

Experiment No 2

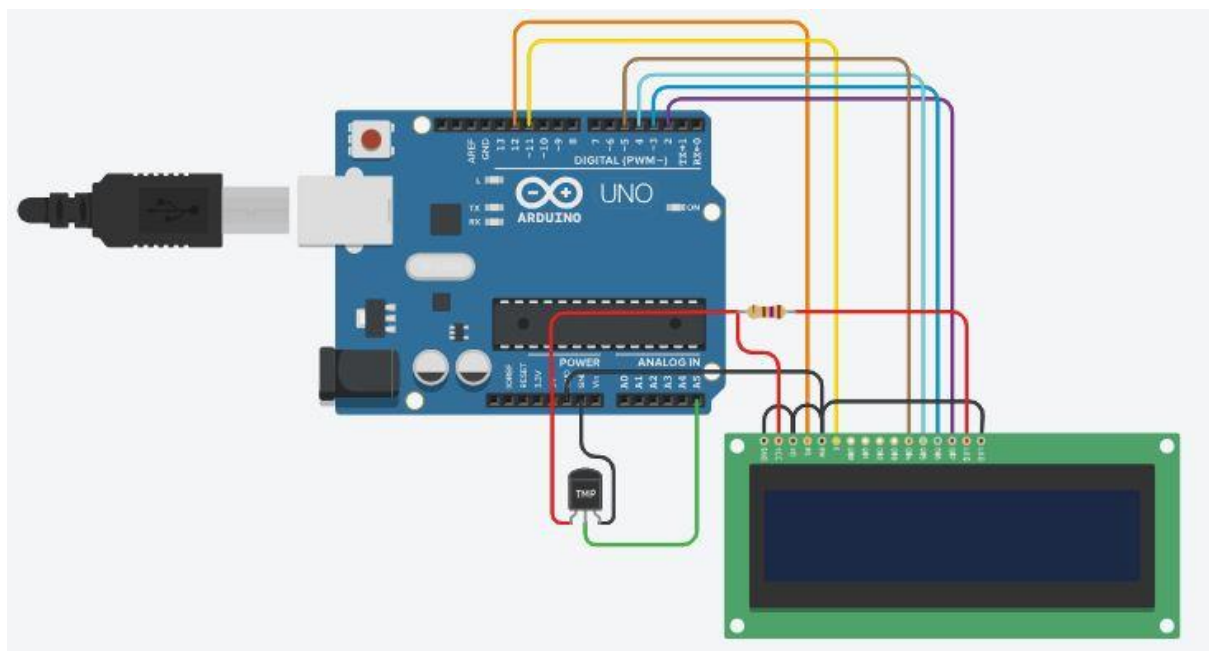
Aim: Read room temperature using temperature sensor. Experiment with calculate the Room temperature in Digital

Objectives: Knowledge of Arduino Sensors.

Hardware Requirements:

- Arduino Uno R3
- LCD 16 x 2
- 170 Ω Resistor
- Temperature Sensor [TMP36]

Circuit Diagram:



Code:

```
// include the library code for LCD display:
#include <LiquidCrystal.h>

// initialize the library with the numbers of the interface pins
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

// Defining pin
#define temp A5
#define led 13

void setup()
{
    // set up the LCD's number of columns and rows:
```

```

lcd.begin(16, 2);
pinMode(led, OUTPUT);
pinMode(temp, INPUT);
Serial.begin(9600);
lcd.clear();
lcd.print("Temperature: ");
}
//Global Variable
float pre_temp = 0;
void loop() {
  float temperature = 0;
  temperature = (analogRead(temp) * 0.48828125) - 49.95;
  if(pre_temp != temperature)
  {
    lcd.setCursor(0,1);
    lcd.print("      ");
  }
  lcd.setCursor(0,1);
  lcd.print(temperature);
  lcd.print(" C");
  pre_temp = temperature;
}

```

Weblink: <https://www.tinkercad.com/things/inv9jkbghDQ-copy-of-temperature-lm35-sensor-with-arduino/editel?tenant=circuits>

Output:

