Project Management Plan

SEmester

Version:	1.0
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Document History

Document Name	Version	Date	Reviewer	Responsible
SEmester_PMP_0.1.docx	0.1	02/12/2024		Chatpisut Chaiuan, Peerachada Limtrakul, Salinporn Rattanaprapaporn, and Thanida Paige Pholsukcharoen
SEmester_PMP_1.0.docx	1.0	18/12/2024		Chatpisut Chaiuan, Peerachada Limtrakul, Salinporn Rattanaprapaporn, and Thanida Paige Pholsukcharoen

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1. Document Objectives

The Project Management Plan (PMP) document serves the following formal purposes:

- It outlines the methodology for managing, monitoring, and following the project's progression.
- It specifies the system resources that have been designated for the project development.
- It involves the allocation and scheduling of resources in a manner that adheres to the predetermined milestones.
- It details the necessary infrastructure, repository management system, and quality management system to be employed throughout the project's lifecycle.

2. Product Description

SEmester is a web application for users to manage coursework, enhancing the learning experience for both students and teachers. Users of this application can be separated into 2 types by their responsibility; Teacher and Student.

Students can benefit from various features within the system that are designed to enhance their academic experience. They can easily submit assignments through a user-friendly interface, which simplifies the process. The platform also includes a grade viewer that uses an intuitive graph to help students visualize their academic progress and understand performance trends. Additionally, students can easily monitor their attendance records and keep track of their attendance history.

Teachers have several tools at their disposal to enhance their classroom management. They can streamline the assignment process, simplifying the task of assigning and collecting work. An announcement hub facilitates seamless communication with the entire class, ensuring everyone is informed. Additionally, teachers can effortlessly track and manage student attendance. With features like a grade calculator and class overview, they can evaluate student performance and gain valuable insights into class progress.

Scope

1. **Course Management:** The application will allow teachers to create specific courses for the subjects they teach, each with its own unique course code. This course code will enable students to join the respective course.
2. **Announcement Management:** The application enables communication between teachers and students. Teachers can create announcements to inform students about important news and provide class materials. Students can view the announcements and access the materials for their courses.
3. **Assignment Management:** The application will enable teachers to assign tasks to students enrolled in their courses. Teachers will be able to check the submission status of students and view their submitted work. For assignments

that involve coding, teachers can preview the submissions directly within the application without needing to download the files. Students will have access to the details of their assignments and can submit their work through the platform.

4. **Grade Management:** The application will allow teachers to post grades for each assignment and exam, as well as view the overall grade distribution for the courses they teach. Students will be able to see the scores they received for each assignment and exam, along with their total grade for each course.
5. **Attendance Management:** The application enables teachers to check students' attendance for any class date. Teachers can add new dates to the application and mark each student's attendance status. Moreover, they can view the attendance records of all students. Students, in turn, can access their overall attendance record for each course.
6. **Security:** The application will be designed with security in mind, using best practices for authentication, authorization, and data encryption.

Objectives

1. Develop a web-based application that streamlines course management by efficiently handling assignments, grades, attendance, and communication between teachers and students.
2. Enable teachers to communicate news and provide class materials to their students instantly.
3. Enable students to track course updates and access class materials without delay.
4. Teachers should be able to assign assignments and manage submissions.
5. Students can track their assignments and submissions effectively.
6. Enhance the grading process for courses and assignments to improve communication and efficiency between teachers and students.
7. The application enables teachers and students to effectively track student attendance.
8. Design the application with security in mind, using best practices for authentication, authorization, and data encryption.

3. Resources

3.1 Software Resource

SEmester is a web application that was developed using FastAPI with ZODB as the database for the system.

We use Visual Studio Code Version 1.96 as a development tool.

3.2 Hardware Resource

This is the hardware that we used to develop a web application and acted as a local server for the project. Computer Hardware Specification.

CPU:	x64 processor 2.1 Ghz
Main Memory:	16 GB of Ram
Operating System:	Windows 11 build 26100

4. Role and Responsibility

Staff	Role	Responsibility
Thanida Paige Pholsukcharoen	Project Manager (PM)	● Manage Project ● Track the Project's Progress
	Developer (Dev)	● Develop the software ● Unit Testing.
Salinporn Rattanaprapaporn	Project Coordinator and IT Service Desk (PCo)	● Coordinate between Work Team ● Track Changes in the Correction Register (i.e. A Change Report)
	System Analysis (SA)	● Analyse and design the software system. ● Present the Prototype. ● Design Test Cases and Test Procedures.
	Developer (Dev)	● Develop the software ● Unit Testing.
Chatpisut Chaiuan	Requirement Engineering (Req)	● Requirement Analysis and Elicitation.

	Tester (Test)	• System Testing and Integration Test.
Peerachada Limtrakul	UI/UX Designer (UI)	• Design the software User Interface and User Experience.
	Tester (Test)	• System Testing and Integration Test.

