

EE344  
Electronic Design Lab  
Lab Report  
TUE-JJ-9-1

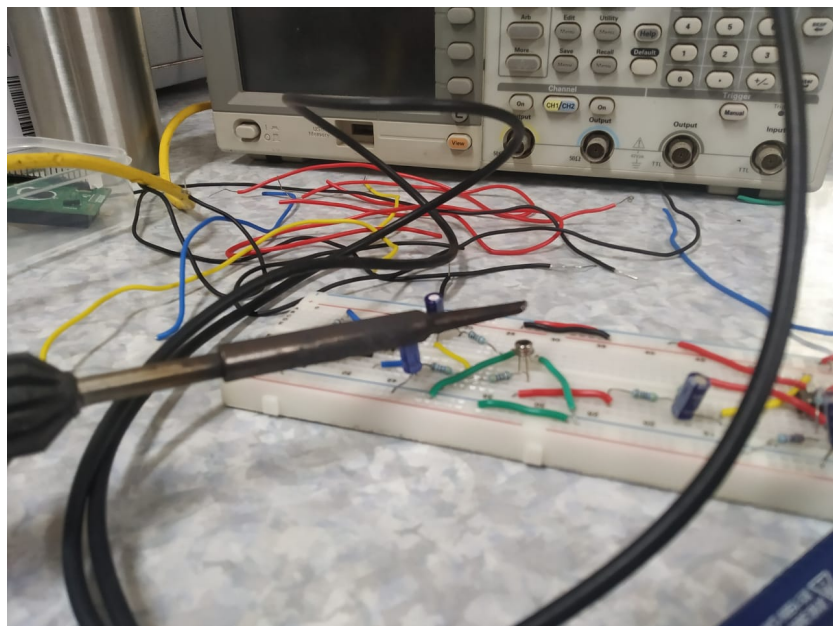
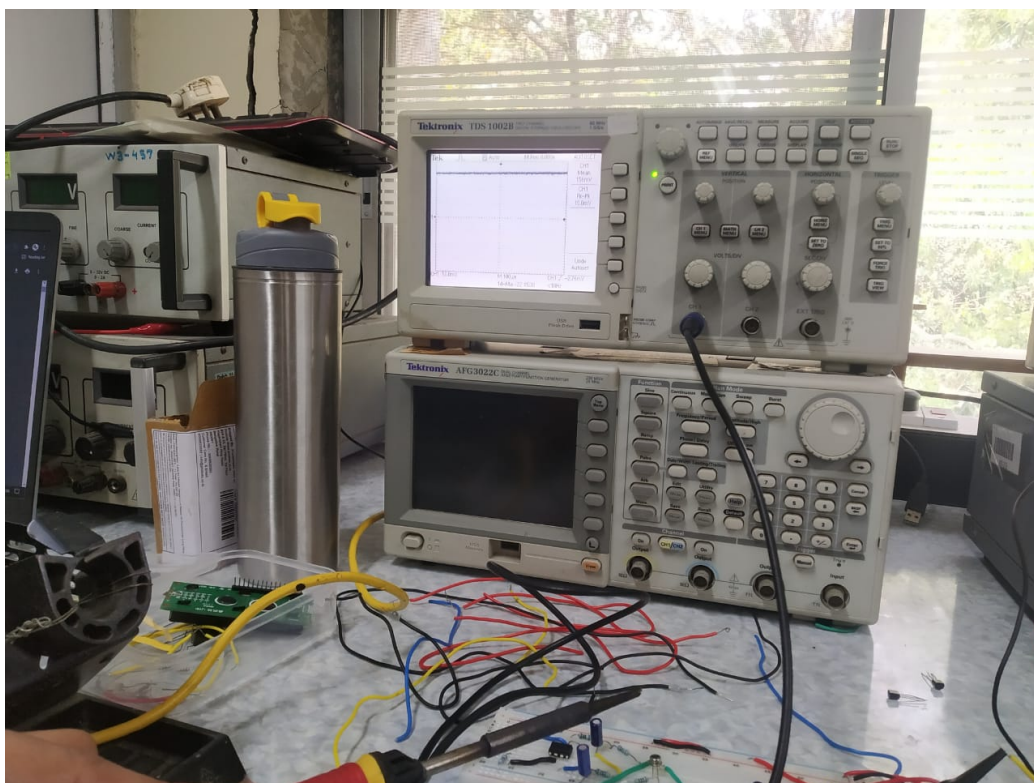
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**March 14, 2022**

