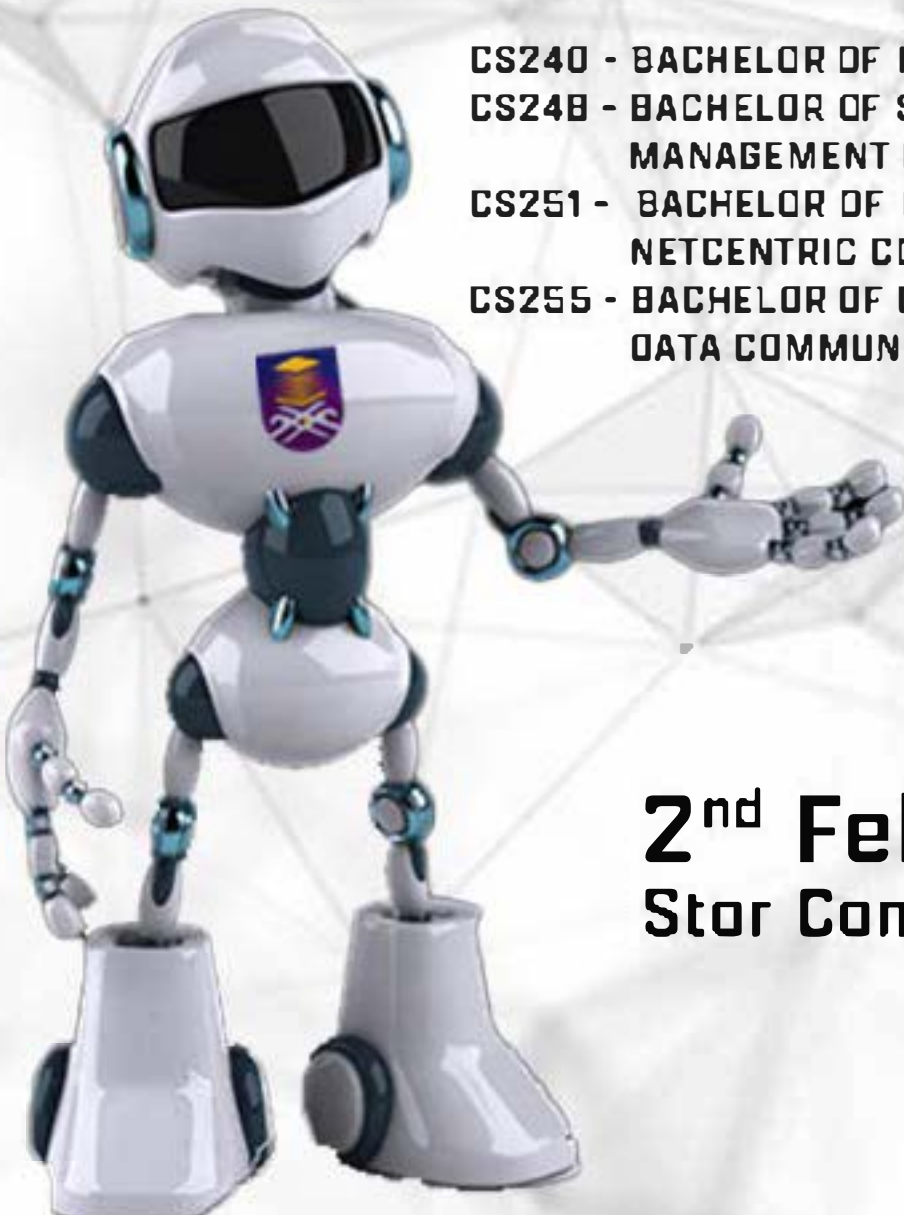

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

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.



RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
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
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MYBUKU PINK MOBILE APPLICATION USING ANDROID

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Abstract

MyBuku Pink mobile application is based on the Pregnancy Check-up Book (Buku Pink) administered by the Malaysian Health Government, which permits periodic health checks after a user's pregnancy has been verified. (Rosely & Jawawi, 2021) stated that once a woman becomes pregnant in Malaysia, she must register for her pregnancy Buku Pink at government clinics or the Klinik Kesihatan Ibu dan Anak. According to the study, people in Malaysia have expressed dissatisfaction with the time it takes to sign up for the pregnancy book at government clinics. A checkup for pregnancy at a government clinic usually takes between one and three hours. The use of manual Buku Pink does not provide advanced features like notifications, and pregnant women tend to forget their appointment. Also, in government clinics, antenatal and postnatal patient appointments are still handled using hardcopies and paper, resulting in high paper consumption. This project uses an agile model for this project as it is most suitable and provides a complete guideline to develop this mobile application successfully. Future work on this project can be applied by making MyBuku Pink in an Ios environment so that this application can use by both users of operating systems.

Keywords: Buku Pink, Klinik Kesihatan Ibu dan Anak, MyBuku Pink

1. Introduction

The objective of MyBuku Pink is to develop an Android mobile application for pregnancy health records and to evaluate the proposed mobile apps via a functional and usability test. MyBuku Pink will be implemented using a mobile application in Android environment. The targeted user for this application is pregnant women. MyBuku Pink will be developed to help the users, which is pregnant women, ease their registration for their "Buku Pink" by just registering it through a mobile app. This application also allows pregnant women to book appointments and get notifications once their bookings are successful. Furthermore, this MyBuku Pink will also benefit both doctors and medical staff. It is because the medical staff doesn't need to write it manually to register the Buku Pink, and the doctor can quickly remind pregnant women through the mobile application. Using this MyBuku Pink, it will also reduce the use of paper for registration.

2. Methodology

In MyBuku Pink, all data was collected through the analysis of the current method used to record pregnancy health which is manual Buku Pink. MyBuku Pink uses an agile methodology that involves planning, analysis, design, implementation, testing, and maintenance. In this project, Google Forms was utilized for collecting feedback from respondents based on the proposed mobile apps, and there were 30 responses collected through usability testing. MyBuku Pink is also tested using functionality testing, where the researcher tests all the functions in the mobile apps.

3. Results and Discussion

Based on the findings, most respondents agreed that this MyBuku Pink should replace the current manual BukuPink. Most of the respondents were also satisfied with the proposed mobile application in terms of the user interface quality, content, and usefulness. All the mobile application functions also

function well after the functionality testing. This resulted in the accomplishment of objective 2 in this project which is to evaluate the proposed mobile apps via a functional and usability test. Developing this mobile app also enables pregnant women to use the pregnancy record and achieve objective 1 in this project. However, some things could be improved in this MyBuku Pink. Firstly, this system does not cover all the pregnancy record health in the manual Buku Pink. Next, MyBuku Pink only covers the Android environment. Another limitation of this application is that it cannot change the language of the app. MyBuku Pink also did not provide a real-time chat in the apps.

4. Novelty of Research / Product

In this project, a new hospital tracker was added. The hospital tracker enables pregnant women to track the nearest hospital near their current location. This helps pregnant women choose their nearest clinic for a check-up. Another advantage of this new feature is it can help pregnant women where they can track the nearest hospital during emergency times. MyBuku Pink has many more advanced features than manual Buku Pink because it has many features and not using manual Buku Pink anymore. This project also will help pregnant women ease their Buku Pink journey. Not only that, but this study will also contribute to assisting the doctor and health staff in registering the Buku Pink and monitoring pregnant women's health status. This digital Buku Pink can also benefit other researchers or governments if they want to implement this mobile app for pregnant women.

5. Conclusion

In a nutshell, MyBuku Pink mobile application is a project that aims to develop an Android mobile application for pregnancy health records and to evaluate the proposed mobile apps via a functional and usability test. This project successfully achieved the two objectives, and the majority of the respondents were satisfied with the mobile application.

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