

FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA TERENGGANU

FINAL REPORT OF DIPLOMA PROJECT

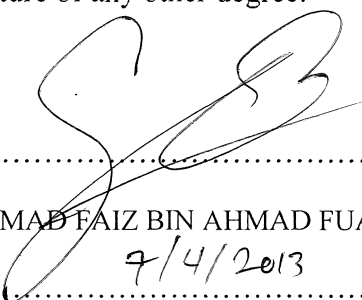
**SMART ROOM AUTOMATIC LIGHT CONTROLLER
WITH VISITOR COUNTER**

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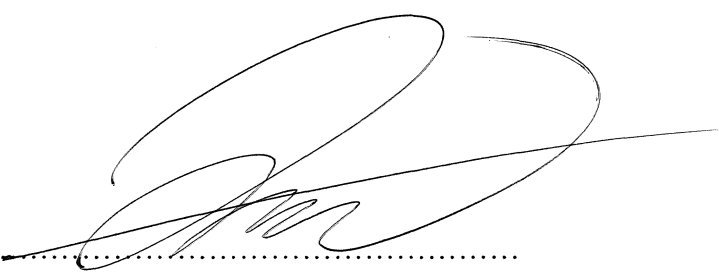
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"I declare that this report entitled "SMART ROOM AUTOMATIC LIGHT CONTROLLER WITH VISITOR COUNTER" is the result of my own group research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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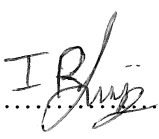
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ACKNOWLEDGEMENT

In the name of ALLAH Most gracious and Most merciful.

Here, we would like to thank all people who involved finishing this final year project. Thus, we want to take this opportunity to give a big thanks to Madam Norizan Binti Ahmed as our supervisor for this final year project.

We also would like to thank to all people who willing to help us, especially in gaining the information to accomplish this project.

By gaining all the information that we needed from them, we finally completed this project. We really appreciate their help and willingness, it help us to understand better about our final project. Besides, without their help also, our final project would never come at the end of this road like we want.

This project also taught we how to precious the value of friendship, tolerate among us, patient, helpful are the good attitude that we should build in ourselves to ensure our friendship will end till eternity. Lastly, thanks again to all people that involved in completing our project.

ABSTRACT

We wanted to make something utilities for people, especially for disable person, but I had no clue where to start. Then I have noticed how about make room without switch to turn on/off or we call it automatic room. A lot of people, especially disable or folks person it hard to move to switch on/off the light. So we decide to make final project that automatically switch the light on/off and counting the person coming and leaving the room. This project also can apply in meeting room because it can display the number of person in that particular room.

Smart Room Automatic Light Controller with Visitor Counter is designed to save the usage of electrical energy and to avoid wastage. This project takes over the task of automatic switch on and off the light in the room as well as counting the persons in the room precisely. When a person enters the room, the lights are switched on automatically and the counter incremented by one and when a person leaves the room, the counter decremented by one. The lights will be switched off as the last person leaves. IR receiver and IR transmitter sensors are placed at the doors and used to detect the presence of human. In this project, microcontroller AT89C2051 (ATMEL) is used as the brain of the project to make seven segment display function as desired and well all data and information would be process. The output from this sensor sent to the AT89C2051 (ATMEL) microcontroller which then automatic switch on and off via a relay and the numbers of people are displayed using a seven segment display. In addition we use C language to program this AT89C2051 (ATMEL) via Keil software. We use Keil software not MicroC software because Keil software for programming ATMEL and MicroC software for programming PIC. It that new information that we learned in programming Integrated Circuit (IC), so that it will function as desired.

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