int buttonState = 0;

const int buttonPin = 2;

int counter=0;

void setup() {

// put your setup code here, to run once:

pinMode(3,OUTPUT);

pinMode(4,OUTPUT);

pinMode(0,OUTPUT);

pinMode(1,OUTPUT);

pinMode(buttonPin, INPUT); //button

digitalWrite(buttonPin,HIGH);// if this isn't in the code it doesn't work

}

const int arraySize=4;

const int pins[arraySize]={4,3,1,0};

void RunningCircle(){

for(int j=0;j<3;j++)

{

for(int i=0;i<4;i++)

{

digitalWrite(pins[i],HIGH);

delay(80);

digitalWrite(pins[i],LOW);

delay(80);

}

}

for(int j=0; j<3;j++)

{

for(int i=0;i<5;i++)

{

digitalWrite(pins[arraySize -i],HIGH);

delay(80);

digitalWrite(pins[arraySize -i],LOW);

delay(80);

}

}

}

void ClockwiseAndCounterClockwise(){

digitalWrite(3, HIGH);

digitalWrite(4, HIGH);

digitalWrite(0, HIGH);

digitalWrite(1, HIGH);

delay(500);

digitalWrite(3, LOW);

digitalWrite(4, LOW);

digitalWrite(0, LOW);

digitalWrite(1, LOW);

for(int i = 0; i < 2; i++) { //Clockwise

digitalWrite(3, HIGH);

delay(200);

digitalWrite(3, LOW);

digitalWrite(4, HIGH);

delay(200);

digitalWrite(4, LOW);

digitalWrite(0, HIGH);

delay(200);

digitalWrite(0, LOW);

digitalWrite(1, HIGH);

delay(200);

digitalWrite(1, LOW);

}

for(int i = 0; i < 2; i++) { //Counter-clockwise

digitalWrite(1, HIGH);

delay(200);

digitalWrite(1, LOW);

digitalWrite(0, HIGH);

delay(200);

digitalWrite(0, LOW);

digitalWrite(4, HIGH);

delay(200);

digitalWrite(4, LOW);

digitalWrite(3, HIGH);

delay(200);

digitalWrite(3, LOW);

}

for(int i = 0; i < 2; i++){

digitalWrite(4, HIGH);

delay(200);

digitalWrite(0,HIGH);

digitalWrite(3, HIGH);

delay(200);

digitalWrite(1, HIGH);

delay(200);

digitalWrite(4, LOW);

delay(200);

digitalWrite(3, LOW);

digitalWrite(0, LOW);

delay(200);

digitalWrite(1, LOW);

delay(200);

}

}

void Christmas(){

for(int i=0;i<4;i++)

{

digitalWrite(pins[i],HIGH);

delay(200);

}

for(int i=0;i<4;i++)

{

digitalWrite(pins[i],LOW);

delay(200);

}

}

void Lightnings(){

int redCounter=0;

int greenCounter=250;

while (redCounter <= 250)

{

analogWrite(0,redCounter);

redCounter = redCounter + 25;

delay(300);

analogWrite(1,greenCounter);

greenCounter = greenCounter - 25;

delay(300);

if (redCounter > 250)

{

digitalWrite(3,HIGH);

delay(50);

digitalWrite(3,LOW);

}

if (greenCounter < 0)

{

digitalWrite(4,HIGH);

delay(50);

digitalWrite(4,LOW);

break;

}

}

}

void loop() {

buttonState = digitalRead(buttonPin);

delay(1000);

if(buttonState==0){//button is pressed

counter++;

}

if(counter>3){

counter=0;

}

if(counter==0){

Christmas();

}

if(counter==1){

ClockwiseAndCounterClockwise();

}

if(counter==2){

RunningCircle();

}

if(counter==3){

Lightnings();

}

}