5. Risk Items

Risk Items	**Solution**	**Probability (1-Low, 3-Med, 5-High)**	**Impact (1-Low, 3- Med, 5-High)**
Changing requirements.	Team meeting for applying requirement change.	2	4
Time limitation.	Working overtime.	1	3
Unavailable staff	Staff must notice the other as early as possible, in order to alter the project schedule in advance.	1	5

6. Expected Deliverables

No.	Artefacts	Media	No. Of copies	Date
1	Project Proposal	Artefacts: Hard Copy	2	26/11/2024
2	First Milestone: - SEmester_SoW_1.0 - SEmester_SRS_1.0 - SEmester_SDD_1.0 - SEmester_PMP_1.0 - SEmester_TR_1.0 - SEmester_VerR_1.0 - SEmester_ValR_1.0	Artefacts: Hard Copy	2	5/1/2025
3	Second Milestone - SEmester_SDD_2.0 - SEmester_PMP_2.0 - SEmester_TR_2.0 - Software Version 1.0	Artefacts: Hard Copy Software: Dedicated Repository	2	25/2/2025
4	Third Milestone - SEmester_SDD_3.0 - SEmester_PMP_3.0 - SEmester_TR_3.0 - Software Version 2.0	Artefacts: Hard Copy Software: Dedicated Repository	2	2/4/2025

Note:
SoW = Statement of Work
SRS = Software Requirement Specification
SDD = Software Design Document
PMP = Project Management Plan
VerR = Verification Result
ValR = Validation Result
TR = Traceability Record

7. Delivery Instructions

- **Software Deployment:** The software being developed will be deployed to a dedicated repository provided by the customer. In addition to the primary repository, two backup environments will also be provided by the customer. These repositories serve as a safeguard in case anything happens to the primary repository. Having backups ensures that there is no loss of work or data, and provides an additional layer of security for the software being developed.
- **Artefacts:** Artefacts will be delivered via two hard copies at the same time as the product delivery.

8. Project Infrastructure, Repository & Quality Management System

8.1 Project Repository

All software artefacts, including the software product, will be stored at: https://github.com/Salinporn/SEmester
Where artefacts will be in a separate folder called “artefacts”.

8.2 Artefacts Naming Convention

All artefacts will be prefixed with the web application title, followed by an underscore and the type of document. For the purpose of this project (web application title SEmester), the naming convention will be as follows: SEmester_PMP, SEmester_SRS, etc.

8.3 Versioning Convention

8.3.1 Source Code and Software

The versioning of the source code will adhere to the commit hash from GitHub. Upon first delivering the software to clients, the software will be designated as version 1.0. Following acceptance by clients, and commencing to the next milestone, the software version will be increased at the whole part (e.g. 2.0, 3.0, etc.)

8.3.2 Artefacts

The initial versions of all baselined artefacts will be designated as version 0.1. Upon client acceptance, the artefact version will be changed to 1.0. In the event of revisions to an artefact, the version will be incremented at the fractional part. For instance, a revised version of the Project Plan may be named "SEmester_PMP_1.1".

8.4 Backup & Recovery

- Daily Backup: On a daily basis, upon the conclusion of the workday, the Developer is responsible for executing a daily backup of the repository. This backup operation will involve saving a copy of the repository to a local disk as well as to a designated private cloud storage location. The backed-up files will be stored in a folder named "DailyBackup," which will contain subfolders labeled with the appropriate date notation of "YYYY-MM-DD".
- Weekly Backup: At the end of each week’s workday, the Developer is tasked with carrying out a weekly backup of the repository. The backup procedure will entail saving a copy of the repository to a local disk and also to a specified private cloud storage location. The backed-up files will be contained in a folder named WeeklyBackup," which will include subfolders identified by the date notation of "YYYY-MM-DD".

9. Project Schedule

9.1 Estimated Durations

Tasks and Estimated Durations		
No.	**Task**	**Estimated Duration (Days)**
1	Project feasibility study	15
2	Project proposal	30
3	First Milestone	40
3.1	Statement of work	4
3.2	Project Management Plan	4
3.3	Software Requirement Specification	4
3.4	Software Design Document	6
3.5	Traceability Record	4
3.6	Verification Record	4
3.7	Validation Record	4
3.8	Finalise First Milestone Delivery	5
3.9	Prepare & Present First Milestone Deliverables	5
4	Second Milestone	51
4.1	Implement, Test & Review Teacher Features	15
4.2	Implement, Test & Review Student Features	15
4.3	Revised Documentation	11
4.4	Finalise Second Milestone Delivery	5
4.5	Prepare & Present Second Milestone Deliverables	5
5	Third Milestone	36

