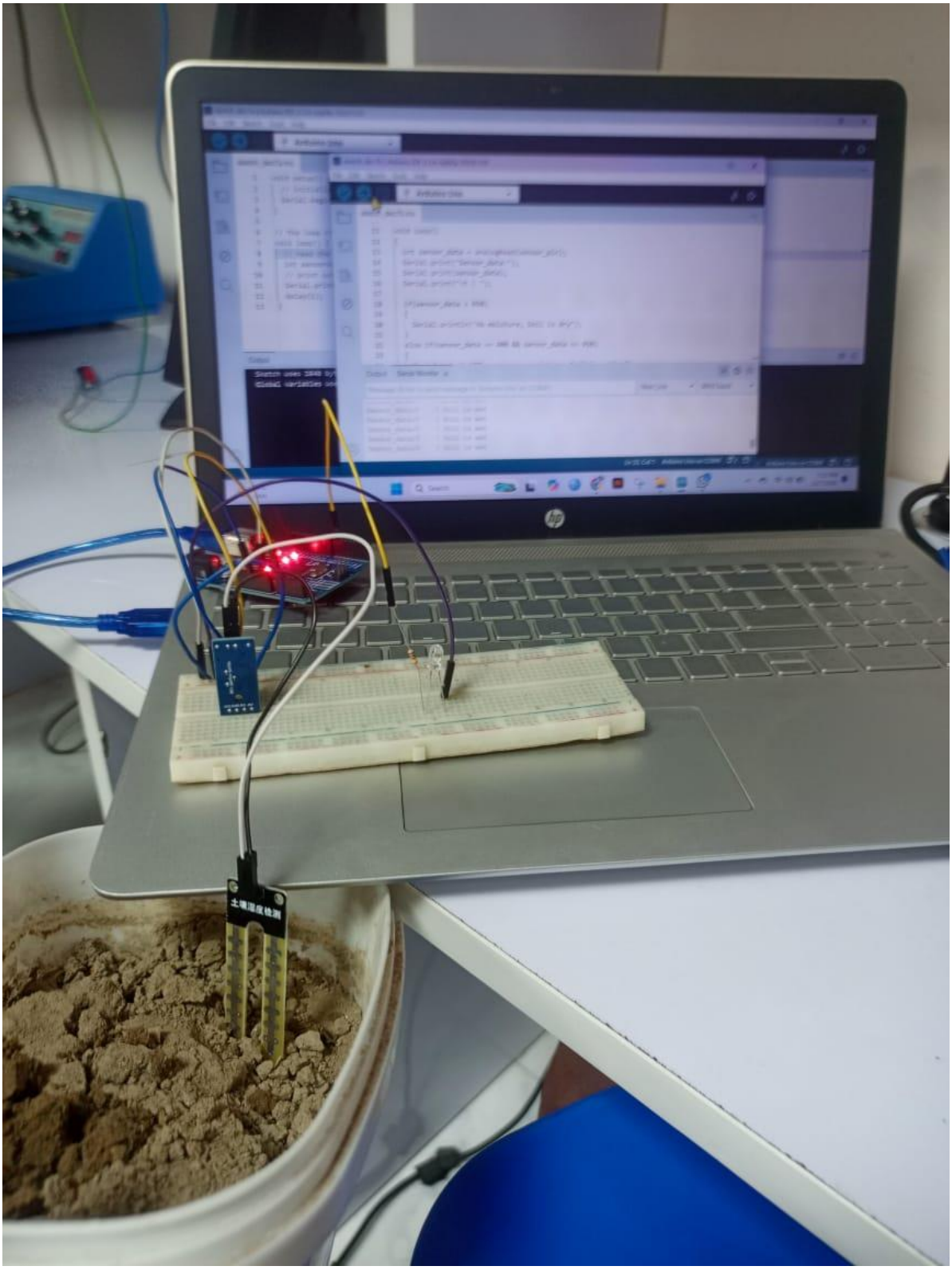
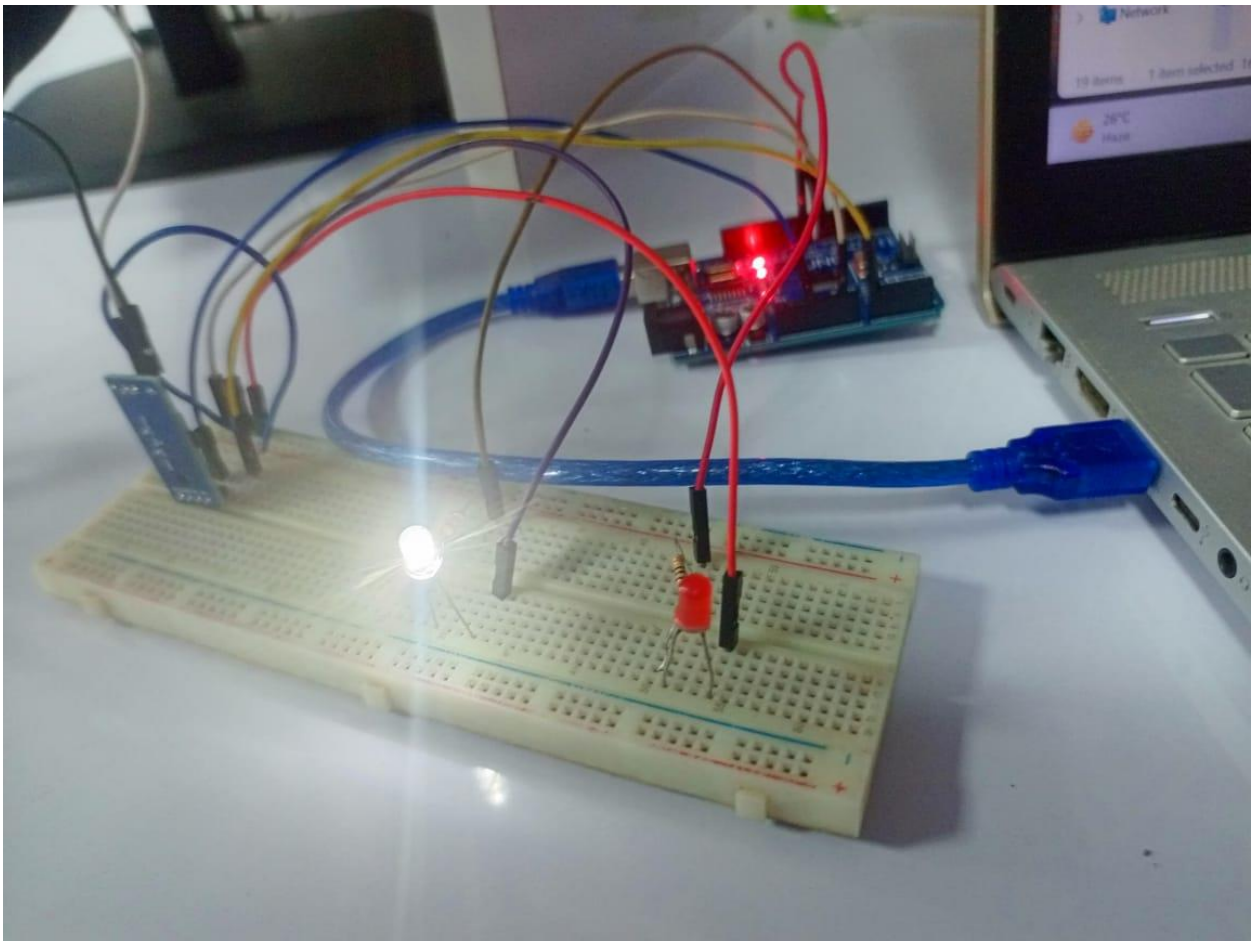
Soil Moisture Sensor with Arduino