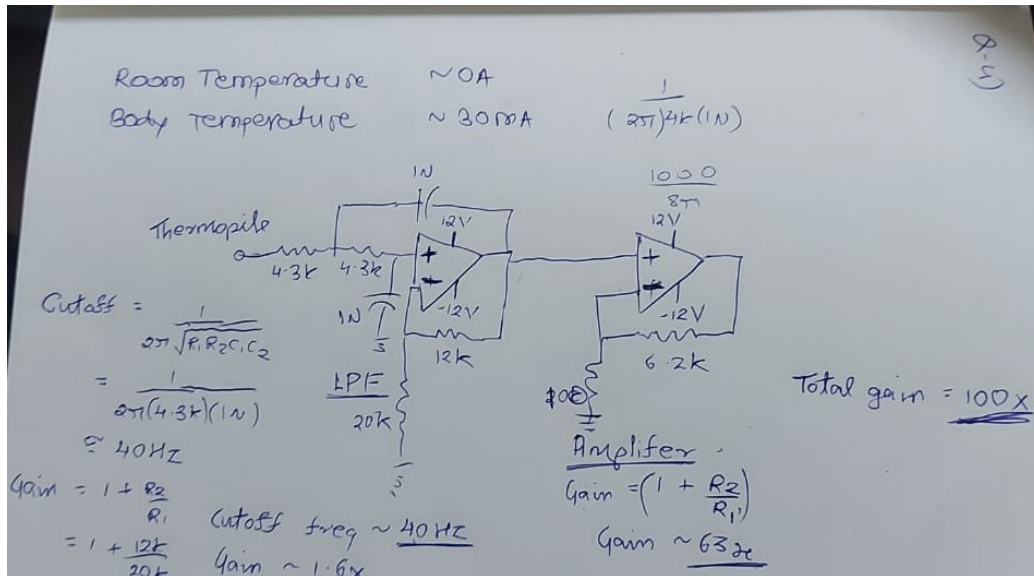
**Sensor Circuit and Lens:**

Today we used our lens for infrared temperature sensor for focusing radiations from the object/surface onto our temperature sensor. We also worked on the circuit and tested its correctness.

We got the voltage output of the circuit for skin contact in the desired range. Also, we used hot soldering iron to study the variation of output for such high temperatures. After bringing the soldering iron well within the range of the temperature sensor, we indeed recorded an increase in voltage output. For skin contact we got output voltage in the range of **50 mV** and for the hot soldering iron we got an output voltage in the range of **450 mV**. The pictures below show our work.



Below picture shows the diagram for our circuit and our calculations for the gain and cut off frequency.



## Arduino Interfacing

Today, we also started working on the interfacing of arduino to LCD. We started writing code for the same.

```
#include <LiquidCrystal.h>
LiquidCrystal lcd(12, 11, 5, 4, 3, 2); // ( interface pins in the order of "RS, E, D4, D5, D6, D7")
int valfromcircuit=0;
float valcal=0.0;

void setup() {
  lcd.begin(16, 2); // lcd display of 16 rows and 2 columns
  pinMode(A0, INPUT);
}

void loop() {
  lcd.clear();
  lcd.setCursor(0, 0);

  valfromcircuit=analogRead(A0);
  valcal=(valfromcircuit*0.1*3.2258);
  Serial.println(valcal);

  delay(1000);
}
```