Project Title: ***Arduino Based Home Automation (Wireless) Using Arduino Uno***

Tech Stack Used:

* C/C++
* Proteus Design Suite
* Embedded System
* AVR C

CONTENT OF THIS PROJECT

* INTRODUCTION:

Home automation is one of in demand concepts in today’s world. Hobbyists do simple automation systems with the components readily available. If we are more concerned about the reliability and performance of the system, then we can go for the expensive Home Automation Consoles.

Home automation reduces the physical efforts and integrates the control for any number of appliances in to a single control unit. Hence, a simple home automation system is a remote control of different electrical appliances i.e., turning them on or off with the help of a remote.

* WORKING:

In our project we are going to use two Arduino boards separately, relay, RF module. In this one Arduino is going to acts as remote controller i.e., transmitter which transmit input signal from buttons and another Arduino receives those signal and switch on home appliances according to the button pressed.

First of all, the transmitter transmits a secret code to the next Arduino according to the button pressed. Let’s say we are transmitting 1 if button 1 is pressed and similarly 2 if button 2 is pressed and so on using the function ***serial.Write(int)*** . Then at the receiver side the second Arduino detects these transmitted number coming from RF module and receive those numbers and take action according to the received number. Let’s say first button 1 is pressed at transmitter side and **1**is transmitted and the second microcontroller detect **1** and it thinks to turn on 1st relay. And similarly, if 2 is received then it turns on 2nd relay and so on. Using this simple concept, we are finally able to make a wireless home automation.

* COMPONENT USED:

***Transmitter Part***:

* Arduino UNO (or any other Arduino board)
* 434 MHz Transmitter Module (or 315 MHz Module)
* LED
* 1 KΩ Resistor
* Prototyping board (bread board)
* Connecting wires
* Power supply (Adapter or battery)
* 434 MHz Transmitter Module (or 315 MHz Module)
* LED
* 1 KΩ Resistor
* Prototyping board (bread board)
* Connecting wires
* Power supply (Adapter or battery)

***Receiver Part:***

* Arduino UNO (or any other Arduino board)
* 434 MHz Receiver Module (or 315 MHz Module)
* LED
* 1 KΩ Resistor
* Prototyping board (bread board)
* Connecting wires
* Power supply (adapter or battery)
* RF Module

TEAM: BUG BUSTERS

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| --- | --- | --- | --- |
| S.NO | MEMBERS | BRANCH | YEAR |
| I | Jeenesh Kumar Chaudhary(Leader) | Electronics and Communication Engineering | Second |
| II | Abhinay Dubey | Electronics and Communication Engineering | Second |
| III | Yashi Gupta | Electronics and Communication Engineering | Second |
| IV | Akanksha Sharma | Electronics and Communication Engineering | Second |
| V | Lakshya Gupta | Electrical Engineering | Second |

GitHub Repository Link

<https://github.com/codebiet/Uno>

Screenshots



