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//GEDI 101

//HAUNTED HOUSE CODE:

//BELL, DOOR, LED
//LED vestibol
int ledPinA2 = A2;
//SERVOMOTOR
#include <Servo.h> //servo motor library
//for the servo motor
int degree = 0;
Servo servo_13;
//DFPLAYER
//PUSHBUTTON
int buttonPin = 2;
int buttonStateDoor = 0;
int maxTimes=1;

//TOMB
//LED ANALOG:
int ledPin9 = 9;
int ledPin10 = 10;
int ledPin11 = 11;
int lecturaFotosensor = 0;
int analogPin0 = A0;
//MOTOR CC
int pinmotor = A3;
int buttonMotorClosed=0;
int buttonpinTomb = 8;
int buttonStateTomb = 0;

//LIGHTS OF THE HOUSE
//LED DIGITAL:
int lecturaPotenciometer;
int ledPin3 = 3;
int ledPin4 = 4;
int ledPin5 = 5;

//FOR THE TWO SOUNDS
//dfplayer libraries:
#include "SoftwareSerial.h"
#include "DFRobotDFPlayerMini.h"

//Use pins 7 and 12 to communicate with DFPlayer Mini
static const uint8_t PIN_MP3_TX = 7; // Connects to module's RX
static const uint8_t PIN_MP3_RX = 12; // Connects to module's TX
SoftwareSerial softwareSerial(PIN_MP3_RX, PIN_MP3_TX);
// Create the Player object
DFRobotDFPlayerMini player;

void setup(){

//LIGHTS OF THE HOUSE
//LED DIGITAL:
pinMode(ledPin3, OUTPUT);
pinMode(ledPin4, OUTPUT);

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pinMode(ledPin5, OUTPUT);

//BELL, DOOR, LED
//SERVOMOTOR
servo_13.attach(13);
pinMode(buttonPin, INPUT); //Input because the information enters to
the arduino
pinMode(ledPinA2, OUTPUT);

//TOMB
//LED ANALOG:
pinMode(ledPin9, OUTPUT);
pinMode(ledPin10, OUTPUT);
pinMode(ledPin11, OUTPUT);
Serial.begin(9600);
//MOTORCC
pinMode(pinmotor, OUTPUT);
pinMode(buttonpinTomb, INPUT);

//FOR THE TWO SOUNDS / DFPLAYER
// Init USB serial port for debugging
Serial.begin(9600);
// Init serial port for DFPlayer Mini
softwareSerial.begin(9600);
player.begin(softwareSerial);
player.volume(30);
}

void loop(){

//LIGHTS OF THE HOUSE
//LED DIGITAL:
lecturaPotenciometer = analogRead(A1); // lecture of the
potentiometer
int brillo = map(lecturaPotenciometer, 0, 1023, 0, 255); // value of
the brightness of the leds
analogWrite(ledPin3, brillo);
analogWrite(ledPin4, brillo);
analogWrite(ledPin5, brillo);

//BELL, DOOR, LED
buttonStateDoor=digitalRead(buttonPin);
if(buttonStateDoor == HIGH){
//open sound
player.playMp3Folder(1);
delay(800);
//open LED of the looby
digitalWrite(ledPinA2, HIGH);

//open the door
for(int times=1; times<=maxTimes; times++){
// sweep the servo from 0 to "100" degrees in steps
// of 1 degrees
for (degree = 0; degree <= 100; degree += 1) {
// tell servo to go to position in variable 'degree'
servo_13.write(degree);
// wait 30 ms for servo to reach the position
delay(50); // Wait for 15 millisecond(s)
}
delay(200);
}
}

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        for (degree = 100; degree >= 0; degree -= 1) {
            // tell servo to go to position in variable 'degree'
            servo_13.write(degree);
            // wait 30 ms for servo to reach the position
            delay(5); // Wait for 30 millisecond(s)
        }
    }
}
else{
    servo_13.write(0);
    digitalWrite(ledPinA2,LOW);
}
delay(500);
player.stop();
//TOMB
//LED ANALOG:

buttonStateTomb=digitalRead(buttonpinTomb);
if(buttonStateTomb == HIGH){
    //open sound
    player.playMp3Folder(2);

    //MOTOR CC
    //incrementamos lentamente la señal PWM en el transistor
    for (int a = 0; a <= 255; a=15+a){
        analogWrite(pinmotor, 255);
        delay(10);
        lecturaFotosensor = analogRead(analogPin0);
        Serial.println(lecturaFotosensor);
        if (lecturaFotosensor >= 800){
            analogWrite(ledPin9, 0);
            analogWrite(ledPin10, 0);
            analogWrite(ledPin11, 0); //Turn led off
        }
        else{ //led pampalluga
            analogWrite(ledPin9, 255);
            analogWrite(ledPin10, 30);
            analogWrite(ledPin11, 0);
            delay(400);
            analogWrite(ledPin9, 0);
            analogWrite(ledPin10, 0);
            analogWrite(ledPin11, 0);
            delay(130);
        }
    }
}

//disminuyendo lentamente la señal PWM en el transistor
for(int a = 255; a>= 0; a=15-a){
    analogWrite(pinmotor, a);
    delay(10);
}
}
else{
    analogWrite(pinmotor,buttonMotorClosed);
    delay(100);
}
}
}

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