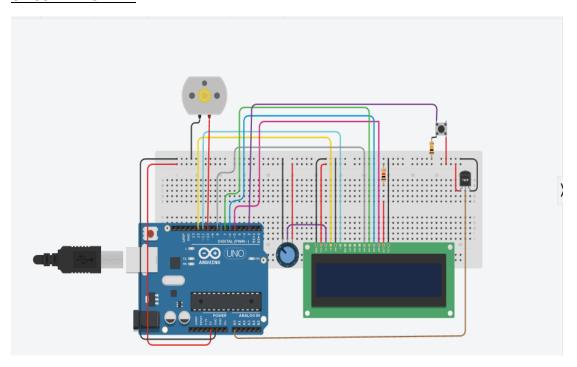
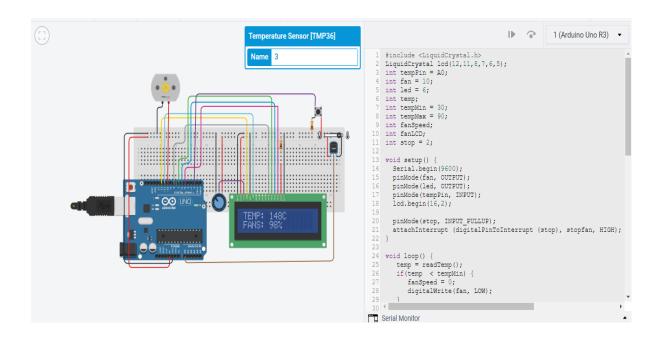
## Assignment – 1

## (SMART HOME AUTOMATION)

## **CIRCUIT DIAGRAM:**





## Program:

#include <LiquidCrystal.h>

```
LiquidCrystal lcd(12,11,8,7,6,5);
int tempPin = A0;
int fan = 10;
int led = 6;
int temp;
int tempMin = 30;
int tempMax = 90;
int fanSpeed;
int fanLCD;
int stop = 2;
void setup() {
Serial.begin(9600);
 pinMode(fan, OUTPUT);
 pinMode(led, OUTPUT);
 pinMode(tempPin, INPUT);
 lcd.begin(16,2);
 pinMode(stop, INPUT_PULLUP);
 attachInterrupt (digitalPinToInterrupt (stop), stopfan, HIGH);
}
void loop() {
 temp = readTemp();
 if(temp < tempMin) {</pre>
   fanSpeed = 0;
   digitalWrite(fan, LOW);
 }
 if((temp >= tempMin) && (temp <= tempMax)) {</pre>
   fanSpeed = map(temp, tempMin, tempMax, 32, 255);
   fanLCD = map(temp, tempMin, tempMax, 0, 100);
   analogWrite(fan, fanSpeed);
 }
 if(temp > tempMax) {
```

```
digitalWrite(led, HIGH);
 } else {
  digitalWrite(led, LOW);
 }
 lcd.print("TEMP: ");
 lcd.print(temp);
 lcd.print("C ");
 lcd.setCursor(0,1);
 lcd.print("FANS: ");
 lcd.print(fanLCD);
 lcd.print("%");
 delay(200);
 lcd.clear();
 }
int readTemp() {
 temp = analogRead(tempPin);
 return temp * 0.48828125;
}
void stopfan () {
 lcd.clear();
 digitalWrite (fan, LOW);
 delayMicroseconds(9000000000000000000000);
 Serial.println("Mati");
 lcd.print("TEMP: --");
 lcd.setCursor(0,1);
 lcd.print("FANS: 0%");
}
```