

Software Engineering Project

Milestone 1



Team 18

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Identifying Various Types of Users

Primary Users

Students: Students use the portal to watch video lectures, submit general assignments and coding assignments through the inbuilt code editor, receive coding hints via Gen AI capabilities, and interact with the chatbot for subject-related queries and doubts.

Secondary Users

Teachers/Lecturers: While the primary focus is on students, teachers play a crucial role in uploading video lectures, setting up calendars for assignments and important dates, grading coding assignments, and possibly interacting with the Gen AI system to ensure it aligns with the curriculum and provides accurate hints.

Administrators: Administrators oversee the entire portal, manage user access, monitor usage statistics, and ensure the smooth operation of the Gen AI chatbot and the inbuilt code editor. They may also handle integration with external systems or services. Any changes in the course made by the instructor are approved by the administrator before it is out on the portal.

Tertiary Users

Technical Support Staff: This group handles technical issues related to the portal, including the Gen AI chatbot and the inbuilt code editor. They ensure that both students and teachers can effectively use the portal without encountering significant technical barriers. If any primary or secondary user faces any issues, they will be assisted by technical support staff. Moreover, they can make changes to the portal but will be public only on approval from the admin.

Financial Service Officials: These individuals oversee the finance-related operations of the courses offered through the portal. Their responsibilities might include managing course fees, processing refunds, handling payments, and ensuring compliance with financial regulations. They play a critical role in supporting the operational aspects of the portal that directly impact the financial transactions between students, teachers, and the institution offering the courses.

Researchers: Researchers involved in education technology, pedagogy, and AI-driven learning tools would be another category of tertiary users. They might use the portal as a case study for their research, exploring how Gen AI capabilities and interactive features like the chatbot influence student engagement and learning outcomes. Additionally, they could

contribute to the development of new features or improvements based on their findings, further enhancing the portal's effectiveness and user experience.

User Stories

Excluding Generative AI

1. **Feature:** Browse Courses

As a student,

I want to be able to browse all courses,

So that I can pick up the most optimal choice based on my preferences.

2. **Feature:** Choose and enrol in course

As a student,

I want to choose and enrol in a new course,

So that I can start learning its contents.

3. **Feature:** View course introduction

As a student,

I want to view the course introduction,

So that I can understand the course structure, objectives, and expectations before starting my learning journey.

4. **Feature:** Read lecture transcripts of lecture videos

As a student,

I want to read lecture transcripts of lecture videos,

So that I can easily review and understand the content delivered in the lectures, reinforce my learning, and refer to specific details as needed.

5. **Feature:** Reference lecture transcripts while solving assignments

As a student,

I want to reference lecture transcripts while solving assignment questions,

So that I can accurately recall and apply the concepts and information presented in the lectures to complete my assignments effectively.

6. **Feature:** Solve programming assignment questions

As a student,

I want to solve programming assignment questions,

So that I can challenge myself to apply my knowledge and problem-solving skills.

7. **Feature:** Check enrolled courses

As a student,

I want to check all my enrolled courses,
So that I can track the progress I've made in them.

8. **Feature:** Upload weekly & supplementary contents

As an instructor,

I want to upload, edit and delete weekly modules and supplementary contents,
So that it can be released according to schedule and any corrections can be made if necessary.

9. **Feature:** Posting Announcement

As an instructor,

I want to post announcement,
So that important issues and updates can be passed on to students.

10. **Feature:** Add assignments

As an instructor,

I want to add assignments,
So that students can be evaluated regularly.

11. **Feature:** Conduct exams

As an instructor,

I want to conduct exams,
So that I can assess student progress.

12. **Feature:** Add/Delete courses

As an admin,

I want to add or remove courses from the portal,
So that I can add new courses and delete the old ones.

Including Generative AI

1. **Feature:** Choose and enrol in courses

As a student,

I want to explore and enrol in new courses with the assistance of Gen AI,
So that I can quickly understand the course content, get answers to my queries, and make an informed decision.

2. **Feature:** View course introduction

As a student,

I want to interact with a chatbot to explore the course introduction,

So that I can conveniently access information about the course structure, objectives, and expectations in a conversational manner, enhancing my understanding before starting my learning journey.

3. **Feature:** Access AI-powered assistance for lecture transcript summary

As a student,

I want to summarise lecture transcripts of lecture videos using Gen AI,

So that I can get a summarised version of the entire lecture to have a quick understanding of what the lecture is about.

4. **Feature:** Use Gen AI to reference transcripts and lectures while solving assignments

As a student,

I want to use Gen AI to reference the transcript as well as the lecture while solving assignment questions,

So that I can receive tailored explanations, contextual information, and clarifications on lecture content to improve the quality and accuracy of my assignment solutions.

5. **Feature:** Solve programming assignment questions with the assistance of Gen AI

As a student,

I want to use Gen AI to provide suitable hints as per my specific needs while solving programming assignment questions,

So that I can receive personalized, context-aware guidance to overcome obstacles, enhance my understanding and problem-solving skills, and improve my code through constructive feedback.

6. **Feature:** Feedback on programming codes using AI assistance

As a student,

I want to get feedback on codes I've submitted,

So that I can understand better/faster codes that can be used and thus improve the way I code.

Journey Maps

Excluding Generative AI

Link to journey map - [here](#)

The above journey map shows the entire journey of a learner across various sections of the portal and its components without the integration of Generative AI.

Including Generative AI

Link to journey map - [here](#)

The above journey map shows the entire journey of a learner across various sections of the portal and its components with the integration of Generative AI in mind.

Note – The journey maps are landscape images, please zoom in for better readability.