

MELAKA
INTERNATIONAL
INTELLECTUAL EXPOSITION

MIIEX'24

12 JUNE '24

Dewan Taming Sari,
Universiti Teknologi MARA Caw. Melaka,
Kampus Alor Gajah, Melaka

*"Empowerment of Special
Needs through Invention
& Innovation"*

**EXTENDED
ABSTRACT**

MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

**“EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”**

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UiTM Cawangan Melaka

KM26 Jalan Lendu,

78000 Alor Gajah

Melaka Bandaraya Bersejarah

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MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

“EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”

EDITORS AND COMPILERS:

Dr Maimunah Johari

Puan Norlinda Tendot Abu Bakar

Puan Maymunah Ismail

Puan Nor Halawah Ahmad

Cik Afzan Shahilla Amir Hamzah

Puan Azira Rahim

COVER DESIGN:

Rashidy Samsudin

Wan Nur Khalisah Shamsudin

Ridzuan Adli bin Azidin

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INNOVATION, INVENTION, AND DESIGN

FOREWORD BY THE RECTOR OF UiTM CAWANGAN MELAKA



Professor Ts. Dr. Mohd Rasdi bin Zaidi

Rector, Universiti Teknologi MARA (UiTM)

Cawangan Melaka

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honour for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

2024 is a special year where MIIEX 2024 emphasizes the development of special needs. As we know, special needs indicate a limitation in a person's ability to engage in and benefit from various aspects, such as daily activities and education. Hence, with the theme "Empowering Special Needs Through Invention and Innovation," it is a platform for industries, professionals, academicians, students, and communities to share their innovative ideas and products to increase accessibility for those with special needs.

The successful implementation of MIIEX '24 is our joint success. This event was supported by the Melaka state government through YB Datuk Fairul Nizam bin Roslan, the EXCO of Science, Technology, Innovation, and Digital Communication. I also want to express my

gratitude to Universitas Negeri Padang, Indonesia, Universitas Muhammadiyah, Makassar, Indonesia, the International Association of Economic and Businesses (IAEB), Universiti Sains Islam Malaysia, Ibnu Umami Maktum Research Center (UMMI), USIM, and The Southeast Asia Minister of Education Organization Regional Centre for Special Educational Needs (SEAMEO SEN) as our co-collaborators for MIIEX 2024.

The collaboration from various parties in MIIEX '24 is a platform that will improve cooperation and interweaving among industries, professionals, academicians, students, and communities in shaping their potential in developing innovation products. This exposition also serves as a platform to cultivate and uphold the nation's innovation culture by presenting new ideas and research by young people, especially from academia and universities. Indirectly, MIIEX '24 will encourage all inventors towards empowering Science, Technology, Engineering, and Mathematics (STEM), especially in primary and secondary schools.

The new digital landscape also inspires more innovation and new ideas that contribute to various activities, such as business and industries. As a university that encourages "Research and Innovation," we aim to foster more innovative products that benefit scholars, industries, and communities, addressing issues to improve our present and future life.

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams, who are the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition. We hope that this collaboration never ends here.

Thank you.

FOREWORD BY THE DEPUTY RECTOR (RESEARCH & INDUSTRIAL LINKAGES)



Associate Professor. Dr. Nur Hayati binti Abd Rahman

Deputy Rector (Research & Industrial Linkages), Universiti Teknologi MARA (UiTM) Cawangan Melaka

With much passion and privilege, let me warmly welcome all of you to the Melaka International Innovation Exhibition (MIIEEX), UiTM Cawangan Melaka's flagship event. I firmly believe that events such as these demonstrate the gradual evolution of this platform in terms of its significance and its governing principles within the sphere of learning and the broader scholarly society.

The theme for this year, "Empowering Special Needs Through Invention and Innovation," strongly connects to our mission of using research and technology to make a positive impact on the world we live in. Besides enforcing the message of diversity, this theme also reaffirms our focus on creating products to improve the lives of people with disabilities (PWDs). Such innovations are vital as only through focused constructive changes can society become more sensitive to the needs of all members.

MIIEEX allows researchers, students, and industry professionals to come together, share their innovative research, and develop viable research partnerships. It has been great to see the enthusiasm of the participants and the efforts they put into their projects, which can offer various social and economic benefits. This is why one can state that MIIEEX is a great

opportunity for creating connections between the academic environment and industry, facilitating the implementation of innovative and promising projects.

