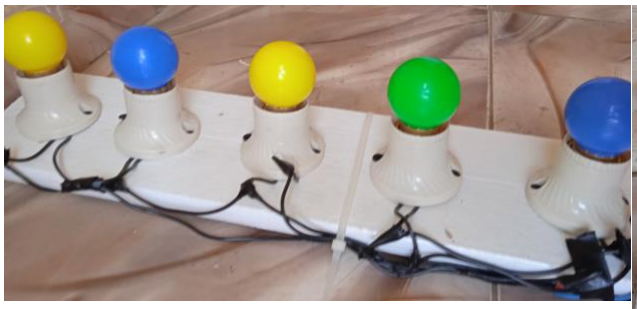
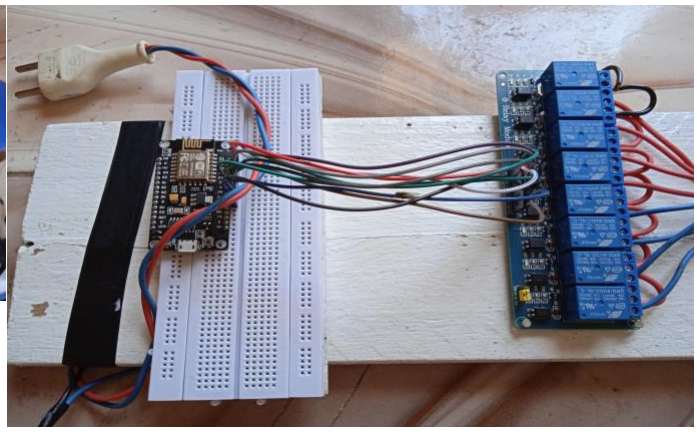
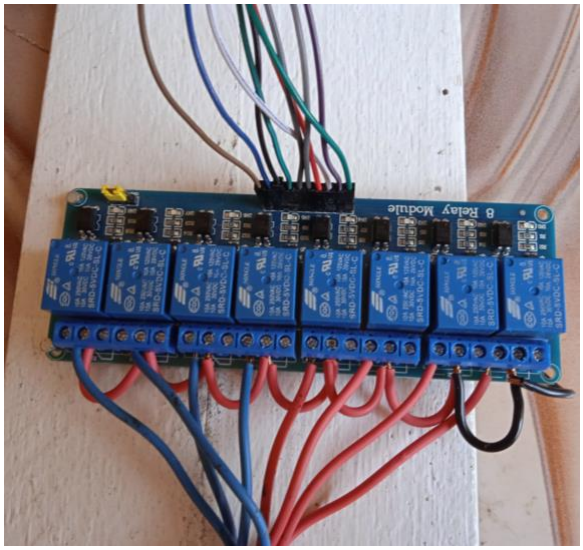
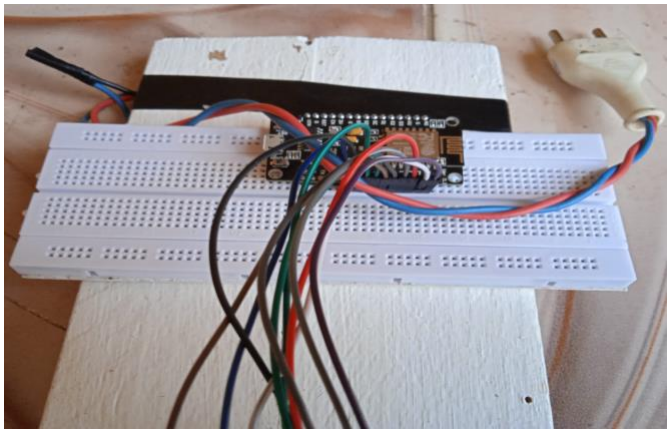
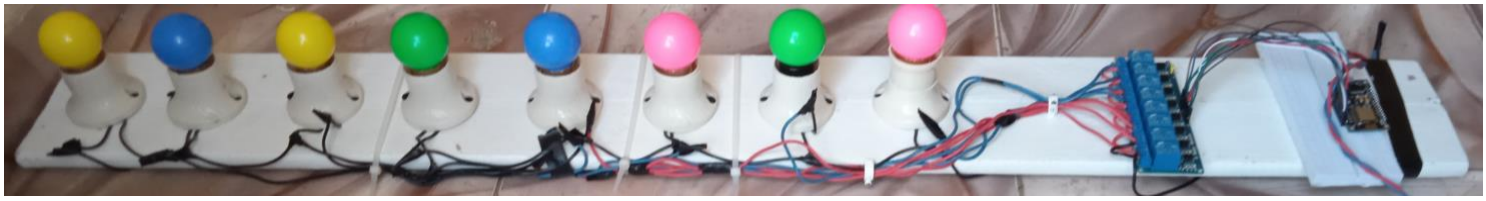










