

```
// Pin Definitions

int sensorPin = A0;

int ledPin = 13;

int buzzerPin = 8;

int relayPin = 7;


int dryThreshold = 300; // adjust for your soil


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


    pinMode(ledPin, OUTPUT);
    pinMode(buzzerPin, OUTPUT);
    pinMode(relayPin, OUTPUT);


    digitalWrite(ledPin, LOW);
    digitalWrite(buzzerPin, LOW);
    digitalWrite(relayPin, HIGH); // Relay OFF
}


void loop() {
    int soilValue = analogRead(sensorPin);

    Serial.print("Soil Moisture: ");
    Serial.println(soilValue);


    if (soilValue > dryThreshold) {
        // Soil dry - turn ON pump
        digitalWrite(relayPin, LOW);
    }
}
```

```
digitalWrite(ledPin, HIGH);  
digitalWrite(buzzerPin, HIGH);  
} else {  
    // Soil wet - turn OFF pump  
    digitalWrite(relayPin, HIGH);  
    digitalWrite(ledPin, LOW);  
    digitalWrite(buzzerPin, LOW);  
}  
  
delay(500);  
}
```