



AUTOMATIC WASHROOM LIGHT SWITCH

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ABSTRACT

Automatic washroom light switch will be convenient in our daily life. This project will help to reduce the power wastage that occurs in public washroom. This is because, in public washroom, the light will open regularly even nobody is in toilet. This circuit will help to turn off the light automatically when there are no people in that room by count the visitor that enter and exit the room. If the room is empty, it will turn off the light. The objective of this project also achieved at the end of this project which is to design the automatic washroom light circuit using Proteus software to reduce the power wastage in the public washroom. We use Proteus software to simulate the circuit before implement it into hardware. We also achieved the objective that is to implement the automatic washroom light switch designed circuit in hardware. The circuit that consists of transmitter and receiver will sense and count the presence of the object that cross between it. The result of this project is when the transmitter circuit detected the presence of the object, the light on the receiver circuit will on and the 7-segment display will display the number of object that enter and exit from the room. The light will be turn off if the display of the 7-segment display is equal to 00. This project is useful in developing countries and this project has a bright future. This project helps us to control the light of a room automatically and counts the number of persons or visitor entering and leaving the room. By using this circuit and proper power supply we can implement various applications such as fans.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Nowadays, there are continuous needs for automatic appliances with the increase in the standard of living, there is a sense of urgency for developing circuits that would ease the complexity of life.

By automating this, there are many advantages for example the circuit is design to consume lesser power so that the circuit can be used in any public washrooms without worrying about the power bills.

Besides, when the display shows the amount of people in the washroom, people can make decision whether she or he able to use the washroom or not. If the display shows high amount and the persons are not willing to wait, the persons can always find another available washroom.

This project title is Automatic Light Switch with Visitor Counter. The objective of this project is to make a controller based model to count number of persons visiting particular room and accordingly light up the room. In this project, people can use sensor and can know present number of persons.