Name: Preyash

Registration Number: 20BPS1022 Date: January 13, 2022

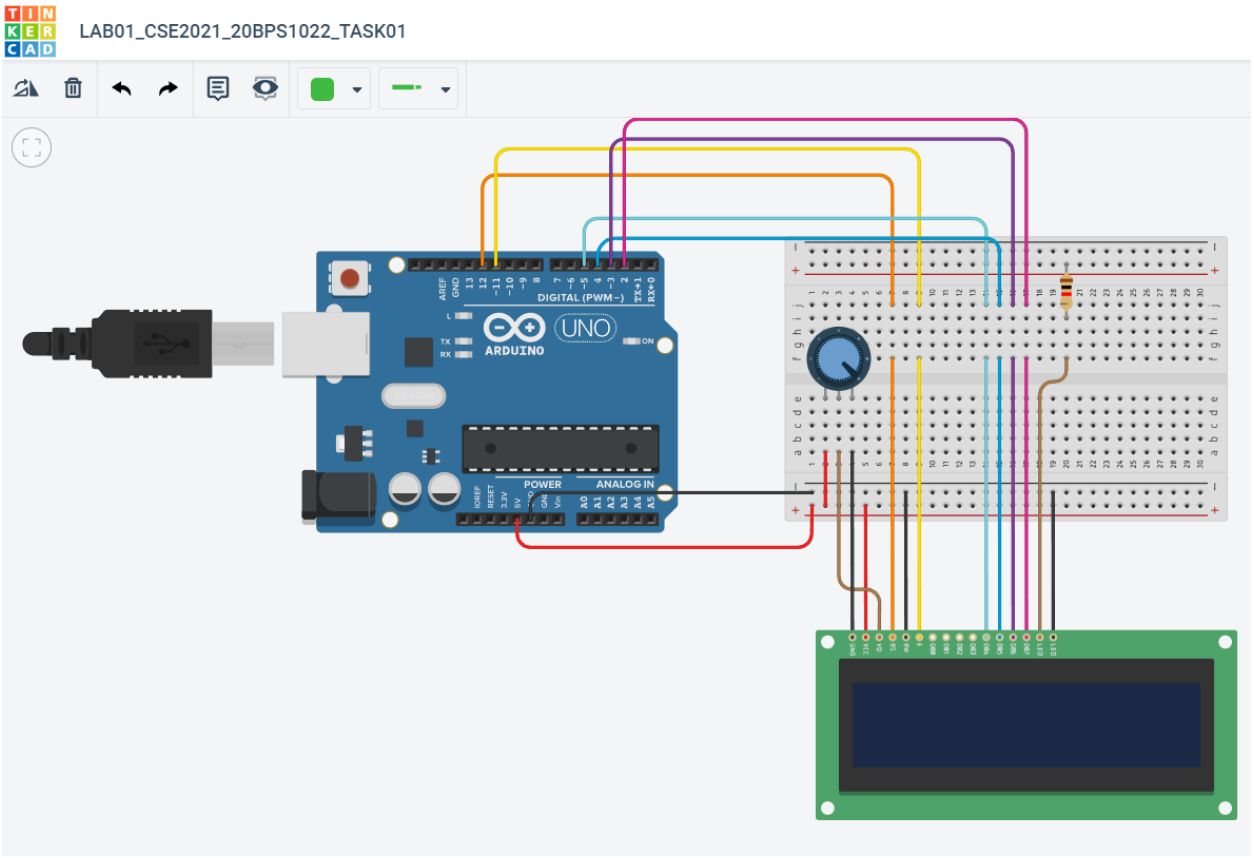
LAB-01

CSE2021