sketch_dec9b | Arduino IDE 2.3.4

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Arduino Uno

sketch_dec9b.ino

```
int sensor_pin = A0; // Sensor connected to analog pin A0
int white_light = 7; // White LED connected to digital pin 7
int red_light = 8;   // Red LED connected to digital pin 8

void setup()
{
  Serial.begin(9600);          // Start Serial communication
  pinMode(sensor_pin, INPUT);  // Set sensor pin as input
  pinMode(white_light, OUTPUT); // Set white LED pin as output
  pinMode(red_light, OUTPUT);   // Set red LED pin as output
}

void loop()
{
  int sensor_data = analogRead(sensor_pin); // Read moisture sensor data
  Serial.print("Sensor Data: ");
  Serial.println(sensor_data);

  if(sensor_data >= 0 && sensor_data <= 500)
  {
 // Turn on white LED for 0-500
    Serial.println("Moisture level low, White LED ON.");
    digitalWrite(white_light, HIGH); // Turn white LED on
    digitalWrite(red_light, LOW);    // Ensure red LED is off
  }
  else if(sensor_data >= 501 && sensor_data <= 700)
  {
    // No light for 501-700
    Serial.println("Moisture level medium, No LED.");
    digitalWrite(white_light, LOW); // Turn white LED off
    digitalWrite(red_light, LOW);   // Turn red LED off
```

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Components:

1) Arduino UNO R3

2) Breadboard

3) Capacitive Soil Moisture Sensor