UNIVERSITI TEKNOLOGI MARA

Employing Dual-Platform Indoor and Outdoor Smart
Home Monitoring with Internet of Thing (IoT) System

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Bachelor of Engineering (Hons) Electrical &
Electronic
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by

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Report is submitted as the requirement for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations, for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Nowadays internet of things (IoT) had been growth up recent years compatible with the improvement of technologies. The smart home system before this only can be imagine now have been reality. The system creates saver, comfortable, easier, and intelligent living environment. Smart home system that uses android smartphone to monitor the environment, control the electrical appliances and automate simply daily tasks. The android smartphone will send data to the Arduino that act as a microcontroller. Then Arduino will control the appliances either to turn it ON or OFF using the relay. It includes indoor and outdoor monitoring such as lamp switch in the house and motor water pump for the garden. Using the internet at home which is Wi-Fi connection to make connection between Ethernet shield Arduino and the android smartphone. Also included the cloud web server of ThingSpeak where it function to collect, record and store the data from the Arduino. The application use for the android which is contain the ON and OFF button is Graphical Unit Interface or GUI which is created by using the MIT App Inventor.

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