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RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

# REMACS 5.0

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CS240 - BACHELOR OF INFORMATION TECHNOLOGY [HONS.]  
CS248 - BACHELOR OF SCIENCES [HONS.]  
MANAGEMENT IN MATHEMATICS  
CS251 - BACHELOR OF COMPUTER SCIENCE [HONS]  
NETCENTRIC COMPUTING  
CS255 - BACHELOR OF COMPUTER SCIENCE [HONS]  
DATA COMMUNICATION & NETWORKING

**2<sup>nd</sup> February 2023**  
**Stor Complex, UiTM Perlis**

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Organized by:  
College of Computing, Informatics and Media  
Universiti Teknologi MARA Perlis Branch

**Research Exhibition in Mathematics and Computer Sciences  
(REMACS 5.0)**

Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)

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# Preface

It is with great pleasure that we present this extended abstract book, titled "The 5<sup>th</sup> Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)". This book is a collection of research work in the fields of Computer Science and Mathematics, contributed by the final year students from Universiti Teknologi MARA, Perlis Branch. The aim of this book is to showcase the diversity and depth of research in these two interrelated fields.

Mathematics and Computer Science are two fields that have seen tremendous growth and advancement in recent years. With the rise of new technologies and the increasing demand for data-driven solutions, researchers in these fields have been working hard to develop new theories, algorithms, and models that can help solve some of the most pressing problems of our time. This book is a testament to their hard work and dedication.

The abstracts in this book cover a wide range of topics, including algebra, analysis, logic, computer architecture, algorithms, artificial intelligence, machine learning, computer network, netcentric computing and many more. The work presented here is both theoretical and practical, and has the potential to impact many areas of society, from finance and healthcare to education and security.

We hope that this book will serve as a valuable resource for future students in the fields of Mathematics and Computer Science. We also hope that it will inspire more students to pursue innovative and groundbreaking research in these two fields. Finally, we would like to express our gratitude to all the contributors for their hard work and dedication, without which this book would not have been possible.



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# EVENT SCHEDULE

8:00 – 8:30 am

- Registration

8:00 am – 12:00 pm

- FYP Project Presentation

12:00 - 2:00pm

- Lunch Break

2:15 – 2:35 pm

- National & Wawasan Setia Anthems
- Doa Recitation

2:35 – 2:45 pm

- Welcoming Address by Director of REMACS 5.0

2:45 – 2:55 pm

- Officiating & Closing Remarks from Rector of UiTM Perlis

2:55 – 3:00 pm

- REMACS 5.0 Montage

3:00 – 4:00 pm

- Awarding of Winners:
  - Best Poster
  - Best Project Award

- Photo Session

- End of Ceremony

*Dress Code: Formal / Corporate*

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# EXTENDED ABSTRACTS

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RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES  
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# UITM WEB PRACTICAL LOGBOOK SYSTEM

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## **Abstract**

A Web-Based Practical Training Logbook System has been developed to computerise the entire practical training process and make it available online. The system allows for the registration of internships, the writing of logbooks, and the monitoring of the UiTM industrial internship programme. This system was created using the System Development Life Cycle (SDLC). This system will be constructed with the assistance of web-based programmes such as PHP, HTML, and MySQL. The Waterfall model has been used as the approach for building the system, which includes phases for planning, analysis, design, implementation, testing, and documentation. These phases are all part of the development process. This online system, which is integrated with a database system, can assist the lecturer in managing and monitoring the students' industrial logbook process. This system offers one of a kind features, such as the capability to print or convert the whole logbook into PDF format. In addition to that, they have the ability to apply for leaves of absence and send alerts to the lecturer in order to keep them updated. The system is simple to use and can help with the internship programme process. As a result, in general, this system will benefit students as well as all parties involved in the internship programme. The functionality and usability testing was done by thirty different individuals, and the findings revealed that the UITM Web Practical Logbook System fulfilled all of the objectives that were originally outlined.

*Keywords: logbook, web, practical, internship*

## **1. Introduction**

The purpose of this research is to design and develop a web practical training logbook system. Beside, is to test the system's usability and functionality to see how well it works. The Web-based Practical Training Logbook System was developed utilising Web-application tools such as XAMPP, MySQL, PHP, and HTML. The intended users are UITM students who are required to prepare an internship report as part of their graduation requirements and UITM lecturers. If a user want to submit a daily internship report, they must first register, then enter their personal information, the company's information, and their daily activities. At the end of internship training, they can convert the entire report to pdf and print it.

## **2. Methodology**

The system development life cycle (SDLC) was implemented in the creation of a Web-based practical training logbook system. SDLC is crucial for ensuring that a system will provide actual deliverables or a positive outcome during its development and at its conclusion. By adhering to the phases in sequential order, the project can yield the greatest results. The six steps of the SDLC are planning, analysis, design, implementation, and testing. This project's SDLC is established using the waterfall paradigm.

## **3. Results and Discussion**

Usability and functionality tests were part of the UITM Web Practical Logbook System code-testing procedures. These procedures are carried out in order to gather user input regarding the efficiency of the UITM Web Practical Logbook System. After usability testing was completed, a series of questionnaires were distributed to respondents to solicit their input. The average system usefulness is

4.52, the average score for quality of information is 4.48 and the median rating for interface quality is 4.6. Usability testing and functionality testing have provided a clear picture of how the UITM Web Practical Logbook System is perceived by its users. In addition, the testing's purpose is to ensure that UITM Web Practical Logbook System has achieved its goal. The findings of this research are subject to a number of constraints and boundaries. Once students had completed their industrial training under this system, there was no opportunity for them to be evaluated on their performance. In addition, the requirements for medical students are different, so this UITM Web Practical Logbook System is not suitable for them. Additionally, this system did not place any restrictions on the number of days that could be used when applying for leave.

#### **4. Novelty of Research / Product**

The goal of this project's research is to come up with a new way to make practical training logbooks that will help people deal with their busy lives, which take up most of their free time. Students don't have to write down their daily activities during an internship in a book anymore because there is now a digital system for keeping a logbook of these activities. The system aims to make people happier because putting in less effort might make people who are always on the go feel like they've done something.

#### **5. Conclusion**

The web-based, practical logbook system has elicited many favourable responses from users in regard to the system. The majority of respondents were satisfied with the UITM Web Practical Logbook System based on the results of the testing sessions. Other than that, the entirety of the tested functionality has provided error-free output.

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