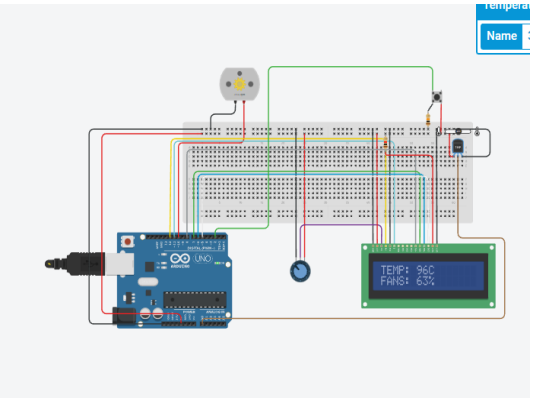
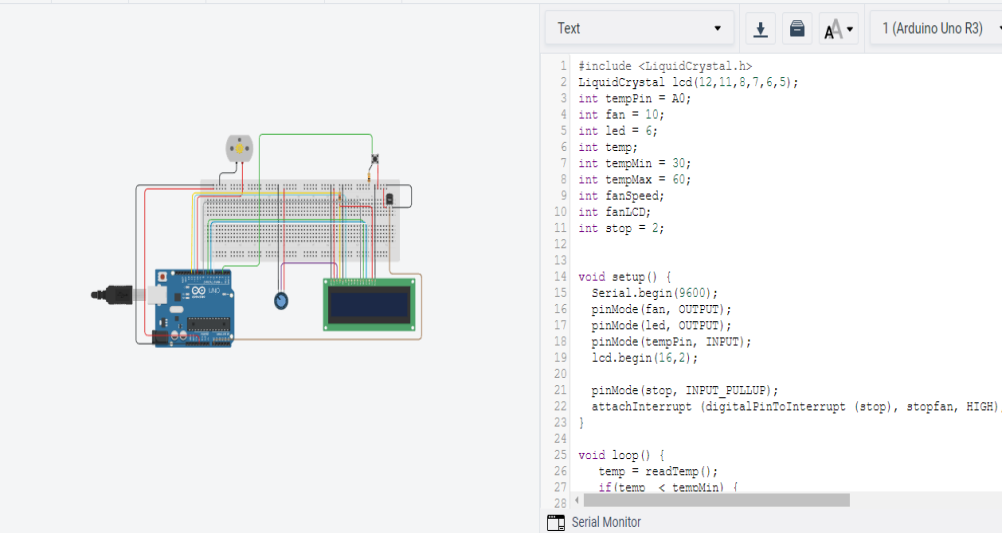
ASSESMENT-1

FAN SPEED CONTROL SYSTEM

CIRCUIT DIAGRAM





```
Text                                                    1 (Arduino Uno R3)
#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 = 60;
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) {
Serial Monitor
```

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 = 60;
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)
```

```
 {
    fanSpeed = 0;
    digitalWrite(fan, LOW);
  }
  if((temp  >= tempMin) && (temp <= tempMax)) {
    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(300000000);
  Serial.println("OFF");
  lcd.print("TEMP: --");
  lcd.setCursor(0,1);
  lcd.print("FANS: 0%");
}
```