WIFI SMART HOME AUTOMATION SYSTEM

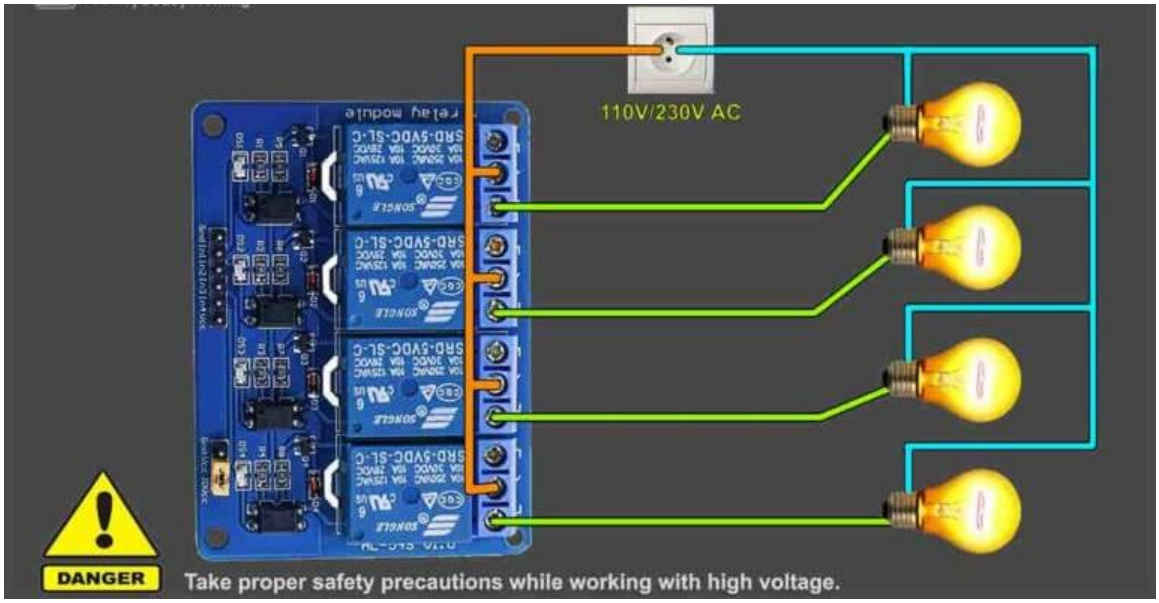
GP02

GP02 | IOT | June 1, 2021

Description About The Project:

In this IOT project, you can control 8 home appliances from the RemoteXY App with internet ,So this is a very useful homemade smart home device that you can easily make with these components.

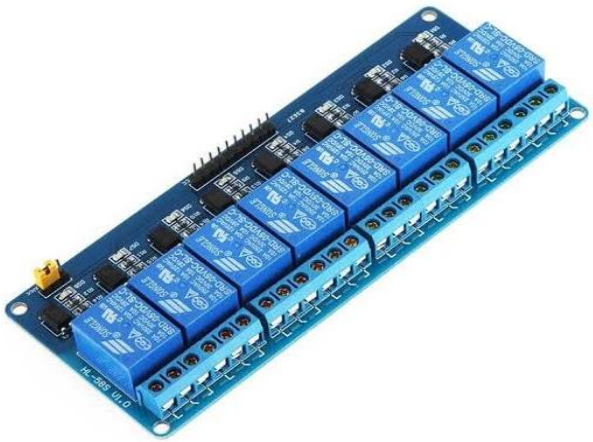
For this ESP8266 home automation project, We have not used any custom design PCB. We have used the RemoteXY IOT applications to control the relay from the smartphone through WiFi. And instead of pushbuttons, you can also connect manual switches or touch sensors to control the home appliances.



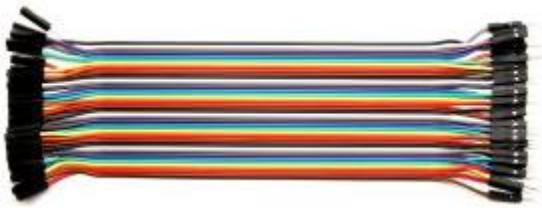
Components For This Project:

- NodeMCU V3

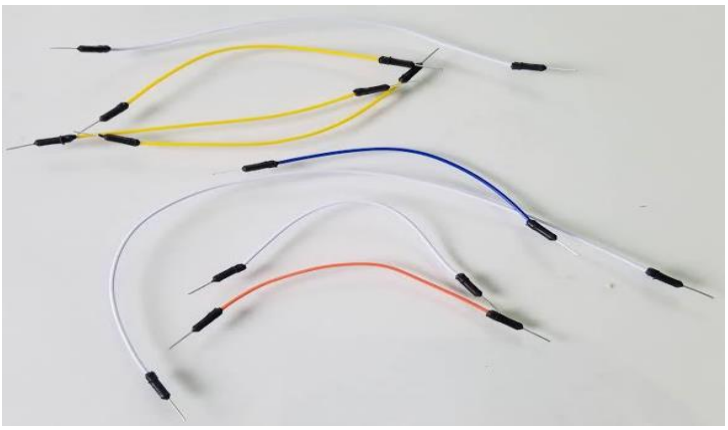
- 8-channel Relay Module (5V)



