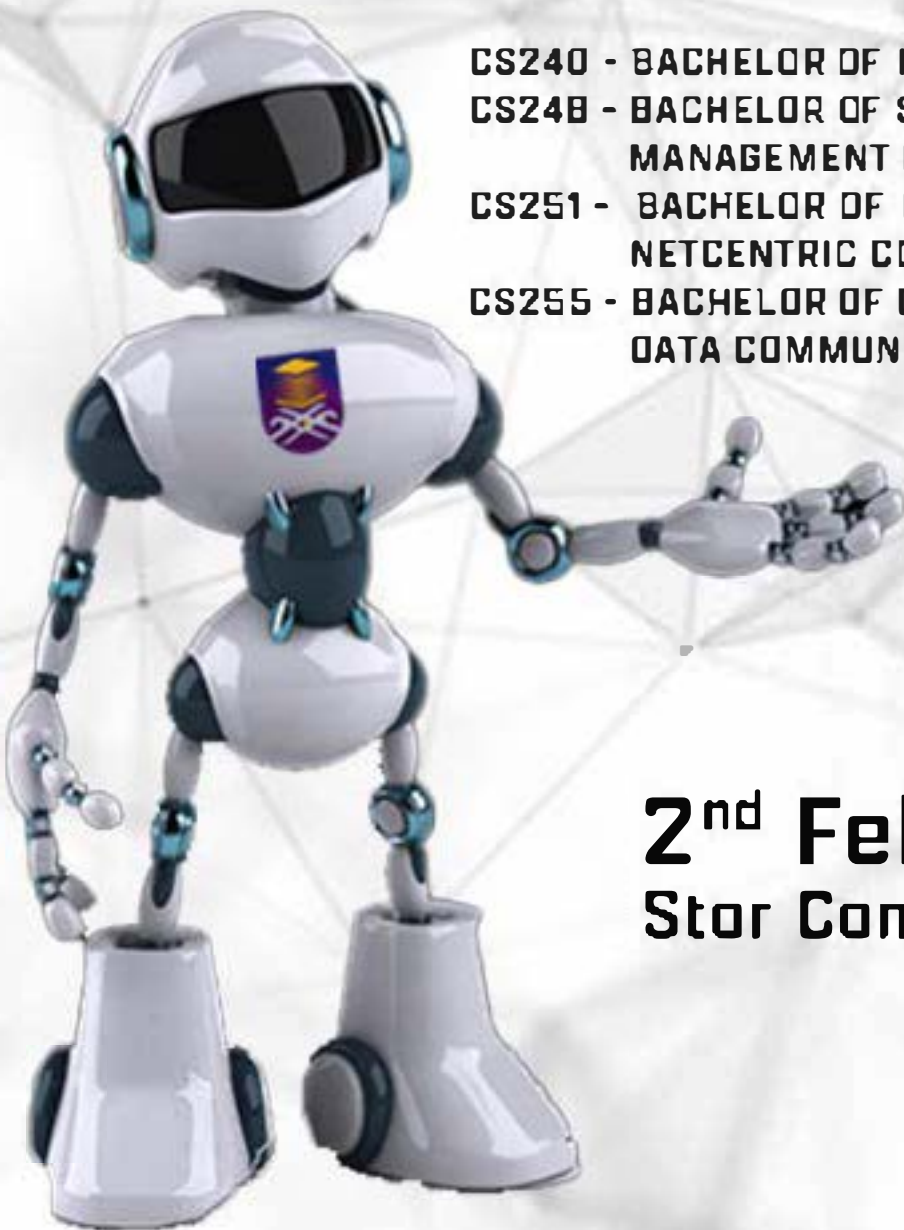

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

REMACS 5.0



CS240 - BACHELOR OF INFORMATION TECHNOLOGY [HONS.]
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2nd February 2023
Stor Complex, UiTM Perlis

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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Editors

Rafiza Ruslan, Mohamad Najib Mohamad Fadzil, Noorfaizalfaird Mohd Nor, Mohammad Hafiz bin Ismail

e ISBN: 978-629-97934-0-3



Perpustakaan Negara Malaysia

Published by

MOHAMMAD HAFIZ BIN ISMAIL
Universiti Teknologi MARA
02600 Arau, Perlis
Tel: +604 988 2028

<https://fskmpерlis.uitm.edu.my/remacs50/>

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Preface

It is with great pleasure that we present this extended abstract book, titled "The 5th 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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REMACS 5.0

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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

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
REMACS 5.0

ONLINE HOSPITAL APPOINTMENT CARD WITH QR CODE

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Abstract

New technologies have emerged in the contemporary world, and as time goes on, individuals will need to adjust to the changes brought about by those technologies. People who are familiar with technology could be intrigued by developments like web apps. Since the Covid-19 pandemic, people who have many obligations and little time to go to the government hospital to receive an appointment, such as employees and students, prefer online platforms. The creation of an Online Hospital Appointment Card with QR Code employing web-based tools like PHP, HTML, and MySQL will be described in this proposal. The planning, analysis, design, implementation, testing, and documentation phases of the system's development have all been implemented using the Waterfall model as the approach. Additionally, the system will use QR Code technology, which will provide a virtual appointment card. Patients will benefit from the QR Codes created by the system since they will provide a virtual appointment card, eliminating the need for patients to carry a physical card with them every time they have an appointment. Only their smartphone must be brought.

1. Introduction

The project's goals are intended to design and develop the hospital appointment card web system with QR codes technology called Online Hospital Appointment Card with QR Code and to perform usability and functionality testing to measure the effectiveness of the system. The Hospital Appointment Management Web System was built using web-based application software such as XAMPP, MySQL, PHP, and HTML. Government hospital's patients are the intended audience. To get access to the Online Hospital Appointment Card with QR code, a user must first register and then fill out their personal information. Then they can view the available schedule that has been scheduled with session title, date and time including doctor's name that is in charge for that session. When the appointment is successfully scheduled, the virtual appointment card's QR code is generated.

2. Methodology

The Online Hospital Appointment Card is developed with the help of the System Development Life Cycle (SDLC), which is an acronym for "system development life cycle." The planning phase, the analysis phase, the design phase, the implementation phase, and the testing phase are the stages that are involved in the creation of this system. Google Forms is used to collect the feedback of the responder about this project. About 60 responses are recorded through the usability testing. Functionality testing was also done for this project by the researcher to test all the functions of Online Hospital Appointment with QR Code.

3. Results and Discussion

This research is subject to a number of constraints and boundaries at this point. According to the findings of the researcher, web design will be the constraint of this study due to the fact that different browsers offer varying degrees of support for HTML standards and implement them in different ways. Because of this, it's possible that some of the functions on the website will appear jumbled up and in a different order when viewed through various browsers. Aside from that, one of the limitations of the Online Hospital Appointment Card with QR code is that the patient can only book the available session that has been arranged by the administrator. They are unable to make a request to plan an appointment with the doctors on the date and time of their choosing.

4. Novelty of Research / Product

In this project, a QR code of the virtual appointment card was added, this feature is added to substitute the physical appointment card. Patients will not have to bring a physical card to the hospital every time they have an appointment. The reason why the QR code is used, this system is developed as a web system. So, the patient can simply scan the QR code and keep the information details in their phone. Other than that, the Online Hospital Appointment Card with QR code also has features that allow patients to book the available schedule. Unlike the physical appointment card, this system has more advanced features. The advantage of the Online Hospital Appointment Card is that hospitals can reduce the usage of the paper and decrease the workloads.

5. Conclusion

In conclusion, the web-based Online Hospital Appointment Card with QR Code has shown positive reactions. In this system, patients can keep their appointment details in their phone and can just bring the information that has been scanned on the QR code in the system then bring it to the hospital as a substitute to the physical appointment card.

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Research Exhibition in Mathematics and Computer Sciences: REMACS 5.0
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e ISBN 978-629-97934-0-3

