

HARMONY IN PROGRESS:

**INTEGRATING SCIENCE, TECHNOLOGY,
AND
SOCIAL INNOVATION
FOR SUSTAINABLE DEVELOPMENT GOALS**



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YST017 - NOTENEST: ALL YOUR NOTES IN ONE PLACE

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ABSTRACT

Note-taking is an essential learning skill in today's academic environment, yet most students struggle to organize their academic content and notes that they have created and designed. Most traditional methods, such as handwritten notes and other word processor software, they are lack organization and a note-sharing mechanism. Students increasingly rely heavily on mobile devices and technology to manage academic content. Some students may struggle to understand certain topics, and would like to expand their understanding by reading more information in additional readings or online resources. However, by using the university's official Learning Management System (LMS), academic resources are mostly provided by the lecturers. There is a lack of note-sharing activities that enable students to share the academic content with personalized notes between peers. Collaboration among students is essential, yet exchanging notes is typically unstructured and unorganized. Therefore, this project, called NoteNest, is designed for UiTM students and lecturers to provide a centralized system that gives users quick access to educational materials, offering an accessible learning system that supports students in sharing and exchanging their academic content. Come in a mobile application platform with a sleek and minimalist user interface, the system enables users to navigate through the application easily. NoteNest is also equipped with intelligent technologies to improve the note-browsing experience for students and lecturers across UiTM campuses. The application adopts some advancements in Artificial Intelligence (AI) and machine learning technologies in mobile applications to enhance user experience, such as user profiling, personalized recommendations, and managing users' preferences. Meanwhile, for effectively managing thousands of notes, a cloud-based database system is also part of this application, enabling students to upload notes in many formats. These technologies brought NoteNest as a dependable note management application with a significant step forward in offering students a centralized platform to share academic content and notes.

Keywords – collaborative learning, mobile application, note-sharing

INTRODUCTION

Students in higher institutions are expected to be much more independent in their learning, where organized and accessible academic content plays a significant role in contributing to academic performance. While most of the academic content is provided by the lecturers, students are also actively creating their personalized notes to capture, design, and represent their comprehension and understanding of the particular lessons. However, in

UiTM's official Learning Management System (LMS), the academic content is mostly contributed by the lecturers in the form of teaching materials. The current methods of sharing notes between students are mostly informal, unstructured, and disorganized, where uploading and downloading notes are being done on many platforms, with unverified content, and a lack of control over dissemination. These problems highlight the importance of an immediate, centralized, well-organized system that provides students with up-to-date, relevant, and collaborative academic resources to help them succeed in their studies.

OBJECTIVE

The objectives for this mobile application are:

- i. To develop a centralized system that gives students quick access to educational materials.
- ii. To establish an efficient and accessible learning system that supports students in understanding and mastering their academic subjects.
- iii. To create an up-to-date system that provides relevant and current resources to aid students in effective examination preparation.

DESCRIPTION OF THE PROJECT

NoteNest offers a minimalist, user-friendly interface with clear instructions and quick response to the user, and increases adoption of the application. Several other features embedded in NoteNest are:

1. Advanced Filter with Smart Search Suggestion - The platform applies several filters based on different criteria, such as category, tags, and keywords, which allows users to focus their search. As the user inputs, smart search suggestions provide content-aware, real-time recommendations, elevating the search experience.
2. Smart Flashcard Generator - The feature can automatically create flashcards by identifying the key concepts from user-uploaded notes, textbooks, or any web pages. It can analyze text for important terminologies, definitions and transform them into questions and answers.
3. Smart Notes Verification – Used AI-enabled content validation to verify the correctness of and applicability of the information; this feature employs algorithms to compare user notes with databases or reliable sources.
4. Real-time Collaboration and Discussion Space - Users can work together quickly, exchange notes and ideas, and have engaging discussions about many topics in real-time collaboration and discussion spaces.

