PROGRAM FOR TEMPERATURE CONTROLLED FAN USING ARDUINO

```
#include <DHT.h>
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#define DHTPIN 2
#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);

const int potPin = A0;
const int fanPin = 3; // Connect the fan to this pin

LiquidCrystal_I2C lcd(0x27, 16, 2); // Set the LCD address and dimensions

void setup() {
  dht.begin();
  pinMode(fanPin, OUTPUT);
  lcd.init();                    // Initialize the LCD
  lcd.backlight();               // Turn on the backlight
  lcd.setCursor(0, 0);
  lcd.print("Temp Fan Control");
  lcd.setCursor(0, 1);
  lcd.print("MC LAB");
  delay(2000);
  lcd.clear();
  Serial.begin(9600);
}

void loop() {
```

```
 // int threshold = map(analogRead(potPin), 0, 1023, 20, 40); // Map potentiometer value to temperature range
  int threshold = 30;
  Serial.println(threshold);

  float temperature = dht.readTemperature();

  Serial.println(temperature);

  if (temperature > threshold) {
    digitalWrite(fanPin, HIGH); // Turn on the fan
    Serial.print("fan ON");
  } else {
    digitalWrite(fanPin, LOW); // Turn off the fan
    Serial.print("fan OFF");
  }

  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("Temp: ");
  lcd.print(temperature);
  lcd.print("C");

  lcd.setCursor(0, 1);
  lcd.print("Threshold: ");
  lcd.print(threshold);
  lcd.print("C");

  delay(1000);
}
```