management platform.

By signing this form, I agree that:

- I am voluntarily taking part in this system project testing.
- I don't expect to receive any benefit or payment for my participation.
- I have been able to ask any questions.

Participant signature		Signed at: 2024-01-26 10:59:24
Date	01/26/2024	

Researcher signature		Signed at: 2024-01-26 10:59:24
Date	01 / 26 / 2024	



#### SYSTEM TESTING PARTICIPATION CONSENT FORM



<b>Project title</b>	FINAL YEAR PROJECT MANAGEMENT SYSTEM (FYPMS)
<b>Researcher</b>	HELMI ASHRAF BIN AHMAD
<b>Participants name</b>	ZALIKHA ZULKIFLI

Thank you for agreeing to be involved as participant of the above system project testing. The testing estimated 30-60 minutes to be completed. This testing form is crucial for assessing and validating the functionalities of the Final Year Project Management System. Through this comprehensive evaluation, the researcher aims to ensure the reliability, efficiency, and seamless performance of the system. Your input and feedback are invaluable in enhancing the overall quality and user experience of the project management platform.

By signing this form, I agree that:

- I am voluntarily taking part in this system project testing.
- I don't expect to receive any benefit or payment for my participation.
- I have been able to ask any questions.

Participant signature		Signed at: 2024-01-26 11:01:51
Date	01/26/2024	

Researcher signature	
Date	1 / 26 / 2024



**Final Year Project Management System (FYPMS)  
Functionality Test**

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**Final Year Project Lecturer (FYPL) Functionality Test Item:**

Section	Function	Expected Result	Actual Result		Comment/ Remark
			✓	✗	
Authentication	Login	Can log in using valid credentials	✓		
Insight	View insight details	Can view detailed insights and analytics related to the final year projects.	✓		
Assignment	Create assignment	Can create a new assignment for students.	✓		
	View assignment details	Can view details of a specific assignment.	✓		
	View submitted assignment	Can view a list of assignments submitted by students.	✓		wrong assignment link
	Delete assignment	Can delete an assignment.	✓		
	Update assignment	Can edit and update assignment details.	✓		
Document	Upload document	Can upload documents related to the final year project.	✓		
	View document details	Can view details of a specific document.	✓		need to check the document link
	View submitted document	Can view a list of documents submitted by students.	✓		
	Delete document	Can delete a document.	✓		
	Update	Can edit and update			

	document	document details.	✓		
Task	Create task	Can create a new task for students.	✓		
	View task list	Can view a list of tasks.	✓		
	View task details	Can view details of a specific task.	✓		
	View submitted task	Can view a list of tasks submitted by students.	✓		
	Delete task	Can delete a task.	✓		
	Update task	Can edit and update task details.	✓		
Student	View student list	Can view a list of students participating in the final year project	✓		
	View student details	Can view detailed information about a specific student.	✓		
Lecturer	View lecturer	Can view a list of other lecturers.	✓		
	View Lecturer details	Can view detailed information about a specific lecturer.	✓		
	Update all lecturer quota	Can update the quota for all lecturers.	✓		
	Update specific lecturer	Can update the quota for a specific lecturer.	✓		
FYPMS Setting	View Batch	Can view information about the batch of final year projects.	✓		
	Update Batch (FYP Lecturer Admin)	FYP lecturer, with administrative privileges, can update batch information	✓		need to double check on the quota glitch

#### A. Feedback

<b>System Overall Feedback:</b>	
<p>It is impressive to see the system working. Only have minor errors on several processes and function. Really hope this system can be used efficiently in next coming semester.</p> <p>Congratulation to the developer!</p>	
Date:	26/1/2024



**Final Year Project Management System (FYPMS)  
Functionality Test**

**Supervisor - Functionality Test Item:**

Section	Function	Expected Result	Actual Result		Comment/ Remark
			✓	X	
Register	Register and verify via email	Successfully registers with valid information. An email is sent for verification. Upon verification, the user gains access to the system.	✓		-suggestion: only provide 1 sign-in for all but add an option to select role (ie. FYP Lecturer, SV, Student) -pwd setting should has "confirm pwd field"
Authentication	Login	Can log in using valid credentials, gaining access to the system dashboard.	✓		-able to has 3 account with same email
Forgot Password	Send new password via email	Requests a new password, and a reset link is sent to their registered email. The user can use the link to set a new password.	✓		since i have 3 accounts(including students when resetting pwd (based on email) i do not know which account i'm resetting.
Supervisee	View supervisee	Can view a list of their supervisees.	✓		OK
	View, create, update, and delete supervisee timeline	Can view, create, update, and delete timelines for their supervisees.	✓		OK the Start/End Label
	Unlink supervisee	Can unlink a supervisee from their profile, removing the supervisory relationship.	✓		OK
Assignment	View submitted assignment	Can see a list of assignments submitted by supervisees.	✓		OK
	Approve or reject assignment	Can review assignments and choose to approve or reject them, providing feedback if necessary.	✓		OK

