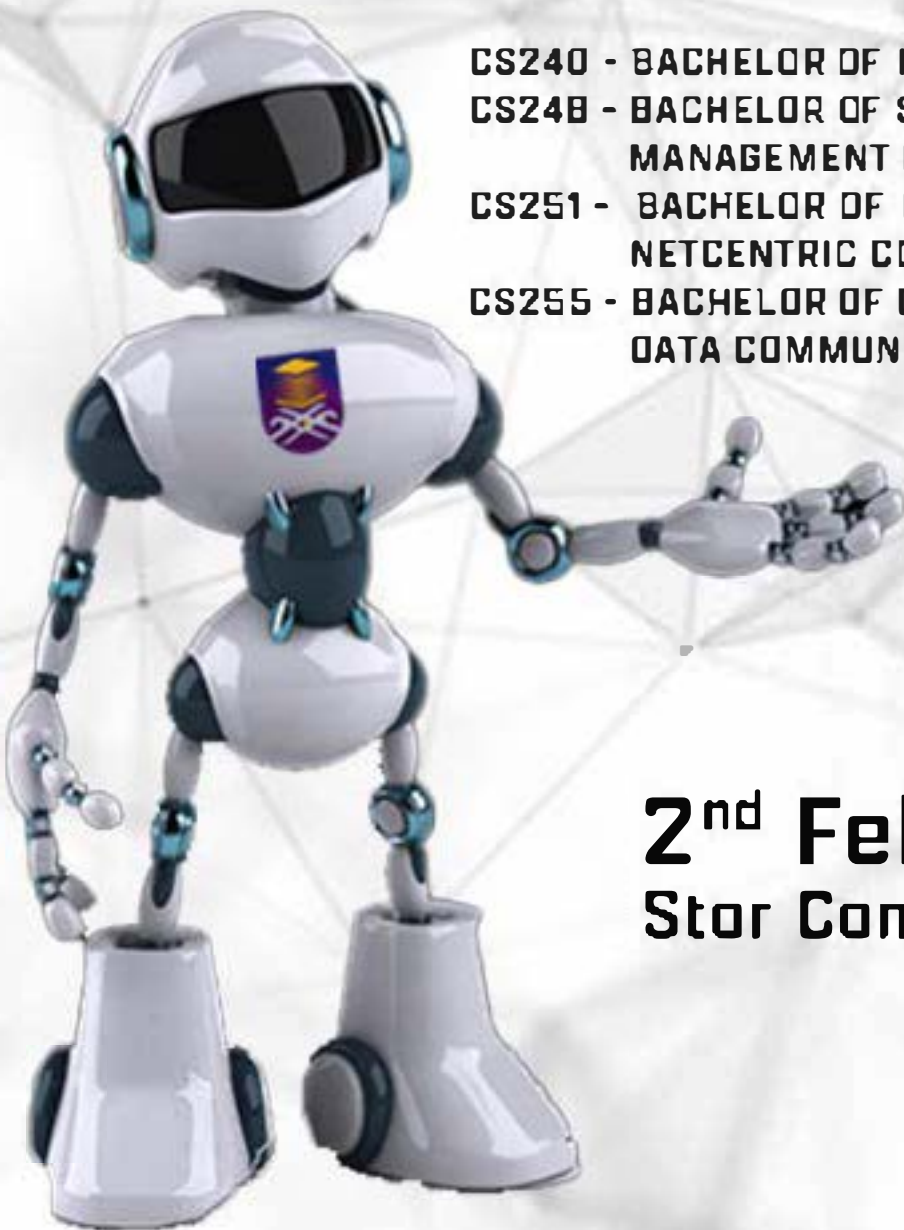

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

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

UiTM PRIHATIN DONATION SYSTEM USING A RESPONSIVE WEB DESIGN APPROACH

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Abstract

In today's fast-paced, globally connected world, time and money are highly valued commodities. People are constantly looking for ways to make their lives easier and more enjoyable. This is especially true when it comes to charitable acts such as giving or helping others. People want to help, but they don't want to spend their time going to mosques or giving money to the homeless. Additionally, asking for assistance in person can be awkward and frightening for those in need. It's possible that they lack the courage to seek help. This thesis describes the creation of the web based UiTM Prihatin Donation System, which aims to support and meet the needs of modern society. Because of the system's responsive web design, users can easily navigate and use it. The system was created using the Waterfall model's phases of planning, information gathering, requirements analysis, design, development, implementation, and testing. The UiTM Prihatin Donation System priorities user experience and responsive web design to make it easy for users to donate and apply for donations. Additionally, the system includes email integration, allowing the administrator to notify users of system status via email. After the UiTM Prihatin Donation System was completed, prospective end users were tested for usability and functionality. The response time of the system was further evaluated using network performance testing, and the success rate was calculated based on user feedback. The testing involved 42 people, and the results show that the UiTM Prihatin Donation System met all of its objectives.

Keywords: responsive web design, response time, donation, integration

1. Introduction

Through the creation of an approachable and intuitive online donation system, the purpose of this project is to facilitate, improve, and standardise the donation and application process for the students and employees of UiTM Arau. The Unit Hal Ehwal Islam of UiTM Arau will be in charge of managing the system, which will allow for it to be easily tracked and kept up to current at all times. The website will be developed with a user-centered approach, with a primary concentration on the requirements and preferences of the faculty and students of UiTM Arau. It will have a straightforward interface that is simple to browse, which will cut down on the amount of time and effort required to make a gift. The technology will be designed to reduce the likelihood of errors caused by humans, hence making the donation process more effective for all parties involved. In conclusion, the website will function as an invaluable resource for anyone who is interested in making a contribution or applying for aid in a way that is straightforward and efficient.

2. Methodology