DISTRIBUTED REAL-TIME SYSTEMS

Task 1: **Connect Arduino with 16x2 LCD display and a button option.**

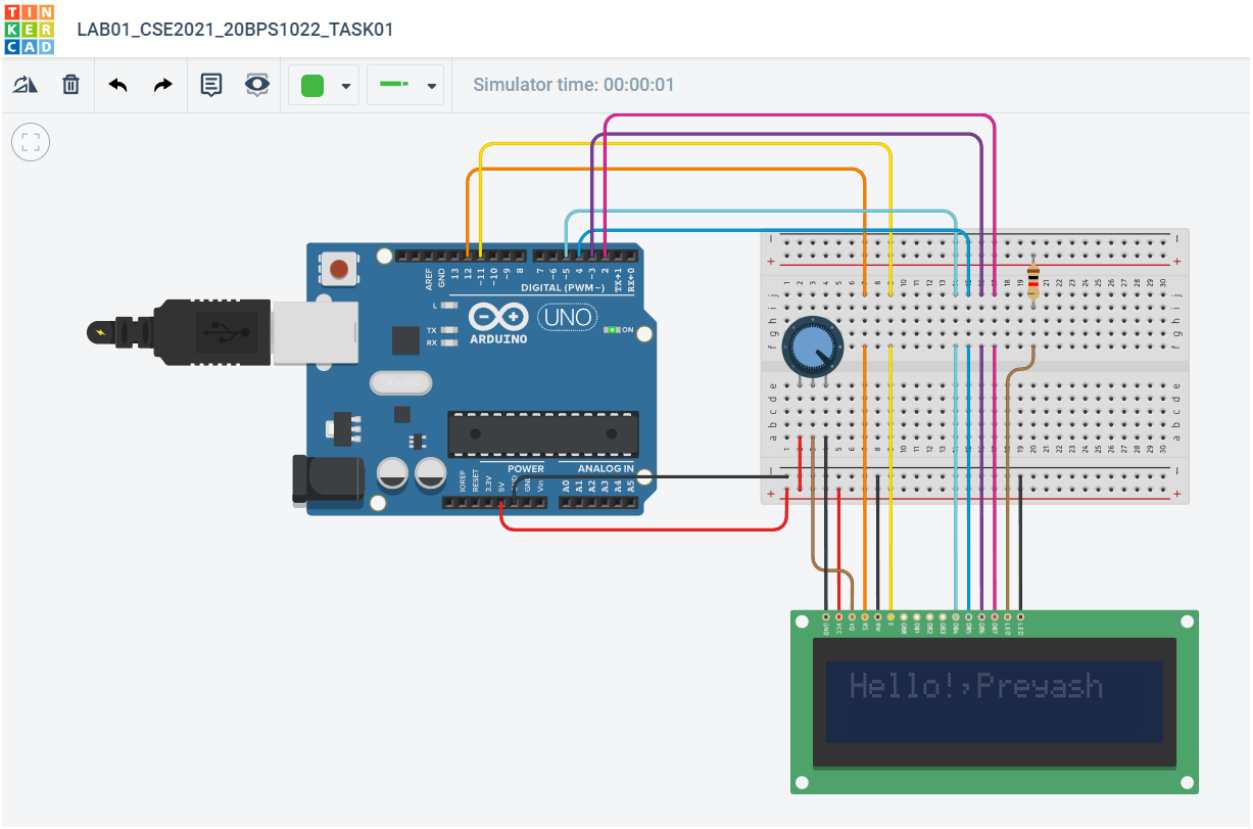
Circuit:

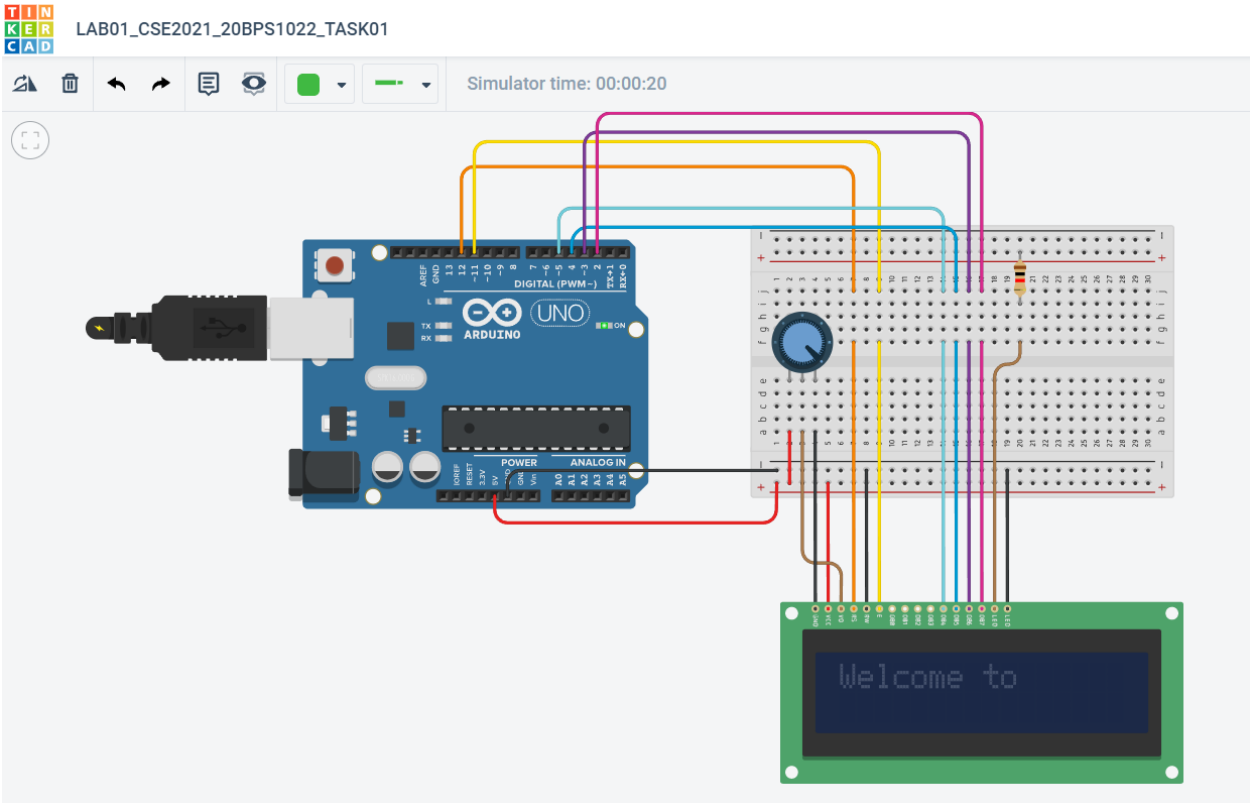


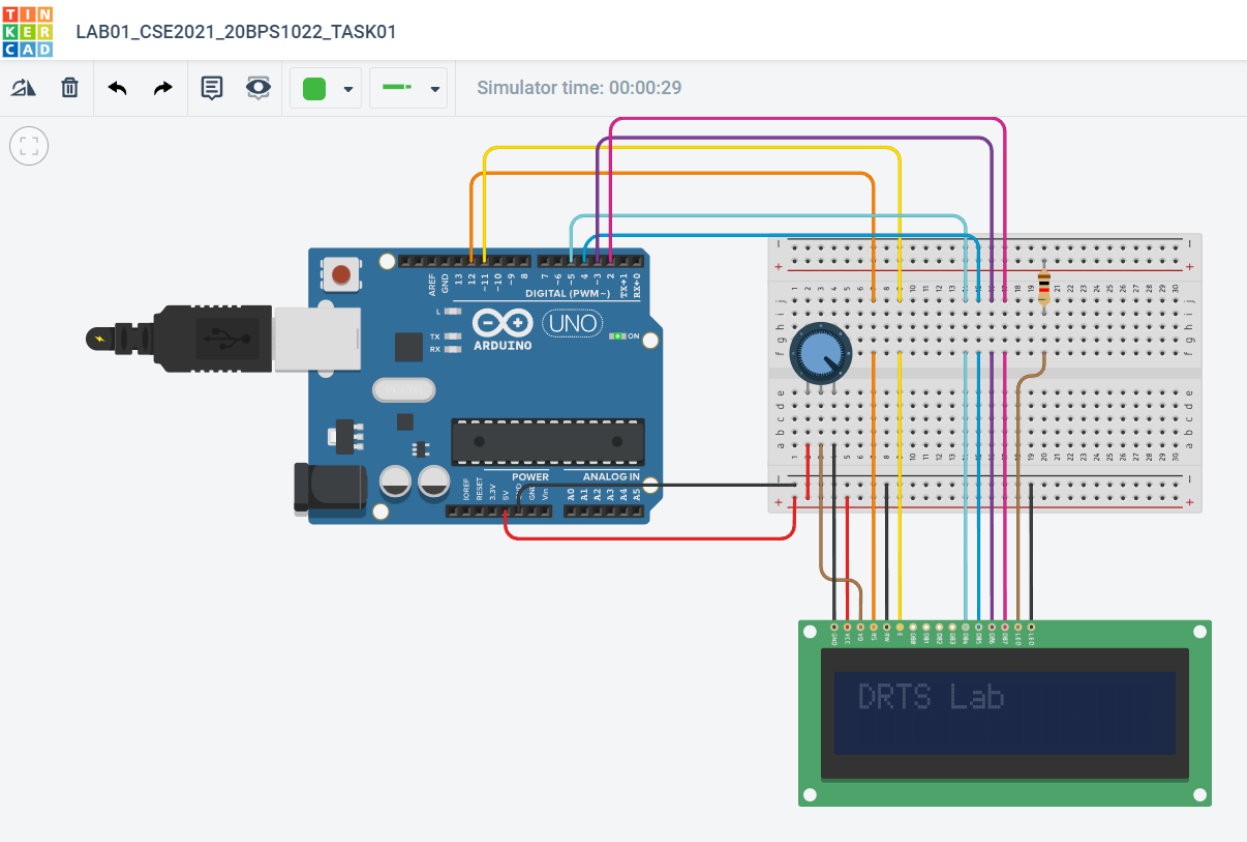
Code:

```
#include <LiquidCrystal.h>

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

void setup() {

lcd.begin(16, 2);

}

void loop() {

lcd.setCursor(0, 0);

lcd.print("Hello!,Preyash");

delay(5000);

  lcd.clear();

lcd.print("Welcome to");

delay(5000);

   lcd.clear();

lcd.print("DRTS Lab");

  delay(5000);

  lcd.clear();

}
```