5.1	System Integration and Testing	15
5.2	Documentation Finalization	11
5.3	Finalise Third Milestone Delivery	5
5.4	Prepare & Present for the whole system	5
Total		172

9.2. Project Timeline

Figure 1: Schedule for Project Initiation (Project Feasibility Study + Proposal)

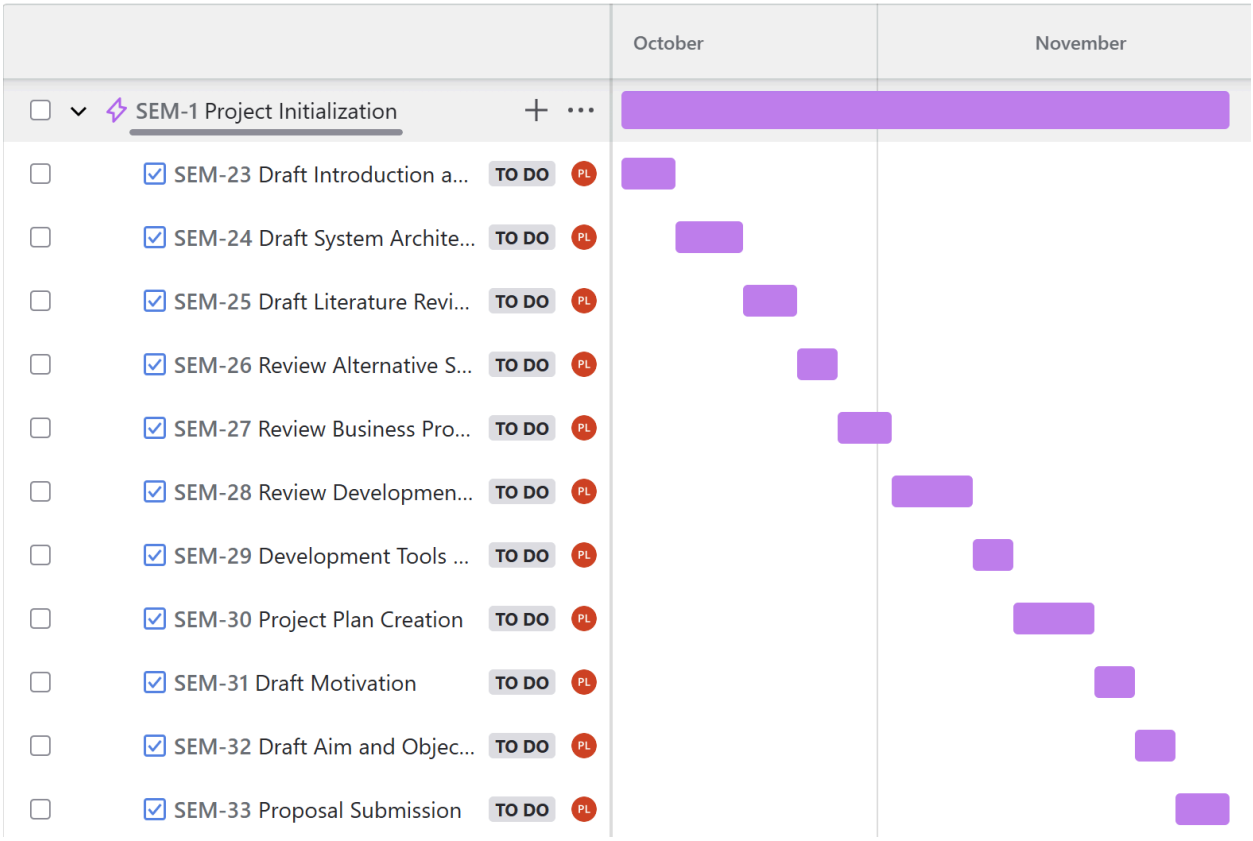

Figure 2: Schedule for The First Milestone

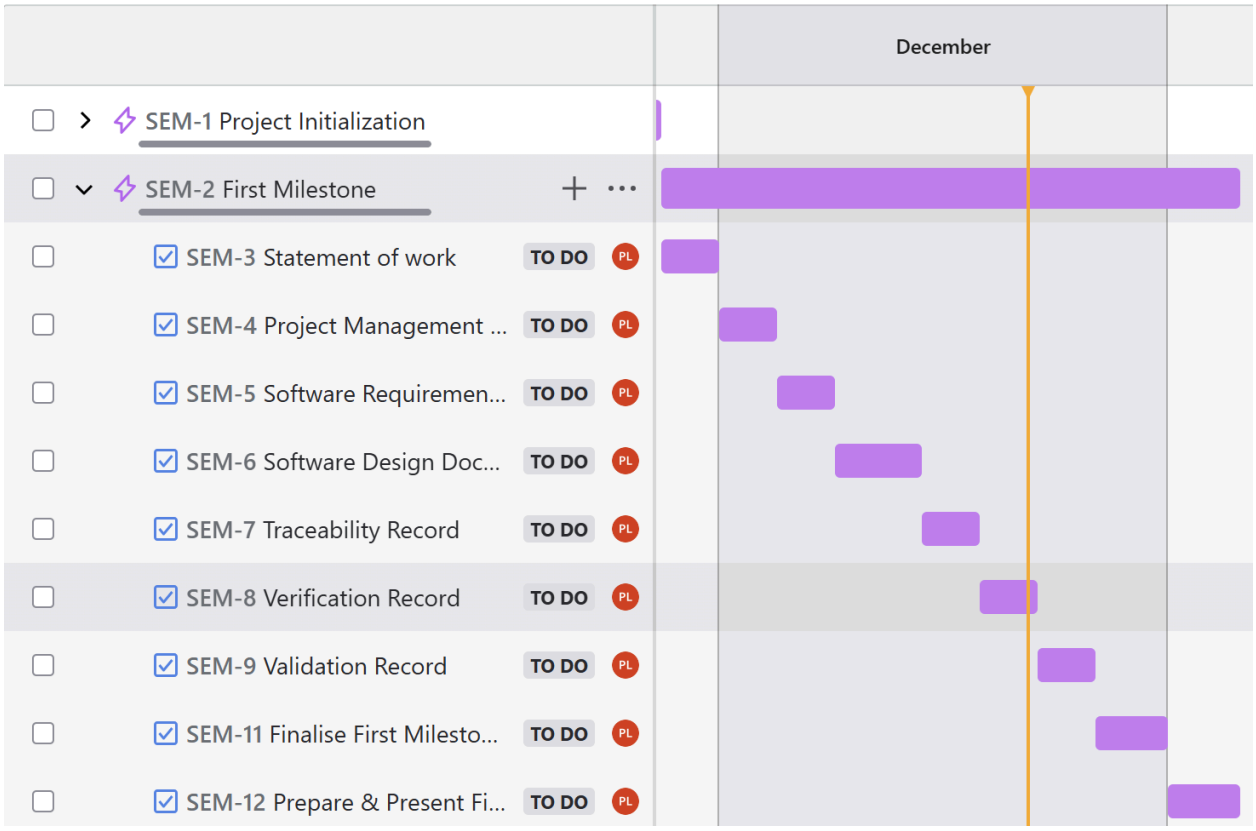

Figure 3: Schedule for The Second Milestone

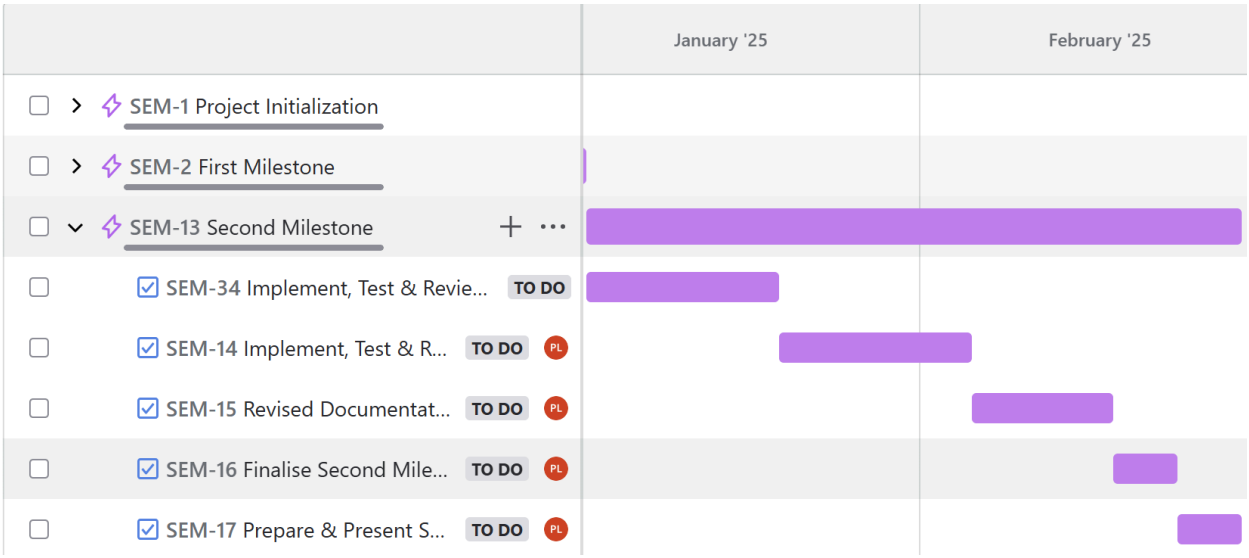

Figure 4: Schedule for The Third Milestone