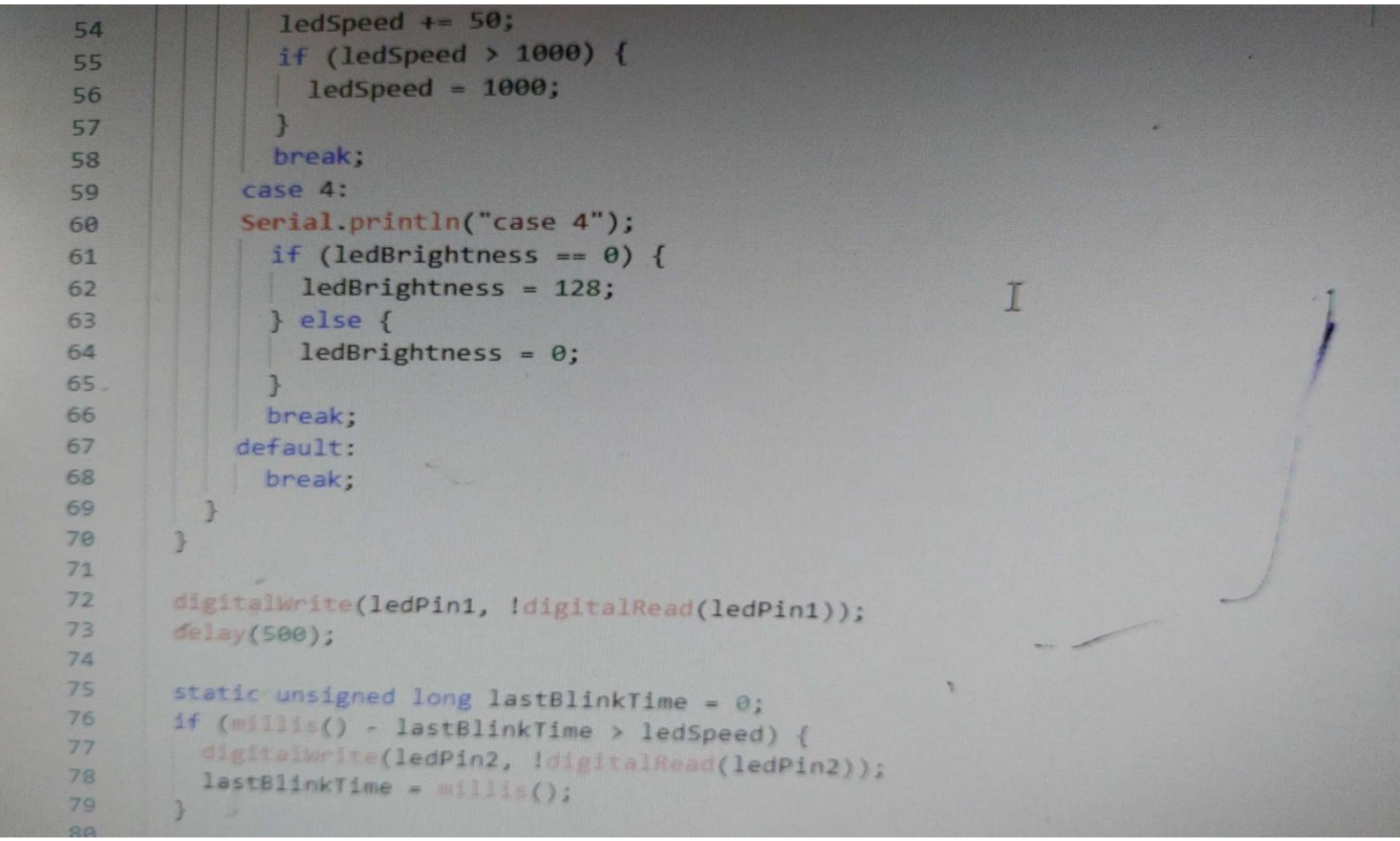
LINK:

https://wokwi.com/projects/359973444096183297

```
1   const int buzzerPin = 2;
2   const int ledPin1 = 3;
3   const int ledPin2 = 4;
4   const int ledPin3 = 5;
5
6   int menuSelection = 0;
7   int ledSpeed = 500;
8   int ledBrightness = 128;
9   int selection = 0;
10  int buzzerState = LOW;
11
12  void setup() {
13    Serial.begin(9600);
14
15    pinMode(buzzerPin, OUTPUT);
16    pinMode(ledPin1, OUTPUT);
17    pinMode(ledPin2, OUTPUT);
18    pinMode(ledPin3, OUTPUT);
19
20    digitalWrite(buzzerPin, LOW);
21    digitalWrite(ledPin1, LOW);
22    digitalWrite(ledPin2, LOW);
23    digitalWrite(ledPin3, LOW);
24    Serial.println("MENU:");
25    Serial.println("1. Toggle buzzer on/off");
26    Serial.println("2. Increase LED 2 speed");
27    Serial.println("3. Decrease LED 2 speed");
```

```
27      Serial.println("3. Decrease LED 2 speed");
28      Serial.println("4. Toggle LED 3 brightness");
29      Serial.println();
30      Serial.print("Selection: ");
31    }
32
33    void loop() {
34      int buzzerPinStateLast = digitalRead(buzzerPin);
35      if (Serial.available()) {
36        int inputChar = Serial.parseInt();
37
38        switch (inputChar) {
39          case 1:
40          //Serial.println ("1");
41          //digitalWrite(buzzerPin, !digitalRead(buzzerPin));
42            ToggleBuzzer();
43            selection = 0;
44            break;
45          case 2:
46          Serial.println("case 2");
47            ledSpeed -= 50;
48            if (ledSpeed < 50) {
49              ledSpeed = 50;
50            }
51            break;
52          case 3:
53          Serial.println("case 3");
```

