
RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

REMACS 5.0



CS240 - BACHELOR OF INFORMATION TECHNOLOGY [HONS.]
CS248 - BACHELOR OF SCIENCES [HONS.]
MANAGEMENT IN MATHEMATICS
CS251 - BACHELOR OF COMPUTER SCIENCE [HONS]
NETCENTRIC COMPUTING
CS255 - BACHELOR OF COMPUTER SCIENCE [HONS]
DATA COMMUNICATION & NETWORKING

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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
REMACS 5.0

MOBILE INTERVENTION FOR USED CLOTHING MANAGEMENT WITH GEOLOCATION

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Abstract

Clothes can be one of the causes of the environmental pollution. This is because the clothes were thrown away in the landfills when it is become worn and unwearable. To overcome this problem, an initiative to develop Mobile Intervention for Used Clothing Management with Geolocation. This project is an initiative to be a donation medium for used clothing that people want to donate. Furthermore, this project also implements the Geolocation technology, which purposely to find the collection center for used clothing donation. The System Development Life Cycle (SDLC) was implemented in methodology of developing this application with Waterfall methodology. For a better development, the User Experience Testing (UXT) was conducted with 31 participants to ensure that the application is parallel with the requirements and achieve its goals. Based on the results, the participants give good comments and satisfied with the ability of the developed mobile application. In conclusion, this application will give many benefits and advantages for its target user, especially people who want to make donations based on used clothing material.

Keywords: Used clothing, donation, management

1. Introduction

Firstly, people do not know the appropriate channel to dispose their clothes either by donating, recycling or selling them as used clothing. As for now, no application available to assist donation of clothing. Donating clothing would prevent excessive waste flow that goes to the land field. The people will overlook and fail to notice if there is any announcement regarding clothing donation in the social media. In order to overcome this problem, an application that facilitate the used clothing is needed the most. The aim is to make used clothing donation handling easier for both the donor and the recipient.

2. Methodology

Data were collected from a survey, which is using the User Experience Testing (UXT). The User Experience Questionnaire (UEQ) is made up of 26 questions, each of which is represented by a pair of terms with opposing meanings. The participants will be recruited among people age 18-55 to gain more information regarding the research. The distribution of the questionnaire and the data collection and the data will be collected among people that interested in donating used clothes using mobile application. For the evaluation procedures, the Doclothing Mobile Application can be accessed by using provided smartphone by the researcher, and also can be installed by using .apk file that will be given to participants. To explore the application, the participants were given 10 minutes to using the application. After the participants finished using the application, a Google Form questionnaire based on User Experience Testing (UXT) will be distributed for evaluation.

3. Results and Discussion

As for the result, personal data, including gender, age, and profession, was gathered for the demographic profile in the first section of the survey. This user experience testing involved 31 respondents who responded to the survey. The scales of the questionnaire cover a comprehensive impression of user experience. Both classical usability aspects (efficiency, perspicuity, dependability) and user experience aspects (originality, stimulation) are measured. The UEQ includes a 7-point Likert scale and twenty-six elements showing the main feature. The scale for benchmark was measured, analysed and recorded. The results show that the scale for attractiveness is good, for perspicuity is above average, efficiency is good, stimulation is good and novelty is above average.

4. Novelty of Research / Product

There have been a number of research that have investigated regarding on how used clothing material managed, including research from (Williams & Williams, 2020) about unwanted clothing. To make sure the clothing donation will be beneficial to environment, Fenitra et al. (2021), stated that an individual has higher concerned about the environment are more likely to donate their clothing. The awareness about the clothing donation is highly valuable to make sure that the clothing donation is successful. Halizahari et al. (2021) in their research said that clothing donation will be essential especially during flood in Malaysia. However, there has not been any research on mobile application development that focusing on used clothing donation. Therefore, the main focus is to develop a mobile application for used clothing management with Geolocation. All in all, the research aims to contribute to the scientific mobile application will help users to make clothing donation such as shirts and pants and distribute to parties in need.

5. Conclusion

For conclusion, this project name Doclothing mobile application is an initiative to encourage people and community to donate their own used clothing to the needed one. This project also uses Geolocation technology, to locate the collection centre that accept used clothing donation and link with Google Map application. Overall, all objectives of this project have been achieved.

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