	View assignment history	Can access a history log of all assignments, including their status and any comments.	✓	OK
Task	Post task	Can create and post a new task for supervisees.	✓	OK
	View task created	Can see a list of tasks have been created.	✓	OK
	View task submitted	Can see a list of tasks submitted by supervisees.	✓	OK
	View submitted task	Can view a list of tasks submitted by students.	✓	OK
	Delete task	Can delete a task.	✓	OK
	Update task	Can edit and update task details.	✓	OK
Propose project	View proposes project	Can view a list of proposed projects from supervisees.	✓	OK
	Accept or reject propose project	Can review proposed projects and choose to accept or reject them, providing feedback if necessary.	✓	OK
Profile	View profile	Can view their profile information.	✓	OK
	Update profile	Can edit and update their profile information.	✓	OK
	Change password	Can change their password for account security.	✓	OK

#### A. Feedback

##### System Overall Feedback:

Function system works well; needs slight improvement in user-friendliness for better experience

Date: 27/1/2024



**Final Year Project Management System (FYPMS)  
Functionality Test**

**Student - Functionality Test Item:**

Section	Functions	Expected Result	Actual Result		Comment/ Remark
			✓	X	
Register	Register and verify via email	successfully registers with valid information. An email is sent for verification. Upon verification, the student gains access to the system.	/		
Authentication	Login	can log in using valid credentials, gaining access to the system dashboard.	/		
Forgot Password	Send new password via email	requests a new password, and a reset link is sent to their registered email. The student can use the link to set a new password.	/		
Available supervisor	Choose supervisor	can choose a supervisor from the available list.	/		
	Propose project	can propose a project to their chosen supervisor.			
Application Result	View application status	can view the status of their project proposal/application.	/		
Dashboard	Pie chart for assignment and task	can view a graphical representation (pie chart) of their assignments and tasks.	/		
	Visualization list document	can see a list of visualized documents related to the final year project.	/		

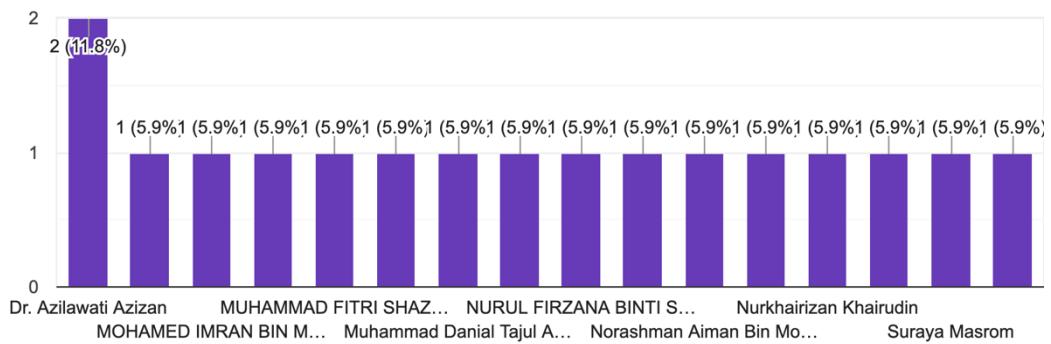
	View Gantt chart provided by supervisor	can view a Gantt chart / provided by their supervisor for project timeline visualization.	/	
Assignment	View assignment and the details	can view details of assignments they have been given.	/	
	Submit assignment	can submit completed assignments.	/	
	View submitted assignment and status	can view a list of submitted assignments along with their status	/	
Document	View document and the details	can view details of documents related to the final year project.	/	
	Submit and view submitted document	can submit documents and view a list of submitted documents.	/	
	Unsubmitted document	can view a list of documents that have not been submitted.	/	
Task	View task and the details	can view details of tasks assigned to them.	/	
	Submit and view submitted task	can submit tasks and view a list of submitted tasks.	/	
	Unsubmitted task	can unsubmitted a tasks that have been submitted	/	
Profile	View profile	can view their profile information.	/	Student's detail view be improve
	Update profile and FYP details	can update their profile information and Final Year Project details.	/	
	Change password	can change their password for account security.	/	

#### A. Feedback

<b>System Overall Feedback:</b>	
User-friendly and visually appealing system. Nice work.	
Date:	27/1/2024

