**ARDUINO UNO CODE**

#include <SoftwareSerial.h>

#define SOIL\_SENSOR\_PIN A0

#define RELAY\_PIN 8

SoftwareSerial espSerial(0, 1); // RX, TX

void setup() {

Serial.begin(9600);

espSerial.begin(9600);

pinMode(RELAY\_PIN, OUTPUT);

digitalWrite(RELAY\_PIN, LOW);

}

void loop() {

int soilMoistureValue = analogRead(SOIL\_SENSOR\_PIN);

// Check soil moisture level and control water pump

if (soilMoistureValue < 300) {

digitalWrite(RELAY\_PIN, HIGH); // Turn on the water pump

delay(5000); // Water for 5 seconds

digitalWrite(RELAY\_PIN, LOW); // Turn off the water pump

}

// Send data to ESP8266

String data = "soilMoisture=" + String(soilMoistureValue);

espSerial.println(data);

delay(6000); // Wait for 30 seconds before next reading

}