## Código Fonte – Fase 3

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/*
          The circuit:
         * LCD RS pin to digital pin 7
         * LCD Enable pin to digital pin 6
         * LCD D4 pin to digital pin 5
         * LCD D5 pin to digital pin 4
         * LCD D6 pin to digital pin 3
         * LCD D7 pin to digital pin 2
         * LCD R/W pin to ground
         * LCD VSS pin to ground
         * LCD VDD pin to 5V
         * LCD V0 pin to pin 2 POT
         */
        #define ldrPin A0
        #define ledPin 9
        // include the library code:
        #include <LiquidCrystal.h>
        // initialize the library with the numbers of the interface pins
        LiquidCrystal lcd(7, 6, 5, 4, 3, 2);
        int luminosidade;
        String input;
        bool autoMode = true;
        void setup() {
          lcd.begin(16, 2);   // set up the LCD's number of columns and rows
          lcd.print("Hello world!");
          pinMode(ldrPin, INPUT);
          pinMode(ledPin, OUTPUT);
          Serial.begin(9600);
        }
        void loop() {
          if(Serial.available()){
            input = Serial.readString();
            Serial.println(input+">>");

            if(input.equals("write")){
              while(!Serial.available());   //espera receber algo
              input = Serial.readString();
              lcd.clear();
              lcd.setCursor(0,0);
              lcd.print(input);

            }else if(input.equals("set")){
              while(!Serial.available()); //espera receber algo
              input = Serial.readString();
```

```
      if(input.equals("auto")){
        autoMode = true;
      } else if(input.toInt() > 0 && input.toInt() < 256){  //verificar se é
numero entre 1 255
        autoMode = false;
        analogWrite(ledPin, input.toInt());  //escreve valores entre 0 e 255
      } else{
        Serial.println("Parametro invalido");
      }
    } else{
      Serial.println("Comando invalido");
    }
  }

  lcd.setCursor(0, 1);  //Segunda linha
  lcd.print(millis() / 1000);

  if(autoMode){
    luminosidade = analogRead(ldrPin);    //lê valores entre 0 e 1023
    //Serial.println(luminosidade);
    analogWrite(ledPin, luminosidade/4);  //escreve valores entre 0 e 255
  }
}
```