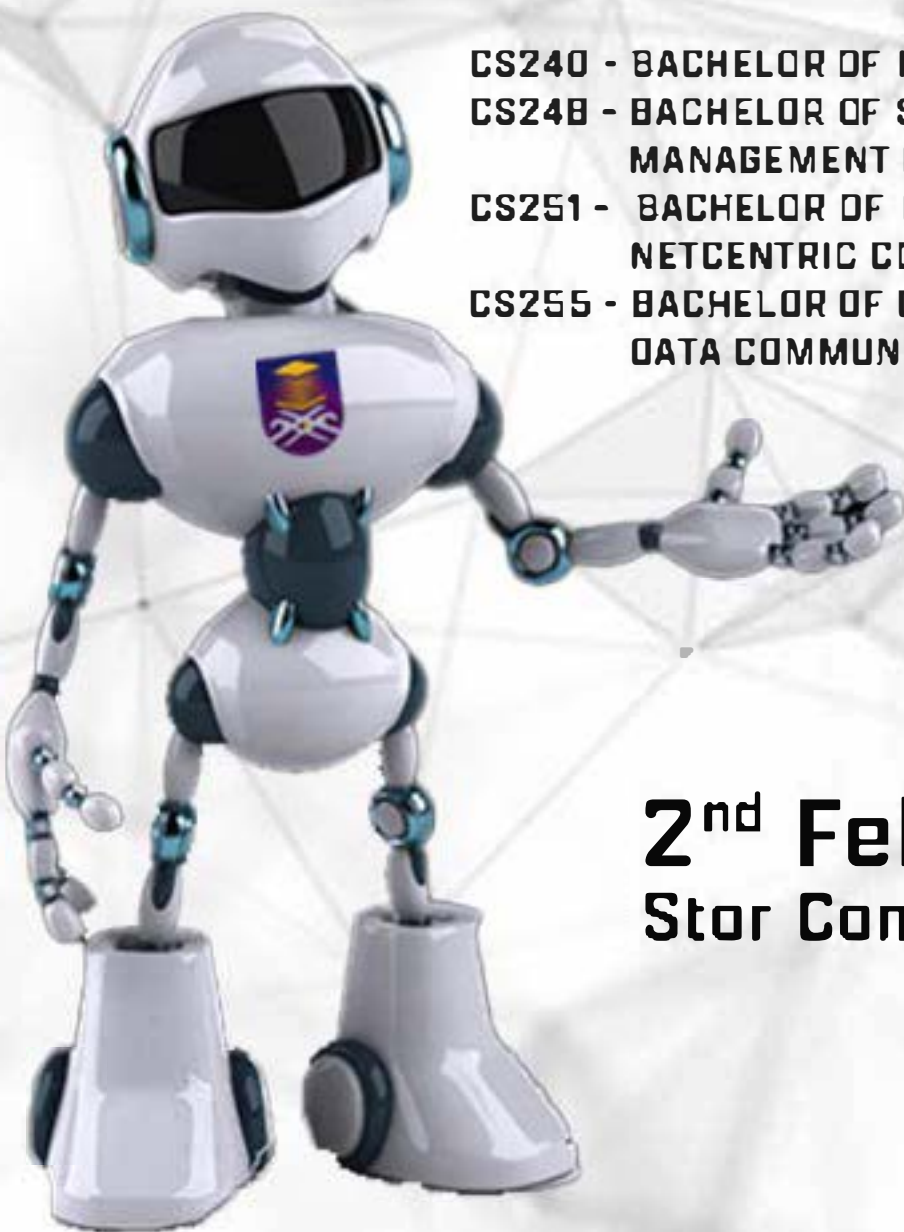

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

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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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

MEDCARE: A WEB-BASED CLINIC APPOINTMENT SYSTEM WITH SHORT MESSAGE SERVICE (SMS) NOTIFICATION

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Abstract

The MedCare Clinic Appointment System is a web-based application to manage appointments for patient and doctor at a non-government clinic. The purpose of implementing this system is to develop a web-based application which is enabling the patients request the appointments using cloud computing or online method before they get the doctor services in the clinic (face to face) as well as manage the appointment information such as schedule, rating, and notification through the system. The MedCare Clinic Appointment system also aims to reduce the time taken by patient to get the appointment within the doctor services. Furthermore, The MedCare Clinic Appointment system is integrated with Short Message Service (SMS) technology to notify the patient and doctor about the appointment status update.

Keywords: appointment, MedCare, clinic appointment system, Short Message Service (SMS)

1. Introduction

The objective of this project are to develop a web-based application system for the appointment management between doctors and patients. Next , to integrate the web-based application clinic appointment with Short Message Service (SMS) notification. To make the system development process easier, the scope of this application will be focused on creating web-based application using notepad++ and AdaSMS for Short Message Service (SMS) notification. Non-government clinic is the target for this system that including patients and doctors.

2. Methodology

Waterfall Model System Development Life Cycle (SDLC) for the methodology. A system is a collection of interacting or interdependent components that form an interconnected whole, it is a word that can be used in various industries, and the Software Development Life Cycle is a specific concept that describes the stages of developing a software component that interacts with other software components to create the whole system. These methodology of five stages, starting with Planning, System Requirement, System Design, System Development and finally System Evaluation.

3. Results and Discussion

The effectiveness of MedCare Clinic Appointment **System was evaluated through usability testing. This testing was** conducted through a questionnaire that is created in Google Form. The usability testing was carried out on thirty participants towards the potential users of this system. The result and analysis are determined based on four different categories which are user interface satisfaction , usefulness and ease of use, usability and last one is alert System. Based on the result, most of the participants were satisfied with the features of MedCare Clinic Appointment System, the functions of the system and the effectiveness of SMS notification. Despite all of this, there were still multiple functions that needed to be improved. The limitation of this system is it requires a strong internet connection and it is only accessible through a website only.

4. Novelty of Research / Product

In this era of pandemic Covid-19, appointment applications would lower the chance of infection since crowding might raise the risk. Thus, this project has been initiated to lower the risk of a pandemic by making an appointment online due to congestion and decreasing patient waiting time to obtain a medical service using cloud computing and SMS notification. Patients should not miss the appointment because they will be notified along the process until it is completed. The study's aimed to minimize the problem and make appointment management easier for both patients and doctors. Hence , we developed a system that sends notifications to patients and doctors throughout the appointment process until it is completed.

5. Conclusion

MedCare Clinic Appointment System using web-based and SMS technology is convenient, economic and reliable method . Therefore, the system has achieved all three objectives, which were to propose and develop a prototype web-based system for the patients and doctors, integrate the system with SMS service to notify those users on their appointments as well as to evaluate the user acceptance of the system and network performance.

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