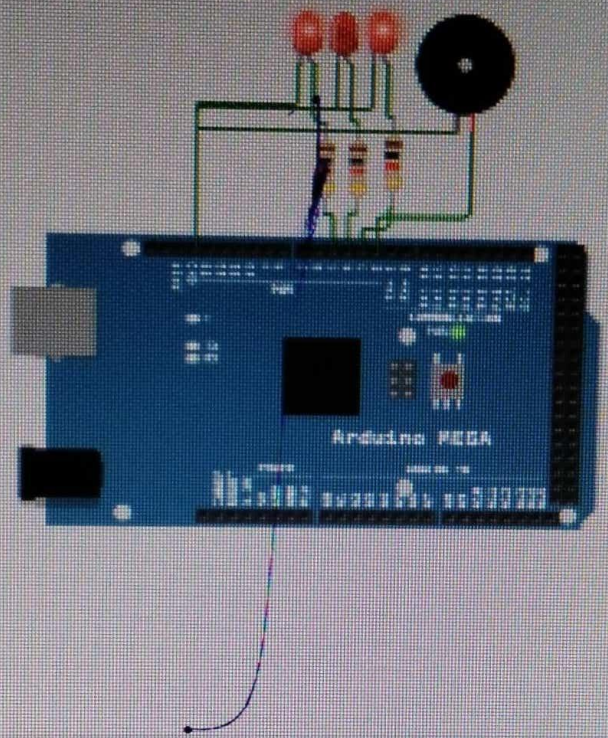


```
54          ledSpeed += 50;
55          if (ledSpeed > 1000) {
56            ledSpeed = 1000;
57          }
58          break;
59        case 4:
60        Serial.println("case 4");
61          if (ledBrightness == 0) {
62            ledBrightness = 128;
63          } else {
64            ledBrightness = 0;
65          }
66          break;
67        default:
68          break;
69      }
70    }
71
72    digitalWrite(ledPin1, !digitalRead(ledPin1));
73    delay(500);
74
75    static unsigned long lastBlinkTime = 0;
76    if (millis() - lastBlinkTime > ledSpeed) {
77      digitalWrite(ledPin2, !digitalRead(ledPin2));
78      lastBlinkTime = millis();
79    }
80
```

```
78        lastBlinkTime = millis();
79      }
80
81      analogWrite(ledPin3, ledBrightness);
82    //Serial.println("MENU:");
83      //Serial.println("1. Toggle buzzer on/off");
84      //Serial.println("2. Increase LED 2 speed");
85      //Serial.println("3. Decrease LED 2 speed");
86      //Serial.println("4. Toggle LED 3 brightness");
87      //Serial.println();
88      //Serial.print("Selection: ");
89      //delay (5000)
90
91    }
92    void ToggleBuzzer ()
93    {
94      buzzerState= (buzzerState) ? LOW : HIGH;
95        digitalWrite(buzzerPin, buzzerState);
96      //int a = digitalWrite(buzzerPin, LOW);
97      //if (a == 1)
98      //{
99        //digitalWrite(buzzerPin, HIGH);
100       //digitalWrite(buzzerPin HIGH); attempt no. 3 failed with multiple errors
101   // } else
102   // {
103   //   digitalWrite(buzzerPin, LOW);
```

```
93  {
94    buzzerState= (buzzerState) ? LOW : HIGH;
95      digitalWrite(buzzerPin, buzzerState);
96    //int a = digitalWrite(buzzerPin, LOW);
97    //if (a == 1)
98    //{
99      //digitalWrite(buzzerPin, HIGH);
100     //digitalWrite(buzzerPin HIGH); attempt no. 3 failed with multiple errors
101   // } else
102   // {
103   //   digitalWrite(buzzerPin, LOW);
104   // }
105
106 }
107
```

AREF
GND
13
12
11
10
9
8
7
6
5
4
3
2
TX→ 1
RX← 0
TX3 14
RX3 15
TX2 16
RX2 17
TX1 18
RX1 19
SDA 20
SCL 21
IOREF
RESET
3.3V
5V
GND
GND
Vin
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
Arduino MEGA



MENU:

1. Toggle buzzer on/off
2. Increase LED 2 speed
3. Decrease LED 2 speed
4. Toggle LED 3 brightness

Selection: