

EE344

Electronic Design Lab

Lab Report

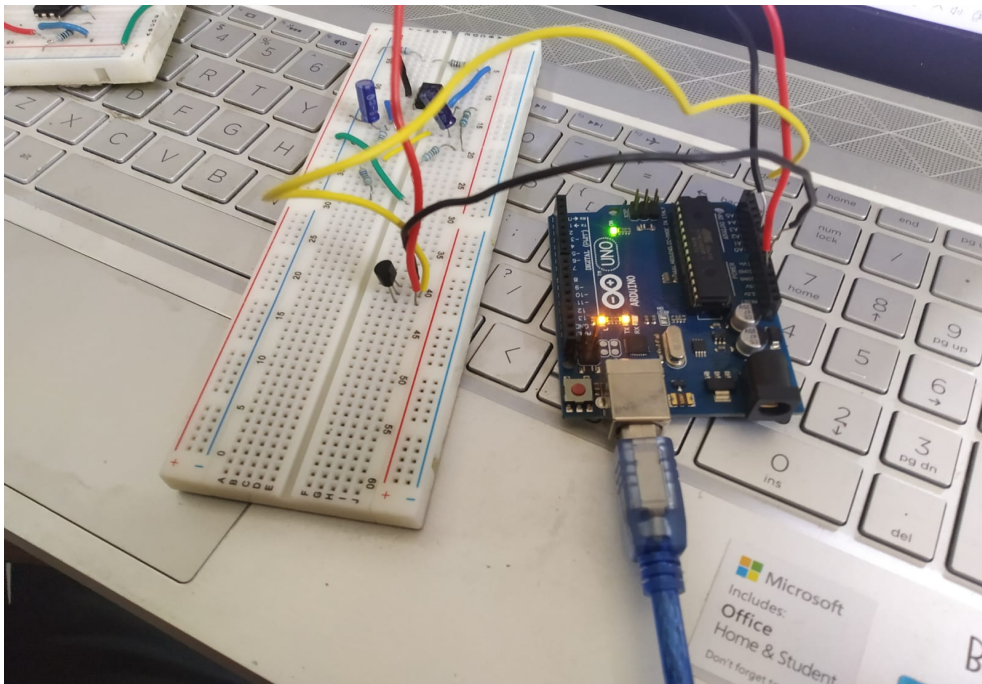
TUE-JJ-9-1

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LM35 Circuit :

Today, we tried to calibrate the LM35 Sensor with temperatures using the Arduino UNO Board.



Arduino Interfacing :

The reading were not that accurate where the outputs were around 51°C at room temperature. We will try to calibrate it correctly in the next lab session.

```
COM4
1023 in DegreeC  30.30
1023 in DegreeC  36.17
1023 in DegreeC  45.45
1023 in DegreeC  46.43
1023 in DegreeC  52.30
1023 in DegreeC  29.01
1023 in DegreeC  54.74
1023 in DegreeC  25.90
1023 in DegreeC  46.43
1023 in DegreeC  22.97
1023 in DegreeC  23.95
1008 in DegreeC  31.28
965 in DegreeC  30.79
896 in DegreeC  34.70
832 in DegreeC  22.40

void loop() {

  vout=analogRead(sensor); //Reading the value from sensor
  valfromcircuit=analogRead(A0);
  Serial.print(valfromcircuit);
  Serial.print(" ");
  vout=(vout*500)/1023;

  temp=vout; // Storing value in Degree Celsius

  Serial.print("in DegreeC");

  Serial.print("\t");

  Serial.print(temp);

  Serial.println();

  delay(500); //Delay of 1 second for ease of viewing
}
```

Serial monitor output showing temperature readings in Celsius. The readings are: 30.30, 36.17, 45.45, 46.43, 52.30, 29.01, 54.74, 25.90, 46.43, 22.97, 23.95, 31.28, 30.79, 34.70, and 22.40.

Sensor Calibration :

We tried to calibrate the sensor using the Arduino Board but readings were coming wrong. We will try to fix the issue in the next lab.