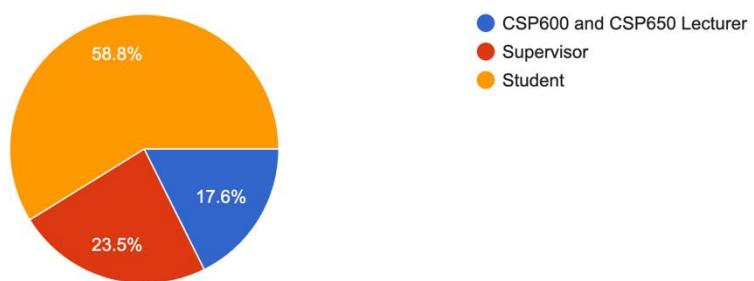
### Full name

17 responses



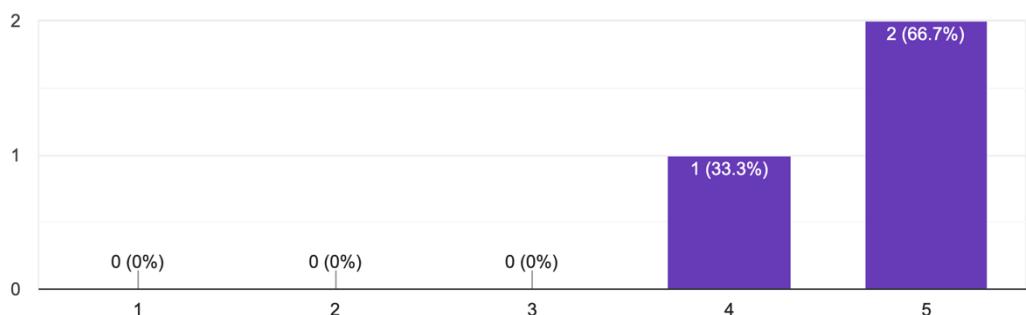
### Select user

17 responses



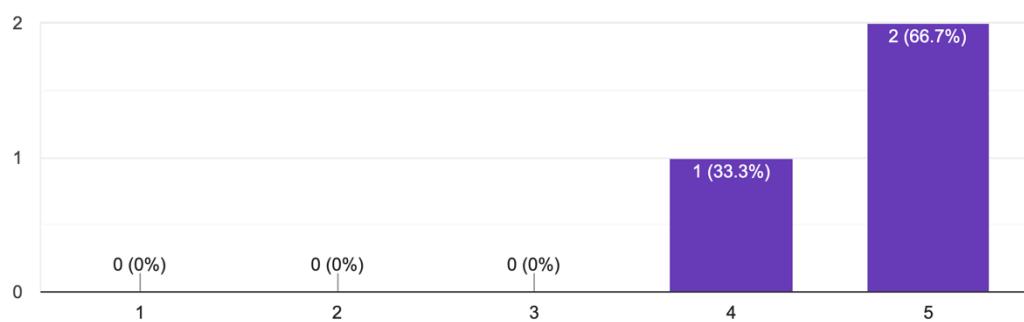
### How easy was it for you to log in and authenticate into the system?

3 responses



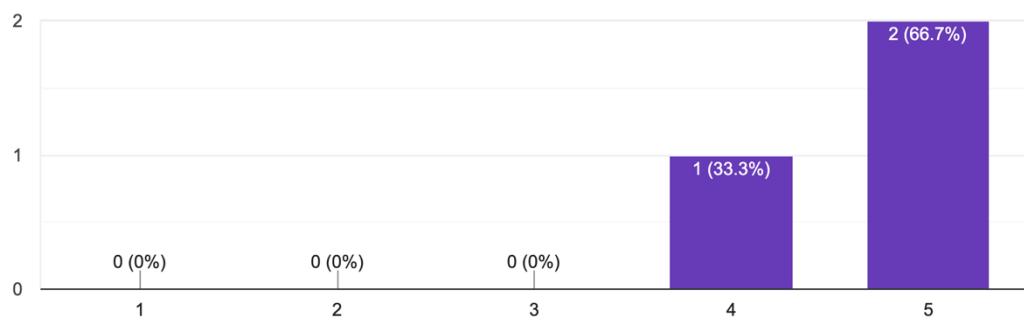
How easy was it for you to log in and authenticate into the system?

3 responses



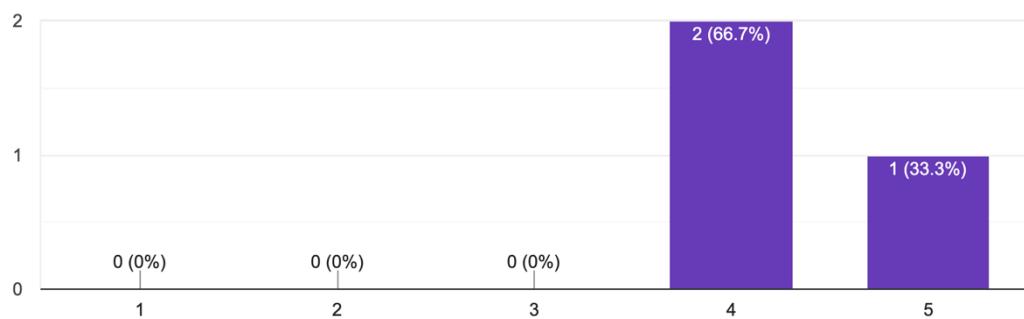
Did you find it straightforward to view detailed insights into the final year projects?

3 responses



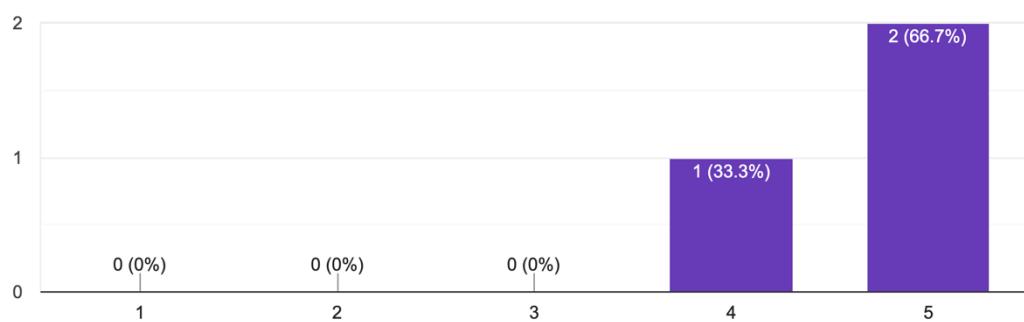
Were you able to easily create, update, delete and view submitted assignments?

3 responses



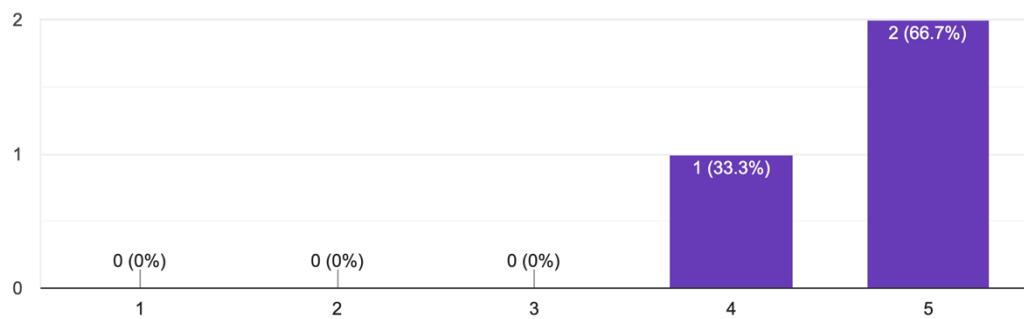
**Rate your experience in uploading, updating, deleting and view submitted documents.**

3 responses



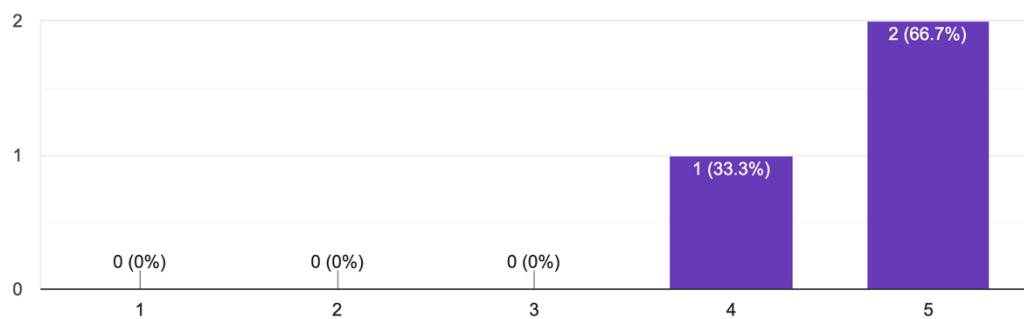
**Rate the ease of creating, updating, deleting and view submitted tasks.**

3 responses



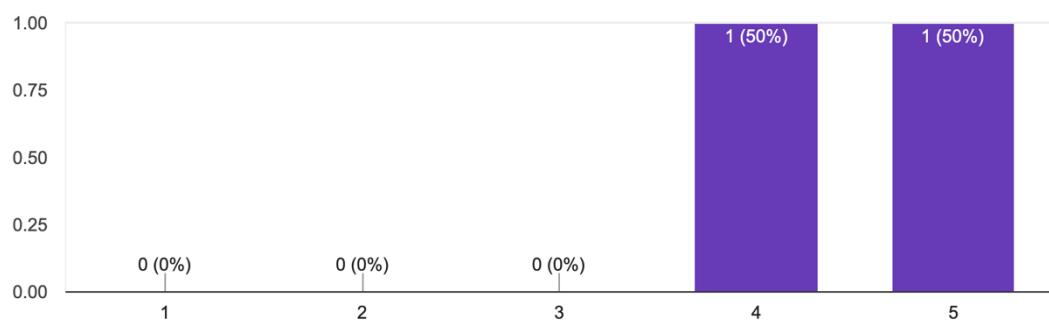
**Evaluate the process of viewing the student list and details.**

3 responses



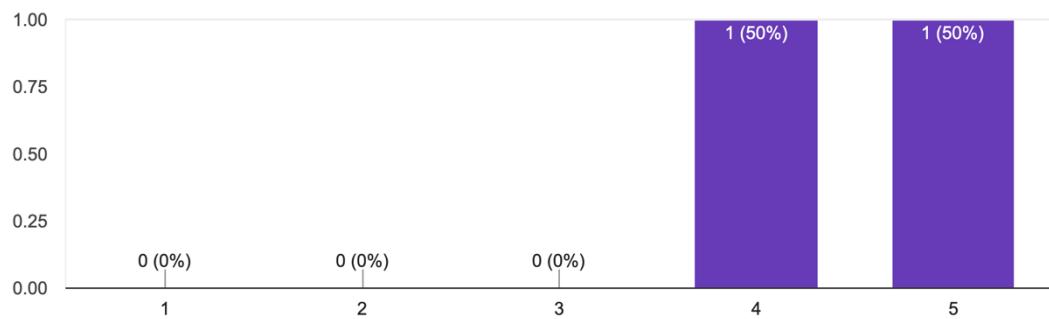
**Rate your experience in viewing and updating lecturer details and quota.**

2 responses



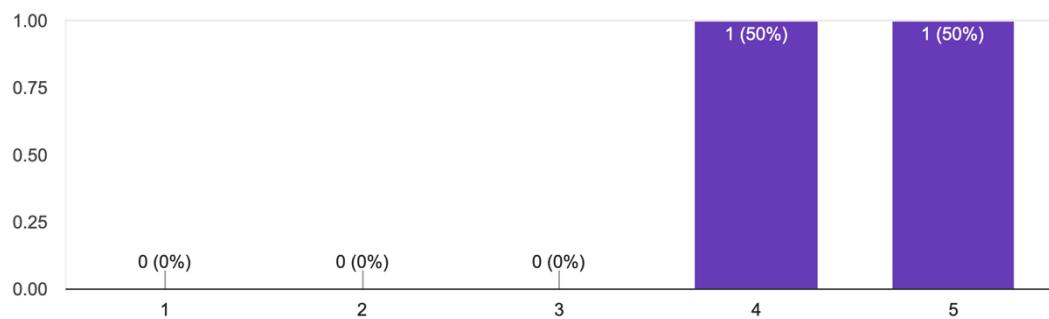
**Evaluate the ease of viewing batch information.**

2 responses



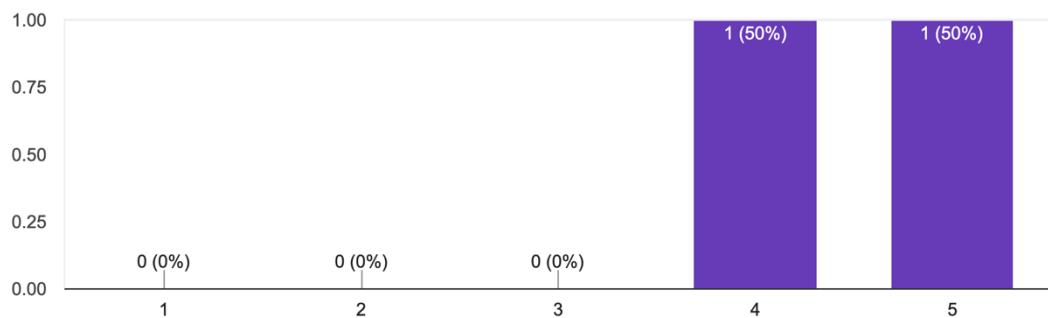
**Evaluate the ease of viewing batch information.**

2 responses



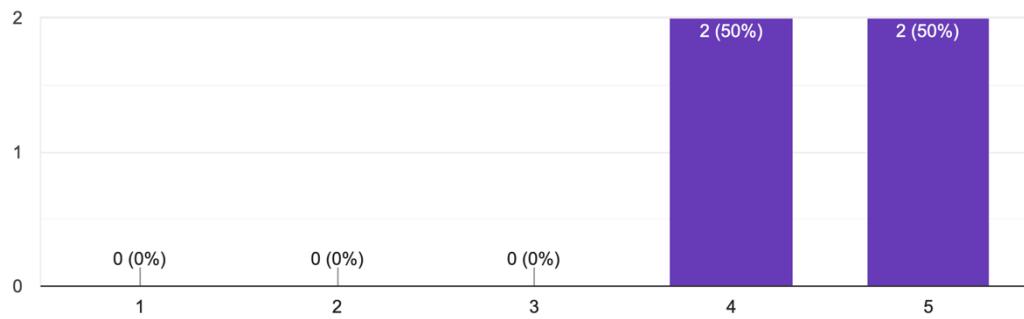
Are you the FYP lecturer admin? if yes, Evaluate the ease of viewing and updating batch information.

2 responses



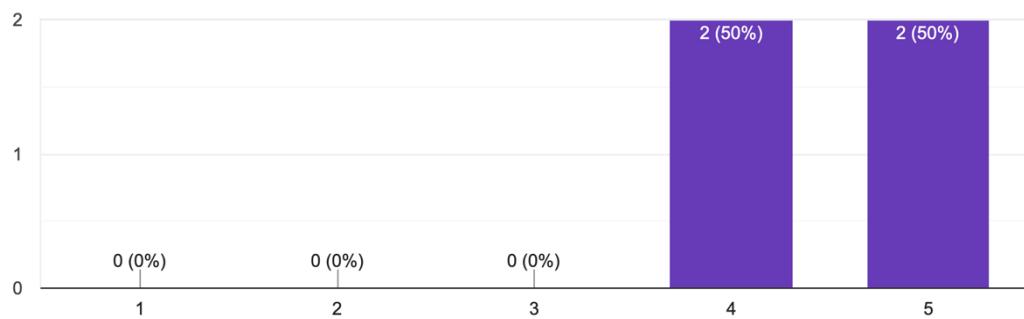
How user-friendly was the registration and login process?

4 responses



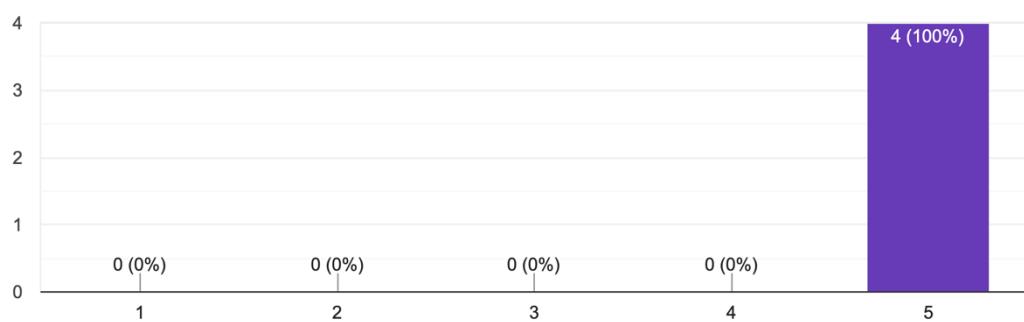
How user-friendly was the registration and login process?

4 responses



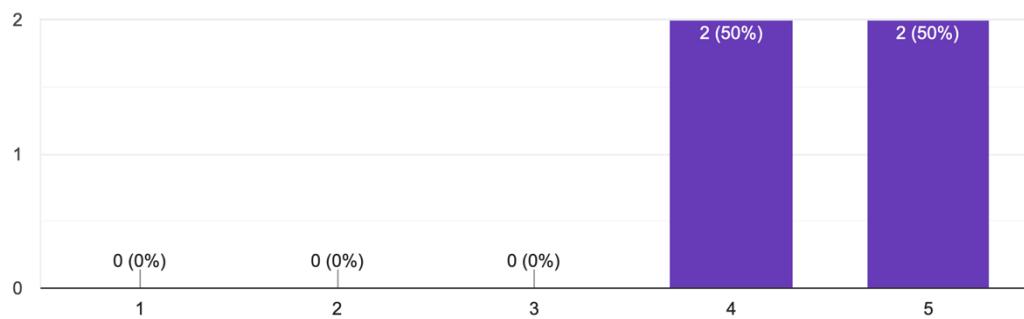
**Were you able to easily reset your password if needed?**

4 responses



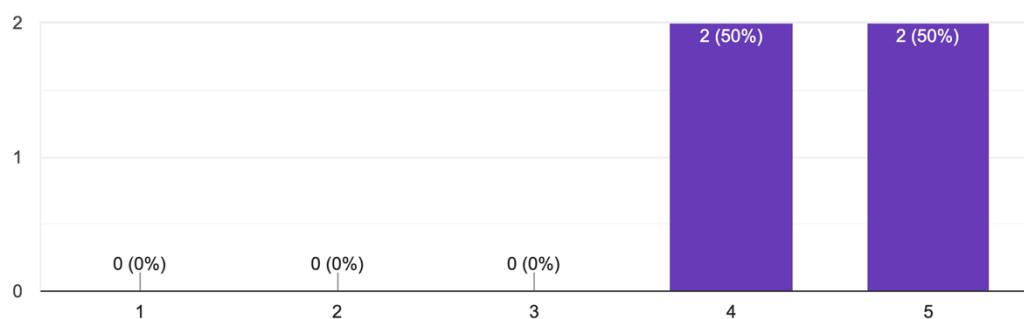
**Rate your experience in viewing proposed projects and accept or reject them.**

4 responses



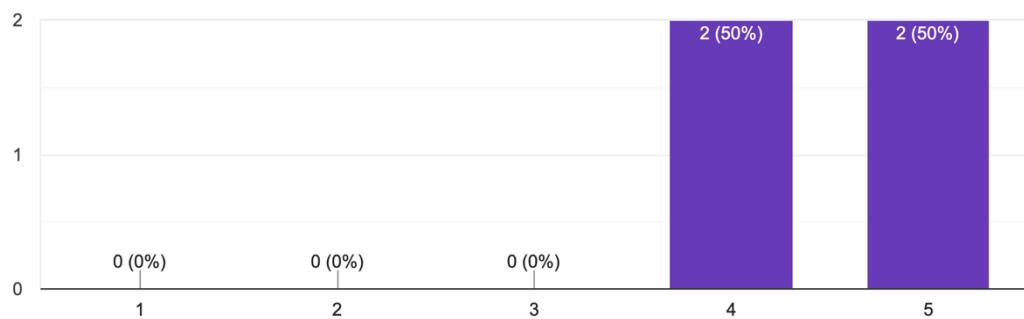
**Rate your experience in viewing, creating, updating, and deleting supervisee timelines.**

4 responses



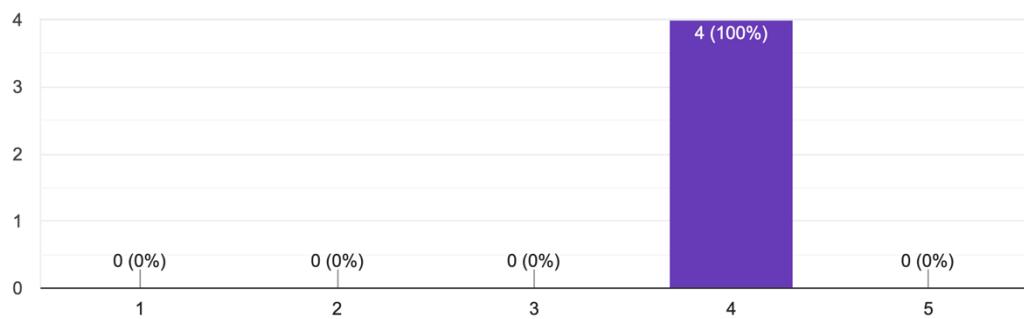
**How straightforward was it to unlink a supervisee?**

