
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
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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
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FELINERINARY: CAT HEALTH MANAGEMENT APP WITH APPOINTMENT REMINDERS USING PUSH-NOTIFICATION

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Abstract

Veterinary clinics are important facilities for cat lovers to ensure the well-being of their pets. To ensure an efficient health record management system, many veterinary clinics have shifted to a computerized system. However, based on an interview with a local veterinary clinic there are some clinics still operating using paper-based record systems. Felinerinary: Cat Health Management App is developed to allow clinics to manage cat's health record and facilitate communication between vet staff and cat owners. This application is equipped with appointment reminders using Push-Notification. Felinerinary provides a ubiquitous platform for both users to enable access to the app. The cat owners will also be able to access their cat's appointments and vaccination records within the app. The methodology used for the development process is the Waterfall Model. The entire project development process is divided into five phases of requirements analysis, design, development, testing and documentation. Besides, a user experience test (UXT) with 30 participants consisting of cat owners, veterinary staff and cat lovers was conducted to verify the performance of this application prototype. The result of the testing conducted has obtained an excellent score on the benchmark scale.

Keywords: veterinary clinics, health record, vet staff, cat owners

1. Introduction

The objective of this project is to develop an app that can facilitate the treatment of the cats involving cat owners and veterinary clinic staff with appointment reminders via the technology from Push-Notification in Changlun, Kedah. Despite federal incentives to transition to Electronic Health Records (EHR), many physicians still operate on paper records (Hedges, 2020). Besides, to evaluate the performance of Felinerinary: Cat Health Management Application using User Experience Testing (UXT). In addition, this can provide a ubiquitous platform for both users to enable access anywhere through mobile phones to view current health information of their cats and ensure they give timely and correct medication to their cats.

2. Methodology

The Waterfall Model approach was used which is the requirement analysis phase is the earliest step. It requires the conduct of an investigation, identification of project requirements, and literature review from publications. The design phase followed with the sitemap that provides a clear view of the project structure before sketching the interfaces using Balsamiq. The development phase involves program code through Android Studio in producing the mobile app and storing the data in Firebase. A User Experience Testing (UXT) to evaluate 30 participants was conducted. With that, all information is documented in the documentation phase.

3. Results and Discussion

The responses of 30 participants were evaluated through a User Experience Questionnaire (UEQ) that prompted them to determine a scale of 1-7 for 26 questions about the experience of using the Felinerinary app. Hinderks et al., (2019) stated that, the questionnaires that measure the user experience consider this complexity of user experience, since they usually compute values on different UX scales. The scale results determined the attractiveness, efficiency, perspicuity, reliability, stimulation, and novelty of the app. The limitation of the application is that it only stands on the Android platform, very dependent on the Internet connection and the cat owners only use the application when their cat's health deteriorates. There are also suggestions from participants such as providing a feature that allows cat owners to buy cat essentials and a feature to total the sales and purchases of medicines at the veterinary clinic. The result that can be concluded is Excellent as the app can clearly help cat owners to get information and reports on their cat's health easier. Also, the veterinary clinic staff can maintain and manage cat vaccination records, cat medical records and so on through the application anywhere via their mobile phones.

4. Novelty of Research / Product

Through the Felinerinary mobile app, veterinary staff can easily refer to the history of the cat's health records available in the application if necessary. This makes it easier for cat owners to check their cat's health records more efficiently and effectively without having to worry about losing old health records. They can also record cat health information directly in the cat health record feature and are important for cat owners to follow. on record from time to time. Furthermore, to give medication to cats, cat owners can schedule a time to take medication using the medication reminder feature in the app because their cat cannot remember or talk about it. This feature will sound an alarm at a set time. If there is a vaccination appointment or cat care follow-up, the veterinary clinic staff can notify the cat owner by sending them some information such as the date, time, and purpose of the appointment with Push-Notification technology in the notify owner feature.

5. Conclusion

In conclusion, the Felinerinary mobile app can clearly help cat owners and vet staff to ease their tasks. Furthermore, most of the participants have excellent experience after using the mobile app after evaluating it through the User Experience Questionnaire (UEQ). Thus, all objectives of this project have been achieved.

REFERENCES

- Hedges, L. (2020). The Pros and Cons of Paper Medical Records (According to Doctors Who Use Them). In *Software Advice*. <https://www.softwareadvice.com/resources/pros-cons-paper-charts/>
- Hinderks, A., Schrepp, M., Domínguez Mayo, F. J., Escalona, M. J., & Thomaschewski, J. (2019). Developing a UX KPI based on the user experience questionnaire. *Computer Standards and Interfaces*, 65, 38–44. <https://doi.org/10.1016/j.csi.2019.01.007>

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