Output:


LAB01_CSE2021_20BPS1022_TASK01
Simulator time: 00:00:01
UNO
ARDUINO
Hello!,Preyash


LAB01_CSE2021_20BPS1022_TASK01
Simulator time: 00:00:20
UNO
ARDUINO
Welcome to

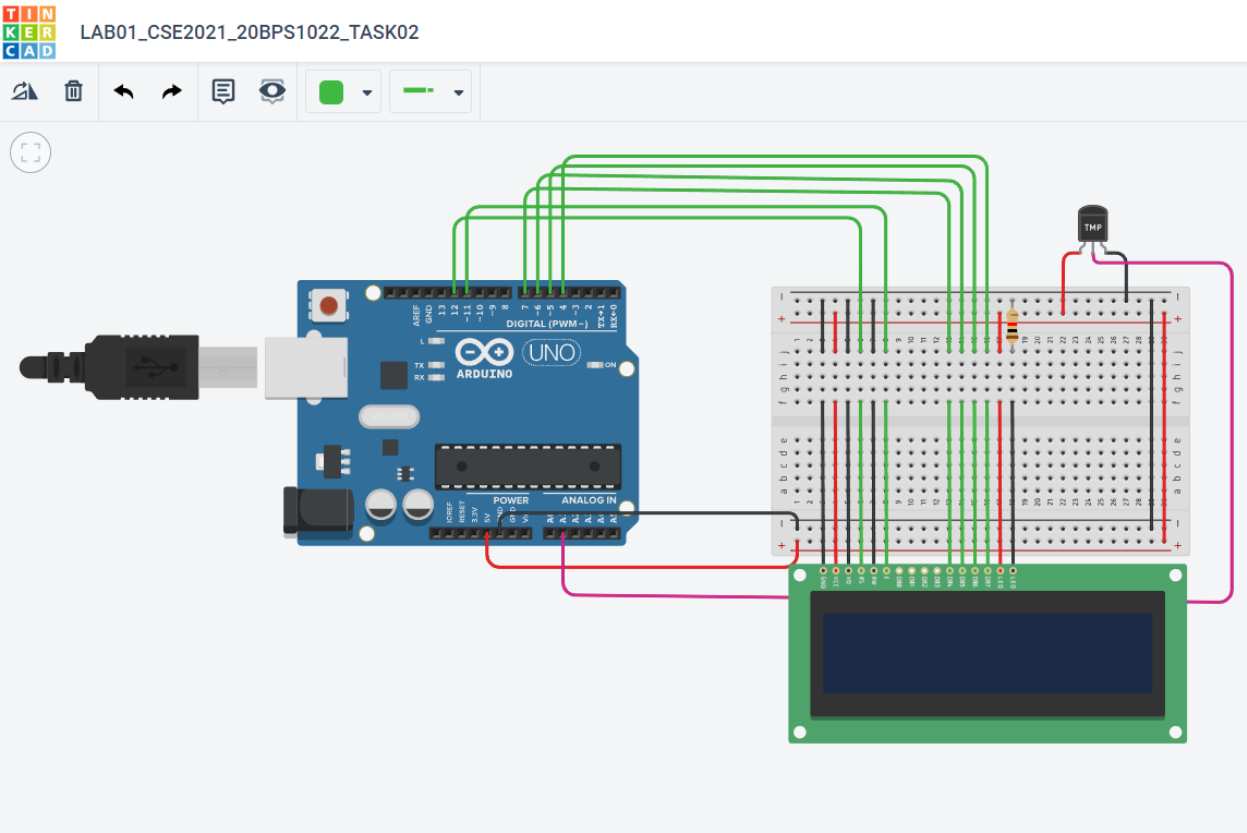


Link:

https://www.tinkercad.com/things/611AROmFpRh-lab01cse202120bps1022task01/editel

Task 2: **Connect Arduino with a LCD display and connect a temperature sensor. The temperature reading must be displayed in the LCD and serial monitor.**

Circuit:

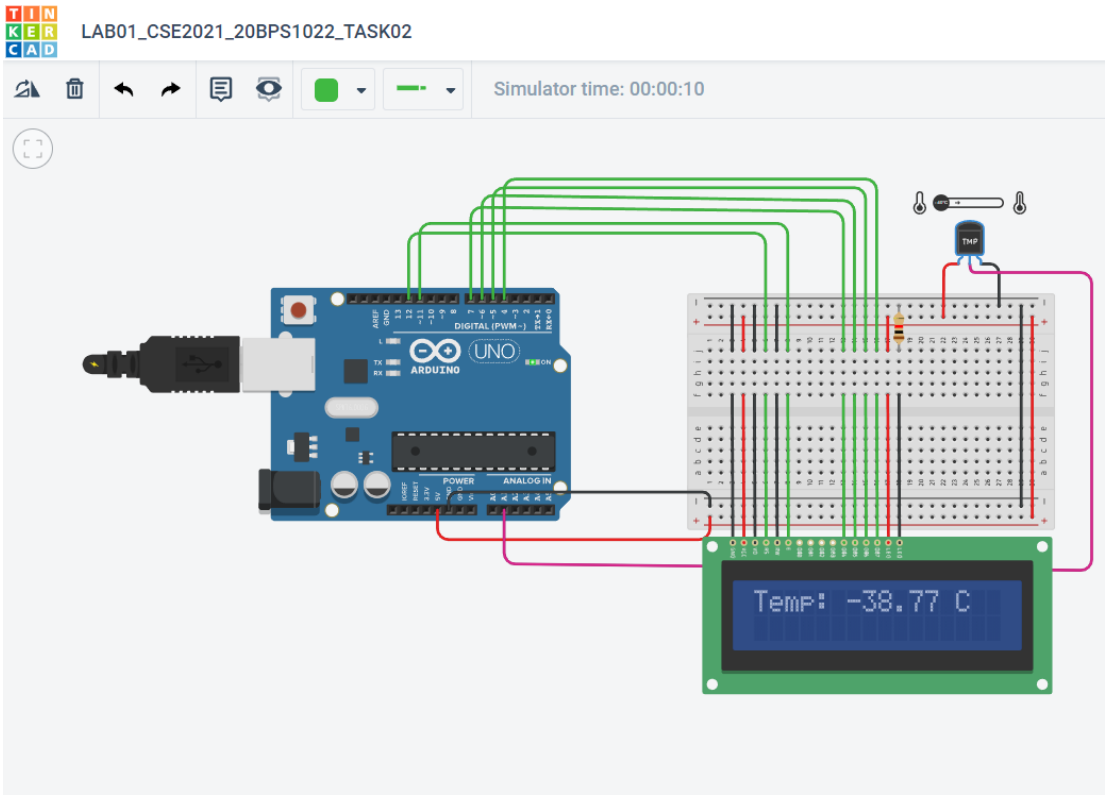


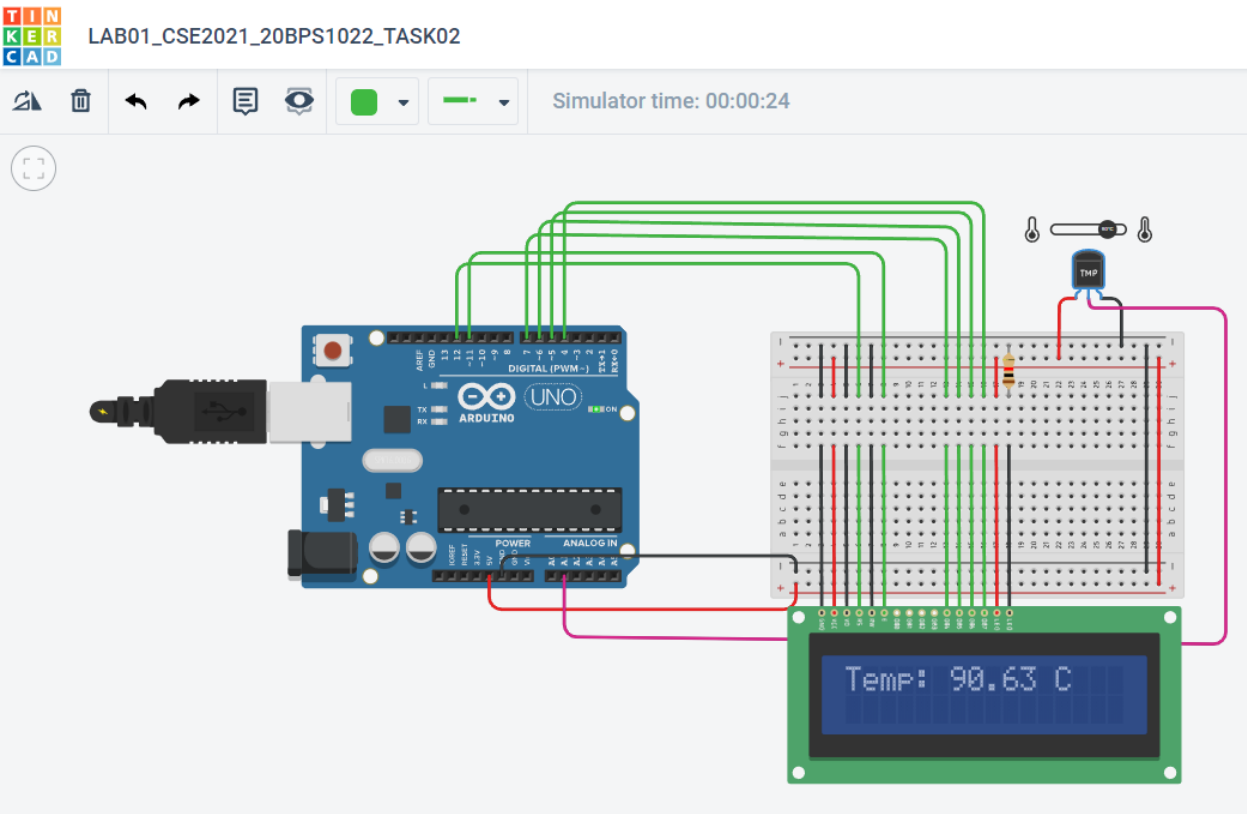
Code:

```
#include<LiquidCrystal.h>

LiquidCrystal lcd(12, 11, 7, 6,5,4);

float celsius;

int temp = A1;

void setup(){

pinMode(temp,INPUT);

}

void loop(){
```

```
celsius = analogRead(temp)*0.004882814;
celsius = (celsius - 0.5) * 100.0;
lcd.setCursor(0,1);
lcd.print("Temp: ");
lcd.print(celsius);
lcd.print(" C");
delay(1000);
lcd.clear();
}
```

Output:





Link:

https://www.tinkercad.com/things/iWnexWWiFeh-lab01cse202120bps1022task02/editel