4 responses



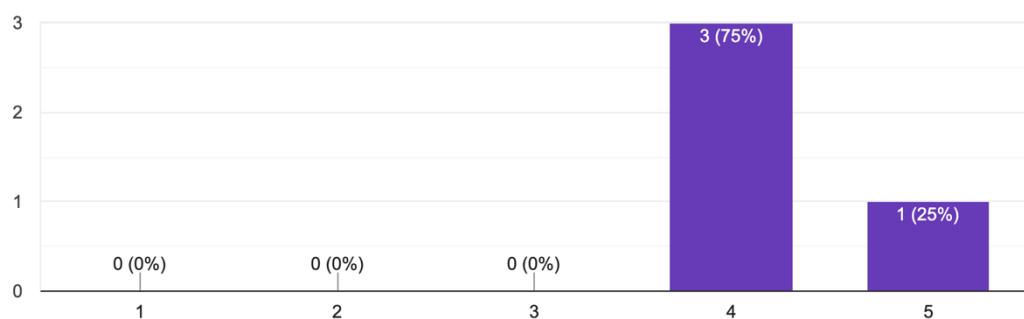
**Evaluate the process of viewing, approve or reject assignment and view assignment history.**

4 responses



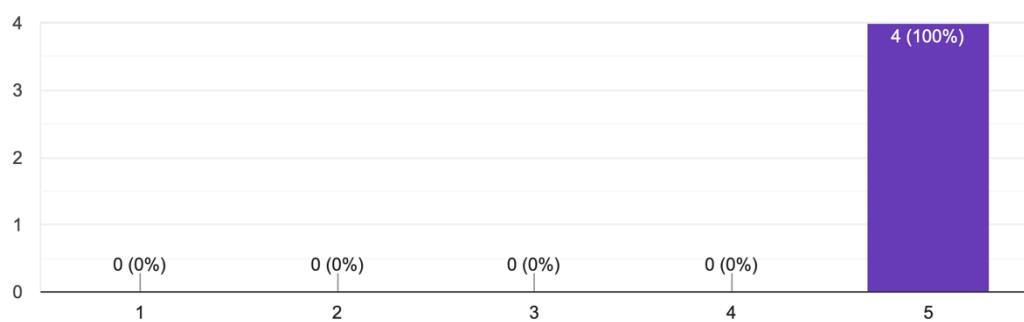
**Evaluate the process of posting, viewing, deleting tasks and view submitted of the item.**

4 responses



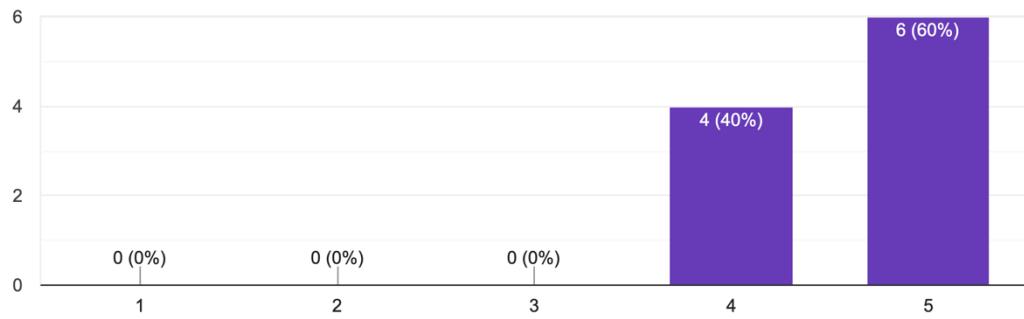
**How easy was it to view and update your profile information?**

4 responses



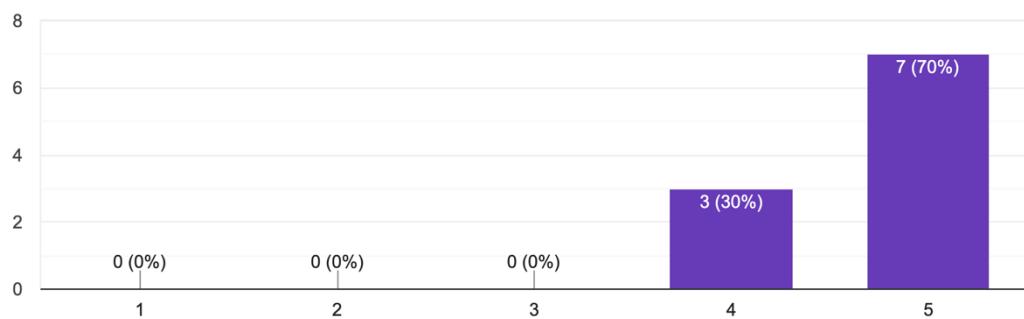
**How user-friendly was the registration and login process?**

10 responses



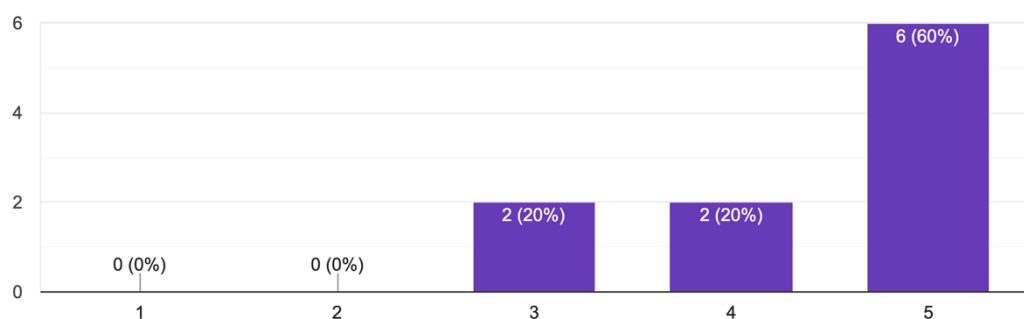
**Were you able to easily reset your password if needed?**

