FACULTY OF ELECTRICAL ENGINEERING

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FINAL REPORT:

AUTOMATIC NIGHT LAMP WITH MORNING ALARM

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ABSTRACT

The automatic night lamp with morning alarm is actually designed to helps us have a better sleep at night and wake us up in the morning. This device should be able to give a soft glow by the LED at night in order to helps people sleep better and who have problems such as afraid of the dark. While in the morning, the alarm or the buzzer should produce a sound that able to wake them up. The project is aimed to be a useful device that helps people and make their life easier as the device is an automatic one and the people do not have to trouble themselves to set the alarm. They just need to switch on the power supply and the device is ready to function. This project consists of two parts which is software and hardware. The software part is all about the programming written in MPlab software and the circuit construct as in Proteus 7. As for the hardware part, it represents the fabrication of PCB and all the components used.

CHAPTER 1

INTRODUCTON

1.1 Background of Study

The automatic night lamp with morning alarm is a device that is commonly used by the people in their bedrooms during night time. It is used to light up their rooms with a dim and soft glow of Light Emitting Diode (LED). Despite of their size and simplicity, the humble night lamp is a welcome addition to any sort of household. This small device has various benefits which can turn your night time living environment into a safer and more convenient. It is in a dim condition where the users will not feel distracted and feel better to sleep.

In this project, the "Passive Infrared" (PIR) sensor which is very sensitive to detect levels of infrared radiation such as motion is also included. By using this component, the LED will light up only after it detects movement of human. For many basic projects or products that need to detect when a person has left or entered the area or has approached, PIR sensors are great. The LED will turn on when the PIR sensor detects any movement around it. Then, when the LDR detect daylight, the morning alarm will turn on until the push button is pressed.