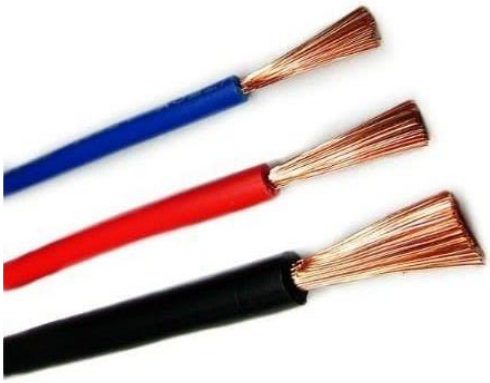
- Female to male Jumper wires



- Male to male Jumper wires



- Copper cables



- Piece of wood

- 8 Bulbs widgets

- 8 bulbs

Code:

```
#define REMOTEXY_MODE__ESP8266WIFI_LIB_POINT

#include <ESP8266WiFi.h>


#include <RemoteXY.h>


// RemoteXY connection settings

#define REMOTEXY_WIFI_SSID "rooo"

#define REMOTEXY_WIFI_PASSWORD "12345678"

#define REMOTEXY_SERVER_PORT 6377



// RemoteXY configurate

#pragma pack(push, 1)

uint8_t RemoteXY_CONF[] =

  { 255,8,0,0,0,151,0,11,15,1,

  2,0,36,30,22,11,2,26,31,31,

  79,78,0,79,70,70,0,2,0,7,

  30,22,11,2,26,31,31,79,78,0,

  79,70,70,0,2,0,37,45,22,11,

  2,26,31,31,79,78,0,79,70,70,

  0,2,0,7,45,22,11,2,26,31,

  31,79,78,0,79,70,70,0,2,0,

  37,61,22,11,2,26,31,31,79,78,

  0,79,70,70,0,2,0,6,61,22,

  11,2,26,31,31,79,78,0,79,70,

  70,0,2,0,7,78,22,11,2,26,
```

```
  31,31,79,78,0,79,70,70,0,2,
  0,37,77,22,11,2,26,31,31,79,
  78,0,79,70,70,0,129,0,12,8,
  39,15,17,82,111,111,111,0 };

// this structure defines all the variables and events of your control interface
struct {

    // input variables
  uint8_t switch_1; // =1 if switch ON and =0 if OFF
  uint8_t switch_2; // =1 if switch ON and =0 if OFF
  uint8_t switch_3; // =1 if switch ON and =0 if OFF
  uint8_t switch_4; // =1 if switch ON and =0 if OFF
  uint8_t switch_5; // =1 if switch ON and =0 if OFF
  uint8_t switch_6; // =1 if switch ON and =0 if OFF
  uint8_t switch_7; // =1 if switch ON and =0 if OFF
  uint8_t switch_8; // =1 if switch ON and =0 if OFF

    // other variable
  uint8_t connect_flag;  // =1 if wire connected, else =0

} RemoteXY;
#pragma pack(pop)

/////////////////////////////////////////////
//          END RemoteXY include          //
/////////////////////////////////////////////
```

```
#define PIN_SWITCH_1 D0
#define PIN_SWITCH_2 D1
#define PIN_SWITCH_3 D2
#define PIN_SWITCH_4 D3
#define PIN_SWITCH_5 D4
#define PIN_SWITCH_6 D5
#define PIN_SWITCH_7 D7
#define PIN_SWITCH_8 D6


void setup()
{
  RemoteXY_Init ();

  pinMode (PIN_SWITCH_1, OUTPUT);
  pinMode (PIN_SWITCH_2, OUTPUT);
  pinMode (PIN_SWITCH_3, OUTPUT);
  pinMode (PIN_SWITCH_4, OUTPUT);
  pinMode (PIN_SWITCH_5, OUTPUT);
  pinMode (PIN_SWITCH_6, OUTPUT);
  pinMode (PIN_SWITCH_7, OUTPUT);
  pinMode (PIN_SWITCH_8, OUTPUT);

  // TODO you setup code

}
```

```
void loop()
{
  RemoteXY_Handler ();

  digitalWrite(PIN_SWITCH_1, (RemoteXY.switch_1==0)?LOW:HIGH);
  digitalWrite(PIN_SWITCH_2, (RemoteXY.switch_2==0)?LOW:HIGH);
  digitalWrite(PIN_SWITCH_3, (RemoteXY.switch_3==0)?LOW:HIGH);
  digitalWrite(PIN_SWITCH_4, (RemoteXY.switch_4==0)?LOW:HIGH);
  digitalWrite(PIN_SWITCH_5, (RemoteXY.switch_5==0)?LOW:HIGH);
  digitalWrite(PIN_SWITCH_6, (RemoteXY.switch_6==0)?LOW:HIGH);
  digitalWrite(PIN_SWITCH_7, (RemoteXY.switch_7==0)?LOW:HIGH);
  digitalWrite(PIN_SWITCH_8, (RemoteXY.switch_8==0)?LOW:HIGH);

  // TODO you loop code
  // use the RemoteXY structure for data transfer
  // do not call delay()


}
```

Goals Of This Project:

To improve the quality of life and convenience in the home.

Greater security

More efficient use of energy thanks to connected

Remote-controllable devices

Ex: the washing machine, lights or the coffee maker, can be time-controlled.

GP02 PROJECT

Sadek hany

Hamza sabry

Rofaida montaser

Amira walid

Ahmed abdraouf

Manar ahmed

Yousef solaiman

Ahmed alaa

Eman Ahmed

Mohammed eid