

Smart Home Project

- **Introduction :**

A smart home design, which you can control your home lightning through it (using Bluetooth application, which I Didn't use it here because my IOS mobile isn't able to install one on it).

- **Components :**

1. 2- ATmega-32 Microcontroller (Master and slave).
2. 2- Led (Room1 light and Room2 light).
3. Virtual Terminal.
4. 2- Resistor (330 ohm).
5. 2- Bluetooth Module.

- **Working Diagram :**



- **How does it work :**

As displayed in the working diagram this system is going to work.

- A two microcontroller to interface with each other with the communication protocol SPI. The first is to handle use info and run main system (Master) and the other to receive instructions from the main and act based on it (slave).
- Virtual terminal and first Bluetooth module act as (an installed Bluetooth application on your mobile).
- These 2-Bluetooth Modules, One for receiving data from the virtual terminal and the second is for receiving that data from the first one and transmitting it to the first microcontroller.

If the user will input these numbers on the virtual terminal this will happen:

(1): Light of room 1 will open (LED 1 will work).

(2): Light of room 1 will close (LED 1 will close).

(3): Light of room 2 will open (LED 2 will work).

(4): Light of room 2 will close (LED 2 will close).

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