Projeto Objetos Inteligentes Conectados (Turma 06J)

Automatização de produção de cerveja artesanal

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Código Projeto:

```
#include <Wire.h>
#include <OneWire.h>
#include <DallasTemperature.h>

// Import required libraries
#define ONE_WIRE_BUS 3

// Setup a oneWire instance to communicate with any OneWire devices (not just
Maxim/Dallas temperature ICs)
OneWire oneWire(ONE_WIRE_BUS);
// Pass our oneWire reference to Dallas Temperature.
DallasTemperature sensors(&oneWire);
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);  // Set the LCD I2C
address


#include <LiquidCrystal_I2C.h>
int IN1 = 11;
int IN2 = 6;
int IN3 = 5;
int IN4 = 10;


void setup()
{

  //Define os pinos como saida
  pinMode(IN1, OUTPUT);
  pinMode(IN2, OUTPUT);
  pinMode(IN3, OUTPUT);
  pinMode(IN4, OUTPUT);

  // start serial port
  //  Serial.begin(9600);
  //  Serial.println("Dallas Temperature IC Control Library Demo");
  // Start up the library
  sensors.begin();
  lcd.begin(16,2);
  lcd.backlight();
  lcd.clear();
  lcd.setCursor(0,0);

 Serial.begin(9600);

}
```

```
void loop() {

  //Gira o Motor A no sentido horario
  digitalWrite(IN1, HIGH);
  digitalWrite(IN2, LOW);
  delay(2000);
  //Para o motor A
  digitalWrite(IN1, HIGH);
  digitalWrite(IN2, HIGH);
  delay(500);

  //Gira o Motor B no sentido horario
  digitalWrite(IN3, HIGH);
  digitalWrite(IN4, LOW);
  delay(2000);
  //Para o motor B
  digitalWrite(IN3, HIGH);
  digitalWrite(IN4, HIGH);
  delay(500);

    sensors.requestTemperatures(); // Send the command to get temperatures
    // Serial.print("Temperature for the device 1 (index 0) is: ");
    float x = sensors.getTempCByIndex(0);
    //  Serial.println(x);
    lcd.setCursor(0,0);
    lcd.print("Temperature: ");
    lcd.setCursor(0,1);
    lcd.print("          ");
    lcd.setCursor(0,1);
    lcd.print(x);

   delay(3000);
}
```