Classroom automation using Arduino Board & IR sensor and Bluetooth

1. Introduction

A. hardware requirement

1. Arduino board

2. Hc05-Bluetooth module

3. IR module (2) 1st for taking count incoming people and 2nd for outgoing

4. Bread board

5. Jumper wires

6. Potentiometer

7. USB cable

B. software requirement

1. Arduino board

2. Windows OS

3. Blu Control apk (Strongly recommend because code is according to that app)

2. Connection.doc

Here you will get all connation information

A. Connection of IR sensor to Arduino board.

B. Connection of Bluetooth module to Arduino board.

C. Connection of LCD to Arduino board.

3. RoomAutomation.ino

This is code which you have to dump in your Arduino board.

4. Working

Idea behind developing this project is; electricity is important for human being. Sometimes students left class as it is that means all electric components are ON yet there is no one class. So this is waste of electricity.

In this model IR sensor continuously monitoring entrance of class, they are taking count of persons in class. When count of student or person in classroom at that time main power supply switch board will turn OFF. So each component is automatically turned OFF.

When count is more than 0 at that time power supply is ON to main board.

Also we provided one extra feature that is Bluetooth access to components.

To avoid misuse of remote access we gave one more feature that is until you make count one you can’t give commands to Arduino.

You must present in the class that time it will work.

!!HOPE IT IS HELPFUL YOU!!

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