Universiti Teknologi MARA

The Implementation of QR Code Based Door Locking System with Mobile Application and GSM Notification

Nurul Syafiqah binti Che Mohd Afandi

Thesis submitted in fulfillment of the requirements for Bachelor of Computer Science (Hons.) Data Communication and Networking
Faculty of Computer and Mathematical Sciences

December 2018

STUDENT DECLARATION

I certify that this thesis and the project to which it refers was the product of my own work and that any idea or quotation from the work of other people, publisher otherwise were fully acknowledged in accordance with the standard referring practices of the discipline.

……

NURUL SYAFIQAH BINTI CHE MOHD AFANDI

2016577183

DECEMBER 26, 2018

ABSTRACT

QR Code has widely used for the commercial and proved it security that could not be read and understood without using a machine to scan it. The user could save their time by scan the QR Code given and the process would in a second to get the success rate. The research was a focus on the implementation of the QR Code door locking system by using the mobile application and GSM notification. Nowadays the user was very busy with their work and sometimes they forgot to bring their key and also lost or misplace their keys. The method was covered limited of house area. So this was the method that the user could felt easy and the problem could be solving. Mobile would act as the key because the key was used the QR Code which was generated and scanned by the user whenever they wanted to enter and lock the door. The door locking system was projected to provide with Wi-Fi connection and the GSM technology. The user would be asked to download the door locking mobile application and the QR Code would be generating if the information entered was matched with the registered by the administrator. The objective of the research project is to implement the door locking system for home security using QR Code and sending notification through GSM Module then will do the testing on the performance and the system. The mobile application was for Android user and the area was cover for research was resident area Arau, Perlis that act as a pilot test. The limit of this scope is one-way action to unlock only, the QR Code generated the same code for every session login and it works in the same network. The findings of this research were the GSM can cover for long range and also the same goes to the QR Code that can be read up to 40 centimeters (cm) compare to other devices.

TABLE OF CONTENTS