

AUTOMATION HOTEL ROOM

Prepared by: Chew Yat Chung

ABSTRACT

In developing an energy saving future, there is a need to reduce the electricity consumption and energy wastage. Furthermore energy saving also saves cost and the green future. Thus, an automation hotel room is designed to control the consumption of electricity. The automation hotel room is built to control most of the switches using sensors technology. The infrared sensors are used to calculate the people entering and leaving the room while controlling the main power supply. If there is person in the room, the lighting system and main power supply to all electronic gadgets will turn on. On the other hand, if there is no person in the room, the main power to the hotel room will be cut off so that all of the electronic gadgets will be turn off. Besides that, the infrared sensors are used as an alarm system as well. If the alarm system is turned on and there is a person entering the room, the lights in the room will blink and there will be a notification sent to the guard as well. A LCD screen was used to show how many people are currently in the room. A password system was built as a security system to enter the hotel room as well as to convenient the customers so that they do not need to worry about losing their “Key” to access to the hotel room. An automation costing system was made such that the entire electronic gadget used will deduct the money reloaded accordingly. For example turning to the lights will deduct 1 cent second whereas turning on the fan will deduct 2 cent per second. The customer will have to reload once the credit reloaded is finish. An LCD screen and LED lights are used to display and indicate the current amount of credits reloaded. Max232 is used as an interface between the hotel room and the hotel service counter computers. The customer will have to contact the service counter to reload their hotel room credit. A wireless interface will be made to replace switches to turn on or off the electronic appliance. An automation balcony roof was built using rain sensor such that there is rain, the roof will automatically slide in and slide out if there is no rain water detected.

Keywords: *Hotel room, infrared sensor, alarm system, LCD, PIC16F877A, wireless interface, max232, costing system, password, security system, automation balcony roof, rain sensor*