

HUMIDITY READING USING ARDUINO UNO

```
#define DHT_PIN 2 // Digital pin connected to the DHT11 sensor

void setup()
{
  Serial.begin(9600);
}

void loop()
{
  // Read the analog value from the DHT11 sensor
  int analogValue = analogRead(DHT_PIN);

  // Map the analog value to a humidity percentage (assuming linearity)
  float humidity = map(analogValue, 204, 736, 0, 100);

  // Print the humidity value
  Serial.print("Humidity: ");
  Serial.print((int)humidity); // Convert to integer for readability
  Serial.println(" %");

  delay(1000); // Update readings every second
}
```

The screenshot displays the Arduino IDE interface with a project named "New Arduino Uno Project - Wokwi". The main window shows the "sketch.ino" file containing the following C++ code:

```
1 #define DHT_PIN 2 // Digital pin connected to the DHT11 sensor
2
3 void setup()
4 {
5   Serial.begin(9600);
6 }
7
8 void loop()
9 {
10    // Read the analog value from the DHT11 sensor
11    int analogValue = analogRead(DHT_PIN);
12
13    // Map the analog value to a humidity percentage (assuming linearity)
14    float humidity = map(analogValue, 204, 736, 0, 100);
15
16    // Print the humidity value
17    Serial.print("Humidity: ");
18    Serial.print((int)humidity); // Convert to integer for readability
19    Serial.println(" %");
20
21    delay(100); // Update readings every second
22 }
23
```

The right-hand side of the IDE shows a 3D simulation of the hardware. An Arduino Uno board is connected to a DHT11 temperature and humidity sensor via its digital pins. The sensor's output is displayed in the "Serial Monitor" window at the bottom right, showing a series of humidity readings:

```
Humidity: 74 %
Humidity: 74 %
Humidity: 65 %
Humidity: 61 %
Humidity: 51 %
Humidity: 60 %
Humidity: 66 %
```