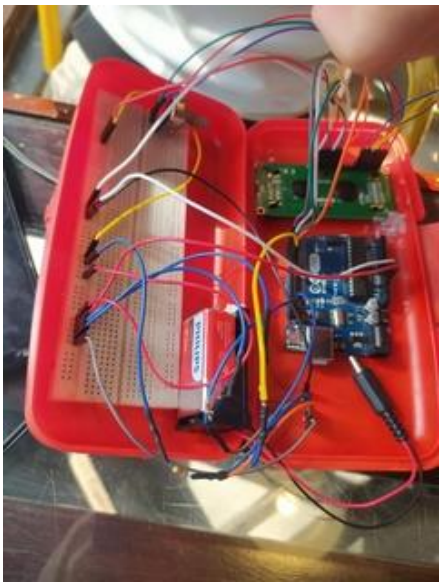
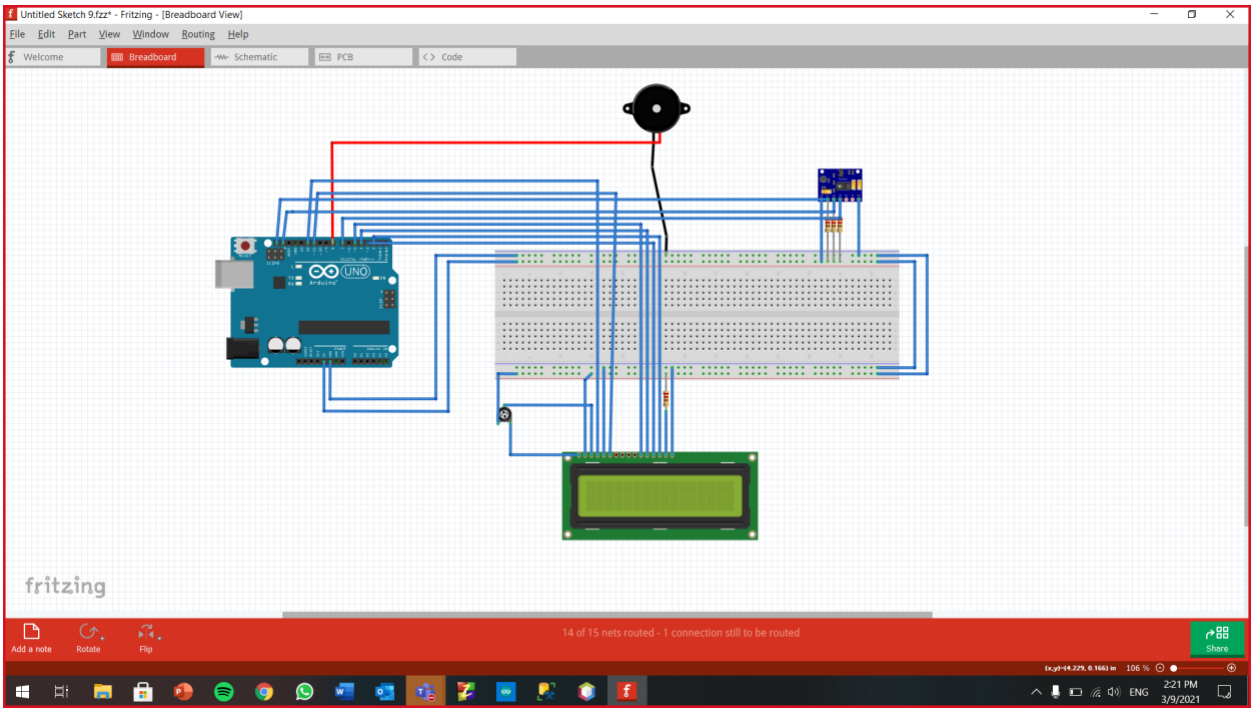
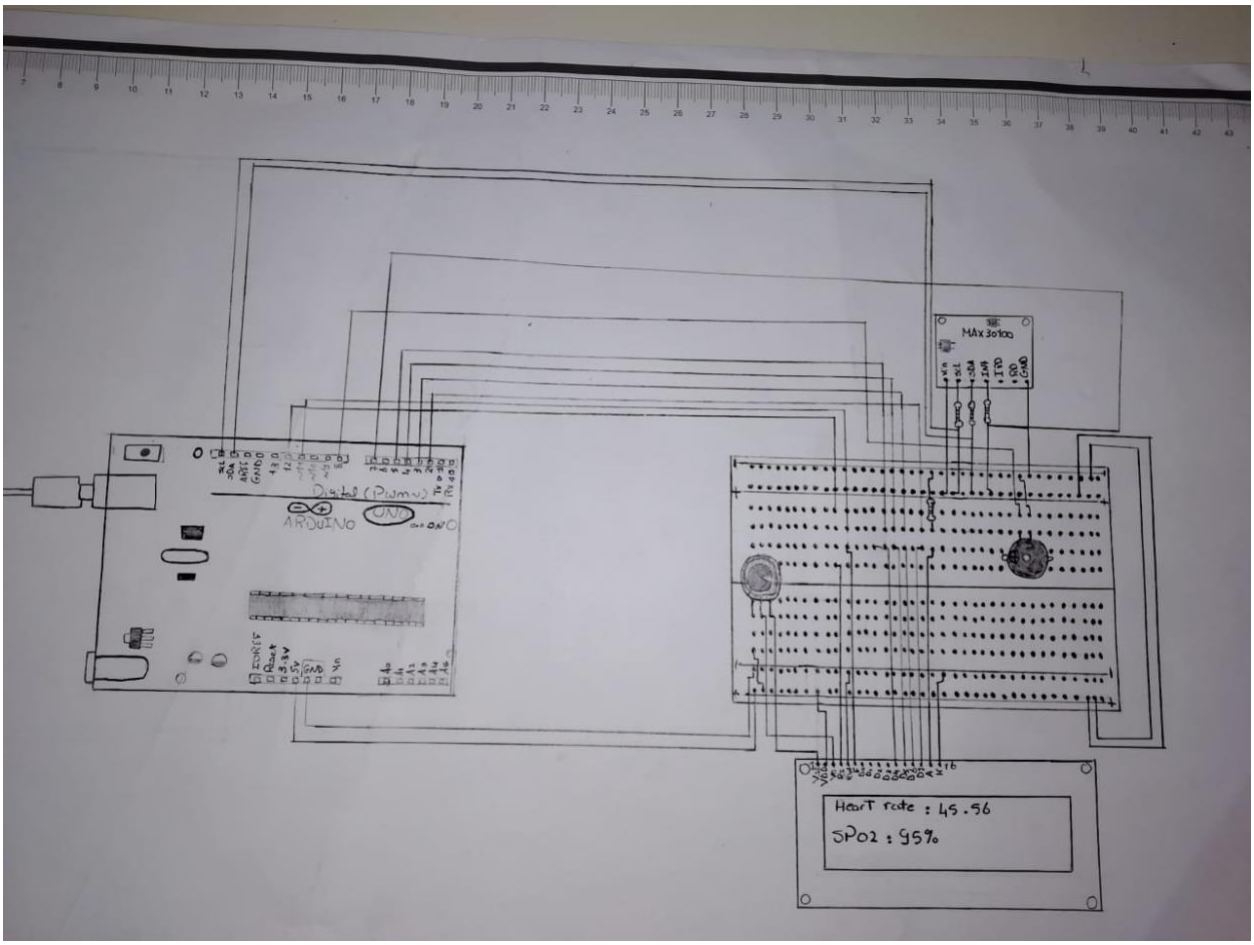
Pulse Oximetre And Heart Rate