This project utilized the Waterfall model, which is a linear sequential methodology that encompasses the steps of planning, data collection, requirements analysis, design, development, implementation, and testing. Usability and functionality testing with possible end-users and network performance testing to determine the system's response time are employed. The procedure comprises the creation of a responsive web design to facilitate navigation and use by users. The system is intended to assist students in making and requesting donations. Students can fill out a form for donation and application purposes. Donations and applications can be viewed, approved, and rejected by administrators. Email and Whats App integration for user status notifications are also offered. The system will be created and maintained

by the Unit Hal Ehwal Islam of Uitm Arau, and it will be simple to track and update the status of donations and applications.

3. Results and Discussion

Usability and functionality testing revealed that the Uitm Prihatin Donation System achieved all of its goals. Participants found the system's design and layout to be intuitive and pleasing. In addition, they agreed that the system was user-friendly and contained all relevant information. Testing of the network's performance found a fast response time, making the system efficient and dependable. Inferable from the conversation is that the Uitm Prihatin Donation System is a valuable resource for both donors and receivers. The responsive web design makes it simple for users to access the system from any internet-connected device, and the integration of email and WhatsApp enables real-time information on the status of donations and applications. The simplicity and usability of the system make it accessible to a wide range of users, including those who may be uncomfortable with more conventional donation methods. Overall, the Uitm Prihatin Donation System provides a convenient and effective solution for donation and application, hence increasing the number of contributors.

4. Novelty of Research / Product

The novelty of this study is in the development of a web-based Uitm Prihatin Donation System employing a responsive web design. This system is specifically designed to meet the needs of students and faculty at Uitm Arau, making it easy and fast for them to donate and request gifts (Kyrnin, 2020). The system integrates email and What's App, enabling real-time information on the status of donations and applications (Kalyanam, 2018). This feature enables the administrator to tell the user of their donation and application status in real time. Additionally, the system's user-friendly design makes it simple to navigate and utilize, especially for people who are uncomfortable with conventional contribution methods. Additionally, the system's user-friendly design makes it simple to navigate and utilize, especially for people who are uncomfortable with conventional contribution methods. The system's simplicity and usability make it accessible to a broad audience. This research is exceptional in that it provides a novel solution to the donation procedure, making it more comfortable and accessible to everybody.

5. Conclusion

In conclusion, the Uitm Prihatin Donation System is a user-friendly, responsive web application designed to enhance the donation process for Uitm Arau students and staff. It offers a convenient and fast way to donate and apply for donations, and includes tools such as email and What's App connection that enable real-time updates on the progress of donations and applications. The system is an innovative solution that can help to improve the contribution process by making it more accessible and comfortable for everyone.

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