

UNIVERSITI TEKNOLOGI MARA

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

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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.

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