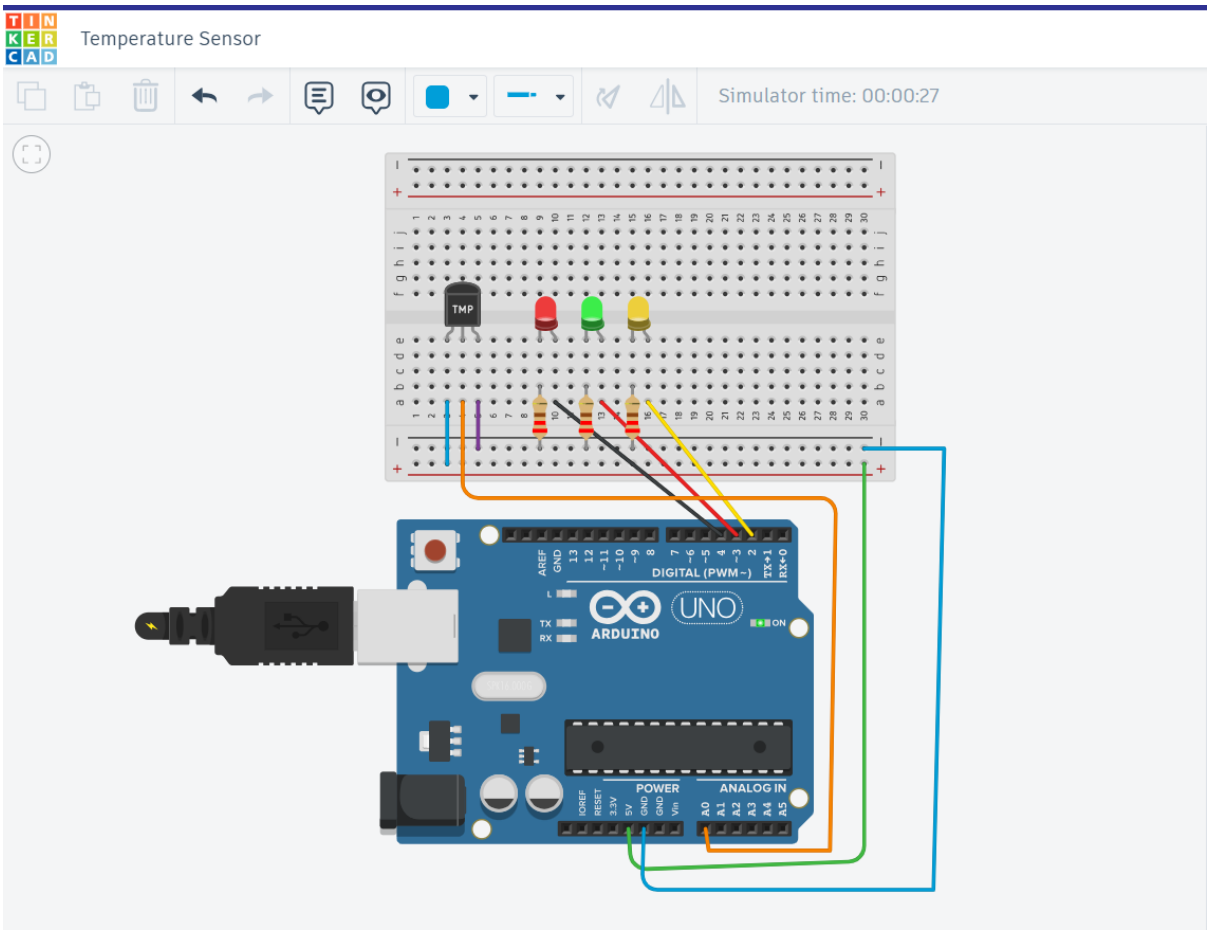
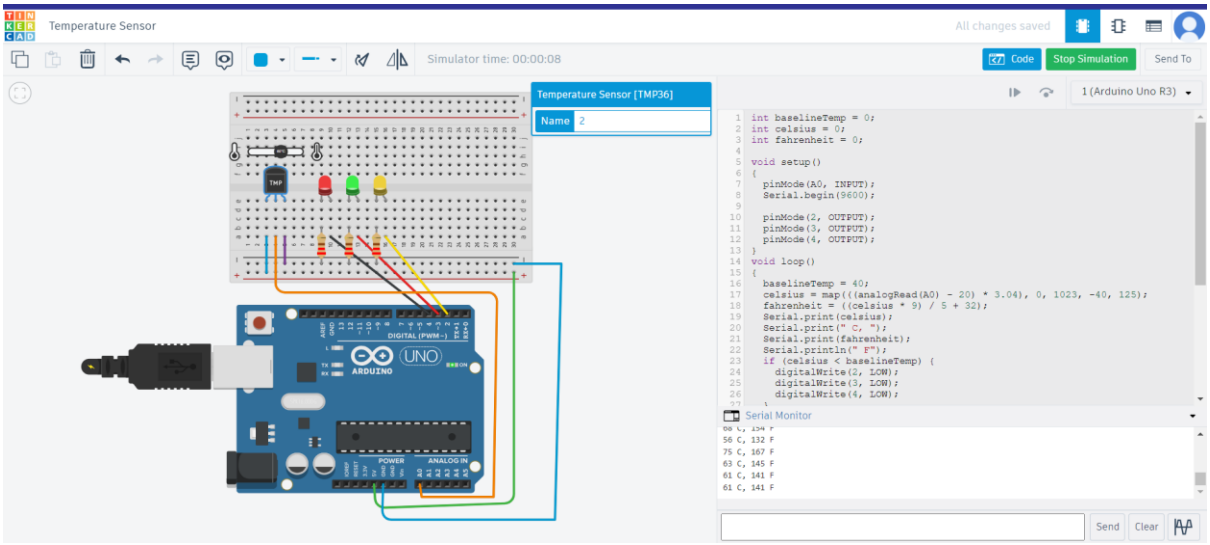
Name: **B. SAI CHARAN**

Roll No: **2203A51L72 (Batch-12)**

EXPERIMENT 6: Interface Temperature sensor (TMP 36) with Arduino board.





CODE:

```
int baselineTemp = 0;
int celsius = 0;
int fahrenheit = 0;

void setup()
{
  pinMode(A0, INPUT);
  Serial.begin(9600);

  pinMode(2, OUTPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
}
void loop()
{
  baselineTemp = 40;
  celsius = map(((analogRead(A0) - 20) * 3.04), 0, 1023, -40, 125);
  fahrenheit = ((celsius * 9) / 5 + 32);
  Serial.print(celsius);
  Serial.print(" C, ");
  Serial.print(fahrenheit);
  Serial.println(" F");
  if (celsius < baselineTemp) {
    digitalWrite(2, LOW);
    digitalWrite(3, LOW);
    digitalWrite(4, LOW);
  }
  if (celsius >= baselineTemp && celsius < baselineTemp + 10) {
```

```
  digitalWrite(2, HIGH);
  digitalWrite(3, LOW);
  digitalWrite(4, LOW);
 }
 if (celsius >= baselineTemp + 10 && celsius < baselineTemp + 20) {
  digitalWrite(2, HIGH);
  digitalWrite(3, HIGH);
  digitalWrite(4, LOW);
 }
 if (celsius >= baselineTemp + 20 && celsius < baselineTemp + 30) {
  digitalWrite(2, HIGH);
  digitalWrite(3, HIGH);
  digitalWrite(4, HIGH);
 }
  delay(1000);
}
```

OUTPUT: