UNIVERSITI TEKNOLOGI MARA

KITAR4U: RECYCLING WASTE MOBILE APPLICATION FOR RESIDENTIAL STUDENTS IN UITM SHAH ALAM

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BACHELOR OF INFORMATION TECHNOLOGY (Hons.)

JANUARY 2021

ACKNOWLEDGEMENT

Alhamdulillah, praises and thanks to Allah SWT because of His Almighty and His utmost blessings, I was able to finish this research within the time duration given. The success and result of this project took a lot of support from many people and I am immensely grateful to the good people around me for giving me strength in completing this project. Firstly, special appreciation also goes to my beloved parents who always encourage me and supporting me in successfully completing this course.

Next is my special thanks goes to my supervisor, Dr. Rozianawaty Osman, a lecturer from Faculty of Information Technology, Shah Alam as a coordination for her guidance, advice, valuable suggestion, encouragement and moral supports throughout the completion of this project. Next, do not forget also to Dr. Emma for teaching us the subject of Project Formulation for two semesters with full dedication despite various challenges in holding classes during this pandemic. I am also grateful and lucky to have a very skilled and knowledgeable examiner about mobile applications. This is because all the reprimands, advice and guidance that have been given are very useful to me to be a more useful human being in the future.

Last but not least, I would like to give my gratitude to my dearest friend for their assistance and contributions throughout the development of this project. Thank you for the support and the help that has been given. May Allah SWT bless us with peace and happiness.

ABSTRACT

The method of recycling objects is challenging for many students because they do not know the methods and ways to quickly recycle them. Residential students in particular, some of whom do not have any transportation and so busy because they go through the routine as a student to go to class, do homework, etc., so that they do not have time to recycle their things. In addition, the campus has inspired students to go to the recycling center and they do not even know how to approach the parties. This project is about developing a Recycling Waste Mobile Application for residential students in UiTM Shah Alam and the owner of the recycle company. This project will cover three objectives which are to identify the requirement, to design, and to develop a Kitar4U mobile application. The scope of this project is focusing on the residential students to view the pickup schedule that have been created by the owner of the recycling company. In addition, it allows the students user to get the recycling service using online ordering. Besides, it has a schedule function to book for the pickup service at their preferred date and time. This way, students can book in any date and time that they were available without need to use any transport. Therefore, when students wish to send a reminder about the pickup service they have reserved, a notification with the alarm manager will appear so that students are better equipped to recycle their products. However, this project did not include a payment gateway as it must have done by cash. The method employed to complete this project is the Mobile Device Development Life Cycle (MADLC). Based on the findings, the project outcome is summarized to show the customer that the booking plan is clearer and can be planned for the pickup service. On the basis of user feedback from the testing session conducted, the weakness and recommendation for future development of this project was recognized. This project used Android Studio for design and development of Kitar4U Recycling Waste application and Firebase real-time database to store the data. In conclusion, Kitar4U will be beneficial for the students as it can minimize the student's time and systematically ease the recycling owner for the data entry.

Keywords: Mobile Application, MADLC Model, Recycling, Firebase, Android Studio, Alarm Notification, Booking Pickup Schedule

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CHAPTER 1

INTRODUCTION

1.1 Project Background

It is found that only 17 per cent of Malaysian have taken up recycling (Aziz, 2016). Malaysia has the lowest recycling rate among the six countries which is only 5 per cent as compared to Hong Kong, Singapore and South Korea which has the highest of recycling rate (see Figure 1.1). This is because solid waste is one of the key environmental problems facing most municipalities in Malaysia, and the amount of waste produced continues to increase in response to rapid population growth and accelerated processes of urbanization and industrialization (Osman et.al, 2015. They also explained that these behaviors are increasingly cause further harm and are attributable to human activity that cause permanent environmental damage.



Figure 1.1 The recycling rate of six countries in 2013.

The evolution and spread of smartphones is undoubtedly one of the most impressive advances in information and communication technology over the last few decades. This is