#define LIGHT 2 // define pint 2 for sensor

#define RELAY 9 // define pin 9 as for relay

const int ledPin = 4; //const won't change

int pbuttonPin = 3;// connect output to push button

int buttonState = 0;

int val = 0; // push value from pin 2

int lightON = 0;//light status

int pushed = 0;//push status

boolean digital = false;// set true to use digital and control the sensitiviety with poentiometer on the module

unsigned int LightValue = 350;// LightValue to determine

void setup() {

Serial.begin(9600);// setup Serial Monitor to display information

pinMode(LIGHT, INPUT\_PULLUP);// define pin as Input sensor

pinMode(RELAY, OUTPUT);// define pin as OUTPUT for relay

pinMode(ledPin, OUTPUT); //initialize the LED pin as an output

pinMode(pbuttonPin, INPUT\_PULLUP);

}

void loop() {

val = digitalRead(pbuttonPin);// read the push button value

if(val == HIGH && lightON == LOW){

pushed = 1-pushed;

delay(100);

}

delay(500);

lightON = val;

if(pushed == HIGH) { //check if the pushbutton is pressed

digitalWrite(ledPin, HIGH); //turn LED on

Serial.println("LED ON +++++++");

if(digital == false)

{

int L =digitalRead(LIGHT);// read the sensor

if(L == 1){

Serial.println(" light is ON");

digitalWrite(RELAY,LOW);// turn the relay ON

}else{

Serial.println("=== light is OFF");

digitalWrite(RELAY,HIGH);// turn the relay OFF

}

}

else

{

int a0Value = analogRead(A0);// read A0 value

if( a0Value >= LightValue){

Serial.print(analogRead(A0));

Serial.println(" Light is ON");

digitalWrite(RELAY,LOW);// turn the relay ON

}else{

Serial.print(analogRead(A0));

// Serial.println(" === light OFF");

digitalWrite(RELAY,HIGH);// turn the relay OFF

}

}

}

else {

digitalWrite(ledPin, LOW); // turn LED off

Serial.println("LED OFF -------");

}

}