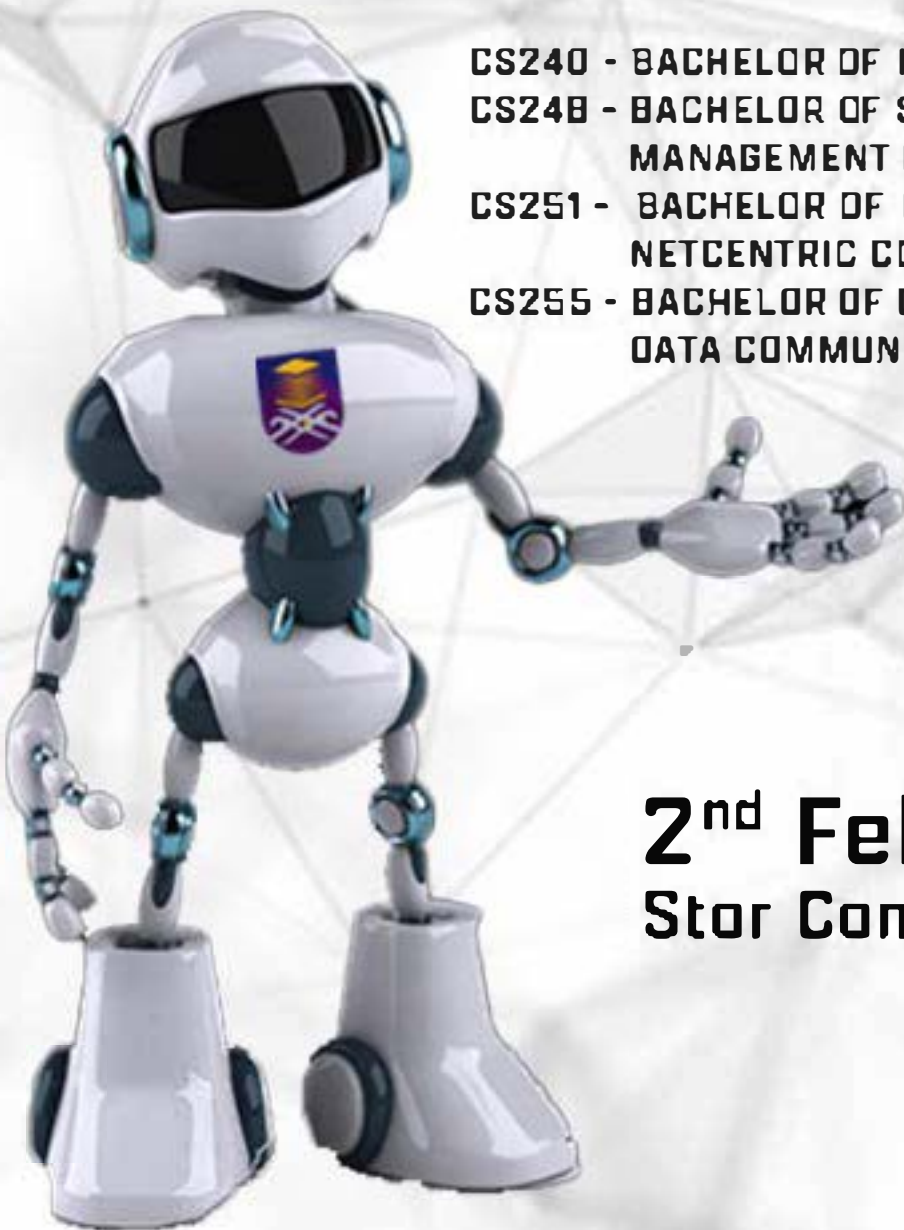

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

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

ON-DEMAND HOME SERVICES USING MOBILE APPS FOR DIGITAL HOUSEHOLDS

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Abstract

The world of the current industrial era has become increasingly dependent on scientific advancements and robotic intelligence. Today's businesses, households, and industries all depend on technology, keeping its power to influence Malaysia's civilizations, cultures, and economies. Due to a lack of customer feedback, it can be challenging for homeowners with digital homes to locate and schedule the best serviceman. On-demand home services using mobile apps for digital household is a platform design to identify and analyse of home services booking system for digital households. Here, homeowners may find serviceman with a variety of skills. By conveniently browsing, choosing, and booking, these mobile apps enable consumers to keep scheduling services with the serviceman of their choice. It will be simpler for both parties to coordinate the time and schedule to make a service booking by using these mobile applications. The fact that homeowners may schedule servicing appointments with experts through this mobile application greatly benefits its users. The Agile Model was developed using appropriate development techniques as a manual for building mobile applications. Using Visual Studio and Firebase as its database, On-demand home services using mobile apps for digital household will build. By giving a questionnaire containing questions from the Usability Testing to 30 respondents, the proposed system was assessed.

Keywords: mobile application, home service booking, homeowner, serviceman

1. Introduction

Technologies have become a vital component of today's businesses, homes, and industries, preserving their ability to shape Malaysia's civilizations, cultures, and economics (Suki et al., 2022). The project's objective is to analyse the problem and requirements of home services system using mobile apps for digital households and to design and develop a mobile apps digital household service. The project's scope is to analyse and construct a mobile app digital household service for digital households. This project will create a mobile app for digital homes to find different types of servicemen. The user only needs to choose a serviceman who matches the digital home service requested and set a time. In addition, there is a serviceman profile that offers more information in order to persuade users that the selected serviceman is the best option for them. This mobile application lets homeowners book service appointments with serviceman without much searching.

2. Methodology

Software Development Life Cycle (SDLC) methodology primarily focuses on the stages of software development, such as requirements analysis, planning, software design, development, testing, and implementation (Altwater, 2020). In functionality testing, the researcher in this project uses the Test Script method to confirm the features and capabilities of the system. In usability process, all the respondents were given a questionnaire with the home service booking application that has been installed into the android phone. Respondents needed to answer the questionnaire provided through Google form after they are completing use that application. All the answers from the questionnaire were recorded and analysed by the researcher and all details explanation on the findings will be explained further below.

3. Results and Discussion

The project result is focuses on the testing of the data collection from the respondents on the home service mobile application for serviceman and homeowner. Two tests were performed involving functionality and usability testing on two user which are homeowner and serviceman. Usability testing was tested to 4 serviceman's staff and 26 homeowners. The objective of usability testing is to confirm whether end -user usability requirements have been met towards home service mobile application for serviceman and homeowner. On the other hand, the purpose of the test is to improve the home service mobile application from the respondent's side of view. In summary, based on the findings of usability testing results, most respondents believed that home services booking mobile applications are a good platform that is efficient and will bring many benefits and advantages to users, particularly serviceman and homeowner.

4. Novelty of Research

The mobile application for booking home services offers users a wide range of advantages. The ability for homeowners to schedule a service directly with the serviceman makes these mobile apps helpful. With the help of these apps, homeowners may review and score the profiles of serviceman. Since the difficulty in building a search list of numerous servicemen on a single site, the homeowner can also benefit from this system because it speeds up selecting a trustworthy and qualified expert for their digital home service. The homeowner might be able to save some time. This mobile apps allows serviceman to plan appointments, create schedules, and update their profiles. This mobile apps also notify serviceman of approaching customer. This is advantageous to the serviceman since it will let independent contractors increase their earnings over time and develop their skills.

5. Conclusion

This research study discusses the introduction, literature review, methodology, the development of the on-demand home services using mobile application for digital households as well as the results and findings. The aim to build an on-demand home services using mobile application for digital households was achieved by accomplishing all three objectives.

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