Finally, I would like to express my sincere appreciation to all the members and supporters of the organizing committee, all the participants, sponsors, and everyone involved in preparing this event. I want to express my gratitude for your commitment and involvement, as the success of MIIEX and the development of an active culture of innovation in our university and beyond is partly owed to your support.

Thank you

FOREWORD BY THE PROJECT DIRECTOR



Dr Zulkefli bin Muhamad Hanapiyah

Senior Lecturer

Assalamualaikum and Warmest Greetings,

It gives me a great pleasure, on behalf of the organizing committee, to welcome all participants and speakers to the Melaka International Intellectual Exposition 2024 (MIIEX '24) with the theme "Empowering Special Needs Through Invention and Innovation." We are honoured and pleased to welcome all participants to this biennial event.

MIIEX '24 is a platform that gathers experts from local and international industries, academia, scientists, researchers, and the community to contribute to the advancement of scientific and technological knowledge. This knowledge helps develop disruptive innovation products that improve daily activities for businesses and the community, especially those with special needs.

MIIEX '24 provides an atmosphere for inventors of all levels to gain new exposure and collaborate. Indirectly, this promotes a collaborative and innovative culture that focuses on cutting-edge technologies and new standards in technology and creativity.

MIIEX '24 is anticipated to serve as an arena for participants to acquire and disseminate revolutionary information on ideas and innovation. It is intended that the competition will expose the contestants' minds to the latest technologies and designs, aligning with the government's goal of encouraging innovation in Malaysia.

Finally, I want to compliment my fellow committee members on their amazing efforts, which were vital to the event's success. In addition, I want to thank our co-organizers, event sponsors, and participants. Optimistically, we hope that all new knowledge discovered, invented, or innovated will lead us toward future sustainability.

Thank you.

**FOREWORD BY MELAKA STATE EXCO OF SCIENCE, TECHNOLOGY,
INNOVATION AND DIGITAL COMMUNICATIONS**



YB Datuk Fairul Nizam bin Roslan

Melaka State Exco of Science, Technology, Innovation and Digital Communications

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honor for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

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Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition. We hope that this collaboration never ends here.

Thank you.

MIIEX'24 ORGANISING COMMITTEE

COMMITTEE	NAME
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	TUAN MUHAMMAD IDRIS IRFAN BIN TUAN MOHD AZAHAR
	RASEEDA BINTI HAMZAH
	TS. DR. NOR AFIRDAUS BINTI ZAINAL ABIDIN
DESIGN & MULTIMEDIA	EN RASHIDY SAMSUDIN
	RIDZUAN ADLI BIN AZIDIN
	WAN NUR KHALISAH SHAMSUDIN
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	BUSHRA ABDUL HALIM
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	FAIQAH HAFIDZAH BINTI HALIM
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	PN MAYMUNAH ISMAIL
	PN NOR HALAWAH AHMAD
	PN AZIRA RAHIM
	NORLINDA TENDOT ABU BAKAR
	AFZAN SHAHILLA AMIR HAMZAH
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	ENCIK KHAIRI BIN KHAIRUDDIN
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	MOHD SUFIAN AB KADIR
	SITI MARIAM ALI
	ERRATUL SHELA ESHAK
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	MASLIZA BINTI MOHD RAZALI
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	AFZAN SAHILLA BINTI MOHD AMIR HAMZAH
	MUHAMMAD FURQAN BIN AZHAR
	KHAIRUL AZHAR BIN LOCHMAN

ABOUT MIIEX'24

MIIEX'24 is an innovation competition annually organised by UiTM Melaka with the intention to bring together ideas and inspiration that could fit in for commercialization needs.

This event creates a platform for researchers to establish networking, partnership and opportunities to collaborate with industries.

OBJECTIVES

1. Encourage and instil passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
2. Highlight distinguished talents of skilful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
3. Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;
5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

THEME

'EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION'

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StudyMate: UiTM Student Time Management System using Web-Scraping and Telegram Bot API with Automatic Notification Reminder

Amirul Mamat¹, Asrol Arshad², Dr. Rahayu Aziz³, Ashraff Azmi⁴, Ayreeq Mazlan⁵

^{1, 2, 3, 4, 5} College of Computing, Informatics and Mathematics, Universiti Teknologi MARA (UiTM)
Cawangan Melaka Kampus Jasin, 77300 Merlimau, Melaka, Malaysia.

