UNIVERSITI TEKNOLOGI MARA

USER AUTHENTICATION AND ENCRYPTION USING NEAR FIELD COMMUNICATION (NFC) TECHNOLOGY

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Report submitted in fulfilment of the requirements for

BACHELOR OF COMPUTER SCIENCE (HONS.)

Faculty of Computer and Mathematical Sciences

January 2017

ACKNOWLEDGEMENT

Bismillahirrahmanirrahim

Foremost, I thank Allah SWT - the Most Compassionate, the Most Merciful and Most Gracious for endowing me with complete health, strengths, opportunities and loves in completion of this Final Year Project within the time duration given.

I am using this as an opportunity to express my deepest gratitude and special thanks to Mr. Mazlan Bin Osman who in spite of being extraordinarily busy with his duties, took time out to hear my problems, giving guidance and keep me on the correct path and allowing me to develop my project in professionally.

I am also express my deepest thanks to Dr Hamidah Binti Jantan my final year project coordinator for her extensive guidance and personal motivation in all phases of this project as well as for providing necessary information regarding the project and also for her support in completing the project.

It is my radiant sentiment to place on record my best regards, deepest sense of gratitude to PM Wan Dorishah Binti Wan Abdul Manan, Mr. Zawawi Bin Wahab, Mr. Muhammad Atif Bin Ramlan for their careful and precious guidance which were extremely valuable for my study both theoretically and practically.

Last but not least, I would like to express my gratitude towards my parents and friends for their kind co-operation and encouragement which help me in completion of this project. I perceive as this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way, and I will continue to work on their improvement, in order to attain desired career objectives.

ABSTRACT

Smartphones with advanced mobile operating has become mainstream both in business and personal purpose. Thus, it contains a lot of private data such as detail about their owners, personal chats, passwords or bank account details. It is absolutely necessary to make sure that the phone should be access by the authorize users. During the research findings, there are a lots of weakness with the current authentication such as in biometric authentication, there is possible that it cannot read our finger accurately if our finger get too oily or dirt. Therefore, this project will create another way as an alternative for authentication process that will used Near Field Communication (NFC) technology to authorize user. To achieve the necessary security a cryptographic concepts such as authentication and encryption algorithm are used. Encryption is used to encryption user personal information such as name, email and phone number which will produce a ciphertext. These ciphertext will be stored to phone and NFC tag and will be used later for authentication process. Once the apps has been installed and service background is running, a NFC tag is required to perform the user authentication process. The phone can be unlocked if it has been authorized NFC tag and successfully authenticate the ciphertext.

TABLE OF CONTENTS