Hardware Components:

- Arduino uno
- LCD 16*2
- Potentiometer
- Max 30100(RCWL-0530 Module)
- 3 Resistors 4.7 k-Ohm
- Wires male - female and male – male
- Buzzer

Note:

You should cut sensor resistors and use external resistors 4.7 K – Ohm .

Software code :

```
#include <Wire.h>
#include "MAX30100_PulseOximeter.h"
#include <LiquidCrystal.h>
//LiquidCrystal lcd(RS, E, D4, D5, D6, D7);
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

#define REPORTING_PERIOD_MS     1000
PulseOximeter pox;
uint32_t tsLastReport = 0;
void onBeatDetected()
{
  // buzzer make a sound when you put youer finger
  tone(8,1000,100);
}

void setup()
{
 // Initialize the buzzer
 pinMode(8,OUTPUT);
```

```
   // Initialize the LCD
   lcd.begin(16, 2);

     // cheking sensor working or not and print  SUCCESS or
FAILED
   if (!pox.begin()) {
      lcd.println("FAILED");
      for(;;);
   } else {
      lcd.println("SUCCESS");
   }

   // set current on red lid
    pox.setIRLedCurrent(MAX30100_LED_CURR_7_6MA);
   // Register a  callback for the beat detection
   pox.setOnBeatDetectedCallback(onBeatDetected);
}

void loop()
{
   // Make sure to call update as fast as possible
   pox.update();
   if (millis() - tsLastReport > REPORTING_PERIOD_MS) {
        lcd.clear();
      lcd.setCursor(0,0);
      lcd.print("Heart rate:");
```

```
        lcd.print(pox.getHeartRate());
        lcd.setCursor(0, 1);
        lcd.print("SpO2: ");
        lcd.print(pox.getSpO2());
        lcd.print("%");
        tsLastReport = millis();
    }
}
```