me@amlxv.com

Abstract

StudyMate is a time management system designed to assist Universiti Teknologi MARA (UiTM) students in effectively managing their academic schedules. The system integrates seamlessly with UiTM's timetable websites, ICress and myStudent. This eliminates the repetitive tasks associated with obtaining timetables through traditional methods and the potential for confusion arising from saving them across various platforms as well as the lack of reminder notifications for studying. This project analyzed that retrieving timetables using the traditional ways is tedious, and preserving them across many platforms such as WhatsApp and Telegram may cause problems in the future. Students occasionally forget their schedules because no one reminds them. StudyMate aids students in scheduling, promoting focused study time. It also integrates seamlessly with the official university timetable website, allowing users to effortlessly import their class schedules directly into the system. This eliminates the need for manually entering data and keeps everything organized in one convenient location. This solution offers to solve these issues by saving each student's timetable directly into the system linked to their profile. Interestingly, the system sends Telegram notifications to students before class begins. The system underwent detailed testing. IT experts confirmed its functionality, while user acceptance tests gained positive feedback. Finally, accuracy tests validated the system's ability to flawlessly retrieve data, deliver reminders, and accommodate user-customized notification times. Number of schedules supported, reminder platform, and numbers of reminder customization can be offered as subscription plans for commercialization.

Keywords: StudyMate, Time Management System, UiTM Timetable, Schedule Reminder

1. INTRODUCTION

StudyMate, the UiTM Student Time Management System is a ground-breaking new tool that will empower students and change the way they manage their academic lives. This modern, user-friendly platform will serve as a single center for students to organize their schedules, prioritize tasks, and remain on track with deadlines. The system utilizes cutting-edge technologies to make schedule management easier. The system uses web scraping techniques to automatically gather schedule data from university websites, removing the need for manual input. Web-scraping is the technique of getting data from websites by browsing and selecting specific content (Glez-Peña et al., 2013). Furthermore, the system works with the Telegram Bot to provide individualized reminders about forthcoming classes and tasks, ensuring that students never miss a beat. Developers can use this API to create bots that can handle messages, group interactions, and membership tasks (Fazliakhmetov et al., 2021). This ingenious method has the potential to revolutionize schooling. StudyMate, by providing students with a powerful and simple tool to manage their time, has the potential to improve academic achievement, reduce stress, and empower students to take control of their education.

2. OBJECTIVE

StudyMate aims to assist UiTM students to take ownership of their academic journey by encouraging smart time management. This unique tool effortlessly connects with the UiTM timetable, allowing students to consolidate class schedules and other commitments under an intuitive structure. This comprehensive method eliminates the need to manage numerous calendars, allowing the students to easily view all events at any time and from any location. To improve organization and prevent missed deadlines, StudyMate includes an optional reminder notification system that delivers messages to students prior to each scheduled event, ensuring they keep on top of their academic obligations and maximize their study time.

3. NOVELTY & INVENTIVENESS

StudyMate eliminates the tedious task of manually acquiring class schedules. Unlike traditional approaches, which need students to manually enter faculty, campus, and course information for each subject before self-filtering the timetable depending on their group, StudyMate completely streamlines the process. Gone are the days of relying on unsafe storage techniques such as notebooks, Telegram messages, or WhatsApp chats, all of which are prone to loss or inadvertent deletion, forcing students to repeat the retrieval procedure. These insignificant actions are no longer necessary with StudyMate. The technology automatically fetches the timetable, removing the need for human group filtering, and all data is safely stored in secured databases. This allows for easy access to the timetable from any location, at any time.

4. PRACTICALITY & USEFULNESS

While StudyMate serves a broad audience outside of academia, its basic design philosophy prioritizes the student experience, particularly for UiTM students. This focus arises from the system's connectivity with the UiTM website, which allows UiTM students to easily retrieve class schedules, saving them important time and reducing manual data entry requirements. However, the capability goes far beyond the original target group. StudyMate provides a full range of scheduling and reminder options that are accessible to all users. Regardless of background, anyone may use the system's organizational features to manage their calendars and receive timely notifications via Telegram, allowing them to keep on top of their obligations and navigate their daily activities more efficiently. In essence, StudyMate goes beyond the scope of student life, providing a beneficial solution for anyone looking to organize their schedule and maximize productivity.

5. CONCLUSION

At last, the introduction of the StudyMate project, the UiTM Student Time Management System maintained on a global server, represents a significant step toward improving accessibility for all students, particularly UiTM students. Students, regardless of college location, may now use this user-friendly application to better manage their time and optimize

their academic and personal responsibilities. Students can enhance their time management skills by utilizing the system's features and functionalities, resulting in increased productivity and academic performance.

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