Each process in NoteNest is presented with an easy navigation user interface to give the users a smooth, simple, and aesthetically pleasing experience. The design creates a user-friendly environment that improves usability and engagement, and creates a familiar design layout by utilizing UiTM's logo. Figure 1 shows the user interface design for the NoteNest mobile application.

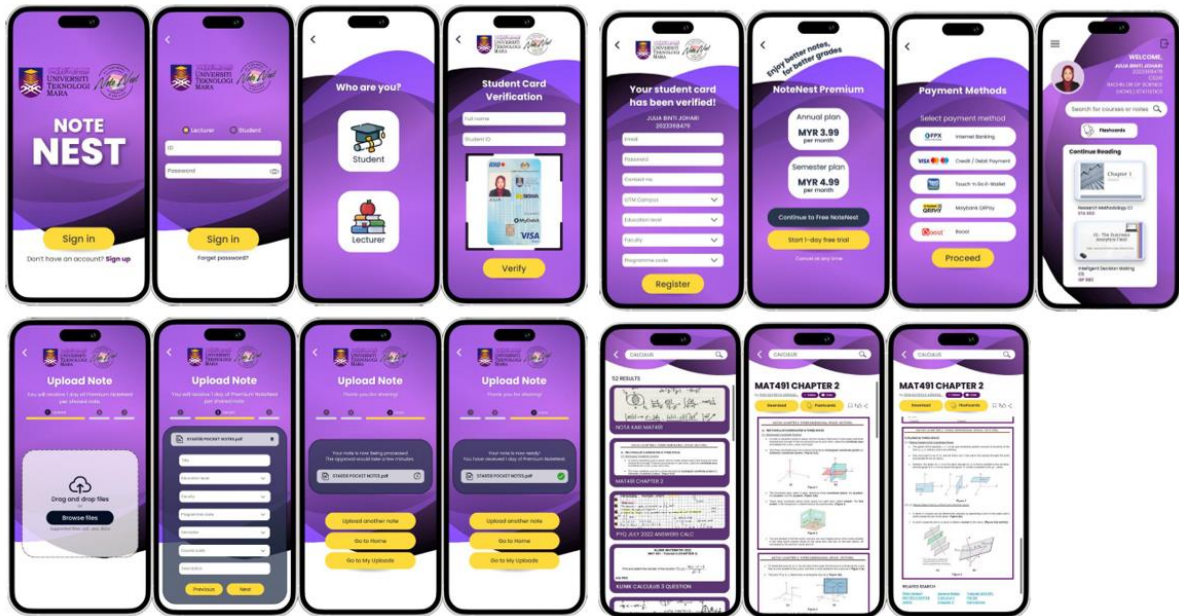


Figure 1: User interfaces for users to sign up, log in, upload notes, and retrieve notes

NOVELTY

NoteNest is unique as it is designed exclusively for students and lecturers of UiTM across all UiTM campuses in Malaysia for sharing customized notes and specifically constructed features to enhance students' educational performance and achievements. All features presented in the project descriptions, such as smart search, AI-enabled content validation, and recommendations for content selection, are part of the novelties of the application, including smart note classification following UiTM's academic requirements. Other additional features, such as customizable notes based on learning style and an interactive discussion space, make the platform outstanding in promoting a collaborative learning environment.

CONCLUSION

Fostering collaborative learning by allowing students to contribute their notes and study materials will significantly enhance the platform's content and have a positive impact on academic performance. Peer-to-peer note-sharing activities and sharing different ideas and perspectives will improve comprehension and create a more enriching learning environment. NoteNest also lets students view their peers' insights, explanations, and approaches, which broadens their comprehension and improves their understanding of the content shared in the application. NoteNest is more than a usual mobile application, as it is a sustainable and affordable educational instrument that precisely aligns with UiTM's goals. Thus, this creative strategy not only helps students thrive academically but also helps UiTM place itself at the forefront of education technology.