10 responses



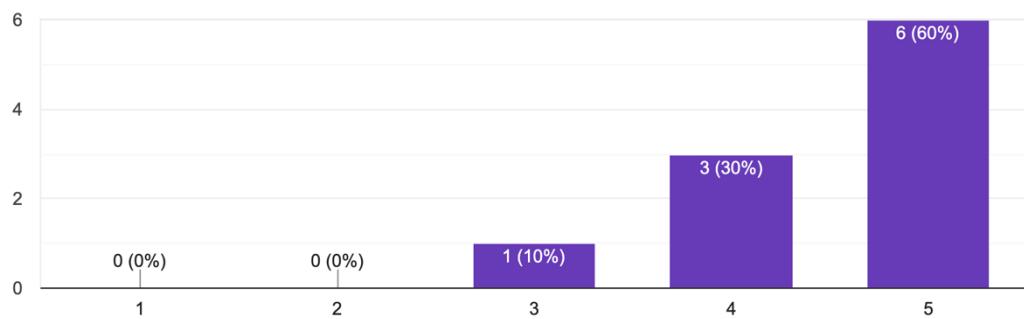
Rate the process of choosing a supervisor and proposing a project.

10 responses



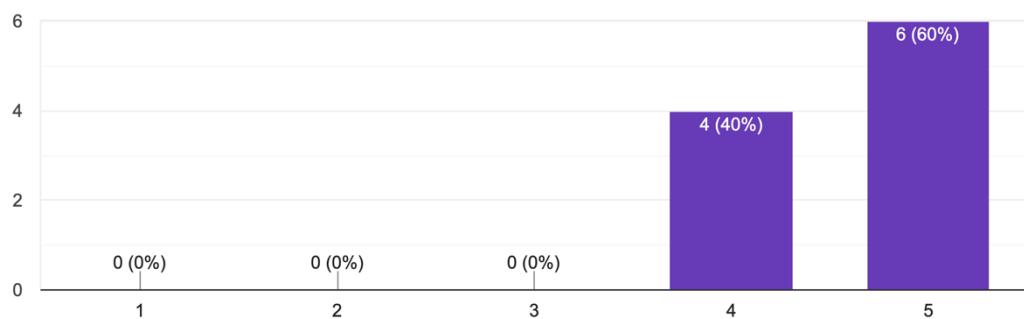
How straightforward was it to view the status of your project application?

10 responses



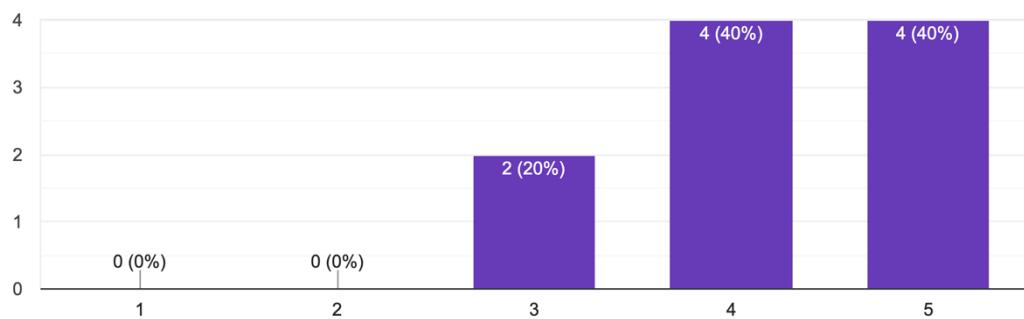
Rate the user-friendliness of the dashboard, including pie charts, visualize done document and Gantt charts.

10 responses



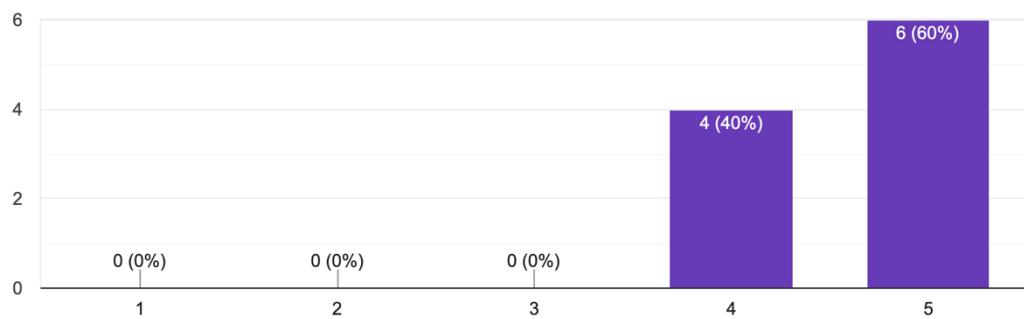
Evaluate the ease of submitting and viewing status, assignments.

10 responses



Evaluate the ease of viewing, submitting, and managing documents, and tasks.

10 responses



Evaluate the process of viewing and updating your profile and FYP details.

10 responses

