Ejercicio

A)

void setup()

{

pinMode(2, OUTPUT);

pinMode(3, OUTPUT);

pinMode(4, OUTPUT);

pinMode(5, OUTPUT);

pinMode(6, OUTPUT);

}

void loop()

{

digitalWrite(2, HIGH);

digitalWrite(5, HIGH);

delay(4000);

digitalWrite(2, LOW);

digitalWrite(5, LOW);

delay(1000);

}

Ejercicio

B)

void setup()

{

pinMode(4, OUTPUT);

pinMode(5, OUTPUT);

pinMode(6, OUTPUT);

pinMode(7, OUTPUT);

pinMode(8, OUTPUT);

pinMode(9, OUTPUT);

pinMode(10, OUTPUT);

pinMode(11, OUTPUT);

pinMode(10, OUTPUT);

pinMode(11, OUTPUT);

pinMode(12, OUTPUT);

pinMode(13, OUTPUT);

}

void loop()

{

digitalWrite(4, HIGH);

digitalWrite(5, LOW);

digitalWrite(6, LOW);

digitalWrite(7, LOW);

digitalWrite(8, LOW);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

}

Ejercicio

C)

void setup()

{

pinMode(4, OUTPUT);

pinMode(5, OUTPUT);

pinMode(6, OUTPUT);

pinMode(7, OUTPUT);

pinMode(8, OUTPUT);

pinMode(9, OUTPUT);

pinMode(10, OUTPUT);

pinMode(11, OUTPUT);

pinMode(10, OUTPUT);

pinMode(11, OUTPUT);

pinMode(12, OUTPUT);

pinMode(13, OUTPUT);

}

void loop()

{

digitalWrite(4, HIGH);

digitalWrite(5, LOW);

digitalWrite(6, LOW);

digitalWrite(7, LOW);

digitalWrite(8, LOW);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, LOW);

digitalWrite(7, LOW);

digitalWrite(8, LOW);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, LOW);

digitalWrite(8, LOW);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

digitalWrite(8, LOW);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

digitalWrite(8, HIGH);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

digitalWrite(8, HIGH);

digitalWrite(9, HIGH);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

digitalWrite(8, HIGH);

digitalWrite(9, HIGH);

digitalWrite(10, HIGH);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

digitalWrite(8, HIGH);

digitalWrite(9, HIGH);

digitalWrite(10, HIGH);

digitalWrite(11, HIGH);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

digitalWrite(8, HIGH);

digitalWrite(9, HIGH);

digitalWrite(10, HIGH);

digitalWrite(11, HIGH);

digitalWrite(12, HIGH);

digitalWrite(13, LOW);

delay(500);

digitalWrite(4, HIGH);

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

digitalWrite(8, HIGH);

digitalWrite(9, HIGH);

digitalWrite(10, HIGH);

digitalWrite(11, HIGH);

digitalWrite(12, HIGH);

digitalWrite(13, HIGH);

delay(500);

digitalWrite(4, LOW);

digitalWrite(5, LOW);

digitalWrite(6, LOW);

digitalWrite(7, LOW);

digitalWrite(8, LOW);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(12, LOW);

digitalWrite(13, LOW);

delay(500);

}

Ejercicio

D)

void setup()

{

pinMode(2, OUTPUT);

pinMode(3, OUTPUT);

pinMode(4, OUTPUT);

}

void loop()

{

digitalWrite(2, HIGH);

digitalWrite(3, LOW);

digitalWrite(4, LOW);

delay(900);

digitalWrite(2, LOW);

digitalWrite(3, HIGH);

digitalWrite(4, HIGH);

delay(900);

}

Ejercicio

E)

void setup()

{

pinMode(3, OUTPUT);

pinMode(5, OUTPUT);

pinMode(6, OUTPUT);

pinMode(9, OUTPUT);

pinMode(10, OUTPUT);

pinMode(11, OUTPUT);

}

void loop()

{

digitalWrite(3, HIGH);

delay(900);

digitalWrite(3, LOW);

digitalWrite(10, HIGH);

digitalWrite(11, HIGH);

delay(900);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(6, HIGH);

delay(900);

digitalWrite(6, LOW);

digitalWrite(9, HIGH);

digitalWrite(10, HIGH);

delay(900);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(5, HIGH);

delay(900);

digitalWrite(5, LOW);

digitalWrite(9, HIGH);

digitalWrite(10, HIGH);

digitalWrite(11, HIGH);

delay(900);

digitalWrite(9, LOW);

digitalWrite(10, LOW);

digitalWrite(11, LOW);

digitalWrite(3, HIGH);

digitalWrite(6, HIGH);

delay(900);

}

Ejercicio

F)

int piezo = 2;

void setup()

