#include <LiquidCrystal.h>

LiquidCrystal lcd(6, 5, 3, 2, 1, 0);

int data=A0;

int start=7;

int count=0;

unsigned long temp=0;

byte customChar1[8] = {0b00000,0b00000,0b00011,0b00111,0b01111,0b01111,0b01111,0b01111};

byte customChar2[8] = {0b00000,0b11000,0b11100,0b11110,0b11111,0b11111,0b11111,0b11111};

byte customChar3[8] = {0b00000,0b00011,0b00111,0b01111,0b11111,0b11111,0b11111,0b11111};

byte customChar4[8] = {0b00000,0b10000,0b11000,0b11100,0b11110,0b11110,0b11110,0b11110};

byte customChar5[8] = {0b00111,0b00011,0b00001,0b00000,0b00000,0b00000,0b00000,0b00000};

byte customChar6[8] = {0b11111,0b11111,0b11111,0b11111,0b01111,0b00111,0b00011,0b00001};

byte customChar7[8] = {0b11111,0b11111,0b11111,0b11111,0b11110,0b11100,0b11000,0b10000};

byte customChar8[8] = {0b11100,0b11000,0b10000,0b00000,0b00000,0b00000,0b00000,0b00000};

void setup()

{

lcd.begin(16, 2);

lcd.createChar(1, customChar1);

lcd.createChar(2, customChar2);

lcd.createChar(3, customChar3);

lcd.createChar(4, customChar4);

lcd.createChar(5, customChar5);

lcd.createChar(6, customChar6);

lcd.createChar(7, customChar7);

lcd.createChar(8, customChar8);

pinMode(data,INPUT);

pinMode(start,INPUT\_PULLUP);

}

void loop()

{

lcd.setCursor(0, 0);

lcd.print("Heart Beat");

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("Place The Finger");

lcd.setCursor(0, 1);

lcd.print("And Press Start");

while(digitalRead(start)>0);

lcd.clear();

temp=millis();

while(millis()<(temp+10000))

{

if(analogRead(data)<100)

{

count=count+1;

lcd.setCursor(6, 0);

lcd.write(byte(1));

lcd.setCursor(7, 0);

lcd.write(byte(2));

lcd.setCursor(8, 0);

lcd.write(byte(3));

lcd.setCursor(9, 0);

lcd.write(byte(4));

lcd.setCursor(6, 1);

lcd.write(byte(5));

lcd.setCursor(7, 1);

lcd.write(byte(6));

lcd.setCursor(8, 1);

lcd.write(byte(7));

lcd.setCursor(9, 1);

lcd.write(byte(8));

while(analogRead(data)<100);

lcd.clear();

}

}

lcd.clear();

lcd.setCursor(0, 0);

count=count\*6;

lcd.setCursor(2, 0);

lcd.write(byte(1));

lcd.setCursor(3, 0);

lcd.write(byte(2));

lcd.setCursor(4, 0);

lcd.write(byte(3));

lcd.setCursor(5, 0);

lcd.write(byte(4));

lcd.setCursor(2, 1);

lcd.write(byte(5));

lcd.setCursor(3, 1);

lcd.write(byte(6));

lcd.setCursor(4, 1);

lcd.write(byte(7));

lcd.setCursor(5, 1);

lcd.write(byte(8));

lcd.setCursor(7, 1);

lcd.print(count);

lcd.print(" BPM");

temp=0;

while(1);

}