# Arduino kode Gruppe 10 DrinkMe

#include "HX711.h"

#include <LiquidCrystal.h>

#define DOUT 3

#define CLK 2

HX711 scale(DOUT, CLK);

const int rs = 12, en = 11, d4 = 9, d5 = 8, d6 = 7, d7 = 6;

LiquidCrystal lcd(rs, en, d4, d5, d6, d7);

const unsigned int BUTTON1 = 5;

const unsigned int BUTTON2 = 4;

const unsigned int Relay = 10;

int i = 10;

float calibration\_factor = 226960;

void setup() {

 pinMode(Relay, OUTPUT);

 pinMode(BUTTON1, INPUT);

 pinMode(BUTTON2, INPUT);

 Serial.begin(9600);

 Serial.println("HX711 calibration sketch");

 Serial.println("Remove all weight from scale");

 Serial.println("After readings begin, place known weight on scale");

 Serial.println("Press + or a to increase calibration factor");

 Serial.println("Press - or z to decrease calibration factor");

 lcd.begin(16, 2);

 long zero\_factor = scale.read\_average(); //Get a baseline reading

 Serial.print("Zero factor: "); //This can be used to remove the need to tare the scale. Useful in permanent scale projects.

 Serial.println(zero\_factor);

 float weight = scale.get\_units()\*-502.67;

 scale.set\_scale();

}

void loop() {

 scale.tare(); //Reset the scale to 0

 lcd.setCursor(0, 0);

 lcd.print(" Drink'me! ");

 lcd.setCursor(0, 1);

 lcd.print(" 1.5 dl 3.0 dl ");

 scale.set\_scale(calibration\_factor); //Adjust to this calibration factor

 float weight = scale.get\_units()\*-502.67;

 Serial.print("Reading: ");

 Serial.print(weight, 1);

 Serial.print(" gram"); //Change this to kg and re-adjust the calibration factor if you follow SI units like a sane person

 Serial.print(" calibration\_factor: ");

 Serial.print(calibration\_factor);

 Serial.println();

 if(Serial.available())

 {

 char temp = Serial.read();

 if(temp == '+' || temp == 'a')

 calibration\_factor += 10;

 else if(temp == '-' || temp == 'z')

 calibration\_factor -= 10;

 }

 const int BUTTON\_STATE1 = digitalRead(BUTTON1);

 const int BUTTON\_STATE2 = digitalRead(BUTTON2);

 if (BUTTON\_STATE1 == HIGH) {

 lcd.setCursor(0, 0);

 lcd.print(" 1.5 dl :-D ");

 lcd.setCursor(0, 1);

 lcd.print(" ");

 Serial.print(weight, 1);

 while ( scale.get\_units()\*-502.67 >= -140){

 digitalWrite(Relay, LOW);

 Serial.print(weight, 1);

 }}

 else {

 digitalWrite(Relay, HIGH);

 }

 if (BUTTON\_STATE2 == HIGH) {

 lcd.setCursor(0, 0);

 lcd.print(" 3 dl :-D ");

 lcd.setCursor(0, 1);

 lcd.print(" ");

 Serial.print(weight, 1);

 while ( scale.get\_units()\*-502.67 >= -280){

 digitalWrite(Relay, LOW);

 Serial.print(weight, 1);

 }}

 else {

 digitalWrite(Relay, HIGH);

 }

}