Exp 3 : humidity + blynk IOT

CODE :

```
#define BLYNK_TEMPLATE_ID “TMPL38GNlgCyi”
#define BLYNK_TEMPLATE_NAME “SoilmoisureMonitor”
#define BLYNK_AUTH_TOKEN “1zVUMt_V7wtIRPyivPS0GKFwKs5pcxjw”
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>
Char auth[] = BLYNK_AUTH_TOKEN;
Char ssid[] = “OnePlus Nord CE3 5G”;
Char pass[] = “1234567890”;
#define SOIL_PIN A0
BlynkTimer timer;
Void sendSoilMoisture() {
  Int sensorValue = analogRead(SOIL_PIN);
  Int moisturePercent = map(sensorValue, 1023, 0, 0, 100);
  Serial.print(“Soil Moisture: “);
  Serial.print(moisturePercent);
  Serial.println(“ %”);
  Blynk.virtualWrite(V1, moisturePercent);
}
Void setup() {
  Serial.begin(115200);
  Blynk.begin(auth, ssid, pass);
  Timer.setInterval(1000L, sendSoilMoisture);
}
```

```
Void loop() {
  Blynk.run();
  Timer.run();
}
```

How to run :

1. Open Arduino IDE

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2. Install ESP8266 Board

Go to:

File → Preferences → Additional Boards Manager URLs

Paste this:

http://arduino.esp8266.com/stable/package_esp8266com_index.json

Now:

Tools → Board → Boards Manager

Search ESP8266

Click Install

Then select:

✓ NodeMCU 1.0 (ESP-12E Module)

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3. Install Required Libraries

Go to:

Sketch → Include Library → Manage Libraries

Search and install:

✓ Blynk

✓ ESP8266WiFi (comes preinstalled)

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4. Wiring (Important)

Soil Moisture Sensor → NodeMCU

Sensor Pin	NodeMCU
VCC	3V3
GND	GND
A0	A0

⚠ Do NOT connect Soil Sensor to 5V (NodeMCU is 3.3V only)

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5. Paste the Correct Code

Delete everything and paste the code .

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6. Select Port

Go to:

Tools → Port → COM3 / COM4

(Mac/Linux will show different name)

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7. Upload Code

Click UPLOAD (→)

Wait for “Done Uploading”.

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8. Open Serial Monitor

Tools → Serial Monitor

Set baud: 115200

You will see:

Soil Moisture: 50 %

Connecting to Blynk...

Connected!

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9. Open Blynk App / Web Dashboard

In Blynk Cloud:

https://blynk.cloud

You will see your device online.

Add:

✓ Datastream V1 → vertical gauge or chart

Soil moisture value will update every 1 second.