{

pinMode(2, OUTPUT );

}

void loop()

{

piezo = digitalRead( 3 );

delay(30);

if( digitalRead( 3 ) == HIGH )

{

digitalWrite(2 , LOW);

}else{

digitalWrite(2 , HIGH);

}

}

Ejercicio

G)

bool boton = false;

int contar = 0;

int tiempo = 200;

void setup()

{

pinMode(2, INPUT\_PULLUP);

pinMode(3, OUTPUT); // Pin rojo del primer LED RGB

pinMode(4, OUTPUT); // Pin verde del primer LED RGB

pinMode(5, OUTPUT); // Pin azul del primer LED RGB

pinMode(6, OUTPUT); // Pin rojo del segundo LED RGB

pinMode(7, OUTPUT); // Pin verde del segundo LED RGB

pinMode(8, OUTPUT); // Pin azul del segundo LED RGB

pinMode(9, OUTPUT); // Pin rojo del tercer LED RGB

pinMode(10, OUTPUT); // Pin verde del tercer LED RGB

pinMode(11, OUTPUT); // Pin azul del tercer LED RGB

Serial.begin(9600);

}

void loop()

{

if( digitalRead(2) == LOW )

{

boton = !boton;

delay(tiempo);

}

if( boton == true)

{

contar = contar + 1;

boton = false;

}

Serial.print(contar);

Serial.print(" - resto:");

Serial.println( contar % 3 ) ;

if( contar == 1 )

{

digitalWrite( 9 , LOW );

digitalWrite( 11 ,LOW );

digitalWrite( 3 , HIGH );

digitalWrite( 4 , HIGH ); //MAGENTA

digitalWrite( 5 , LOW );

}

else if( contar == 2 ){

digitalWrite( 3 , LOW );

digitalWrite( 4 , LOW );

digitalWrite( 6 , LOW ); //CIAN

digitalWrite( 7 , HIGH );

digitalWrite( 8 , HIGH );

}

else{

digitalWrite( 7 , LOW );

digitalWrite( 8 ,LOW );

digitalWrite( 9 , HIGH );

digitalWrite( 10 , LOW );//AMARILLO

digitalWrite( 11 , HIGH );

contar = 0;

}

}

Ejercicio

H)

bool boton = false;

int contar = 0;

int tiempo = 200;

void setup()

{

pinMode(4, INPUT\_PULLUP);

pinMode(5, OUTPUT); // Pin rojo del LED RGB

pinMode(6, OUTPUT); // Pin verde del LED RGB

pinMode(7, OUTPUT); // Pin azul del LED RGB

Serial.begin(9600);

}

void loop()

{

if (digitalRead(4) == LOW)

{

boton = !boton;

delay(tiempo);

}

if (boton == true)

{

contar = contar + 1;

boton = false;

}

Serial.print(contar);

Serial.print(" - resto:");

Serial.println(contar % 7);

// Apagar el LED RGB antes de cambiar de color

digitalWrite(5, LOW);

digitalWrite(6, LOW);

digitalWrite(7, LOW);

// Cambiar de color según el valor de contar

if (contar % 7 == 1)

{

// Rojo

digitalWrite(5, HIGH);

}

else if (contar % 7 == 2)

{

// Cian

digitalWrite(6, HIGH);

}

else if (contar % 7 == 3)

{

// Verde

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

}

else if (contar % 7 == 4)

{

// Magenta

digitalWrite(5, HIGH);

digitalWrite(7, HIGH);

}

else if (contar % 7 == 5)

{

// Azul

digitalWrite(7, HIGH);

}

else if (contar % 7 == 6)

{

// Blanco

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

digitalWrite(7, HIGH);

}

else

{

// Amarillo

digitalWrite(5, HIGH);

digitalWrite(6, HIGH);

}

// Reiniciar la secuencia si llega al final

if (contar == 7)

{

contar = 0;

}

}

Ejercicio

i)

bool boton = false;

int contar = 0;

int tiempo = 200;

void setup()

{

pinMode(3, INPUT\_PULLUP);

for (int i = 4; i <= 13; i++) {

pinMode(i, OUTPUT);

}

Serial.begin(9600);

}

void loop()

{

if (digitalRead(3) == LOW)

{

boton = !boton;

delay(tiempo);

}

if (boton == true)

{

contar = contar + 1;

boton = false;

}

Serial.print(contar);

Serial.print(" - resto:");

Serial.println(contar % 10);

for (int i = 4; i <= 13; i++) {

digitalWrite(i, LOW);

}

if (contar != 0)

{

digitalWrite(contar + 3, HIGH);

}

if (contar == 10)

{

contar = 0;

}

}