Code for Aquari Smart

```
#include <ESP8266WiFi.h>
#include <Wire.h>
#include <Servo.h>
#include <OneWire.h>
#include <DallasTemperature.h>

// WiFi credentials
const char* ssid = "123456789";
const char* password = "123456789";

// Pin definitions
#define TURBIDITY_SENSOR A0
#define TEMP_SENSOR_PIN 4 // GPIO4 (D2 on NodeMCU)
#define SERVO_PIN 5 // GPIO5 (D1 on NodeMCU)
#define BUZZER_PIN 14 // GPIO14 (D5 on NodeMCU)

// Servo motor
Servo servo;

// Temperature sensor
OneWire oneWire(TEMP_SENSOR_PIN);
DallasTemperature tempSensor(&oneWire);

void setup() {
  // Initialize serial communication
  Serial.begin(115200);

  // Connect to WiFi
  WiFi.begin(ssid, password);
  Serial.println("Connecting to WiFi...");
```

```
  while (WiFi.status() != WL_CONNECTED) {
    delay(1000);
    Serial.println("Connecting to WiFi...");
  }
  Serial.println("Connected to WiFi");

  // Initialize servo
  servo.attach(SERVO_PIN);

  // Initialize temperature sensor
  tempSensor.begin();
}

void loop() {
  // Read turbidity sensor
  int turbidityValue = analogRead(TURBIDITY_SENSOR);

  // Read temperature sensor
  tempSensor.requestTemperatures();
  float temperatureValue = tempSensor.getTempCByIndex(0);

  // Check turbidity level
  if (turbidityValue > 500) {
    // Activate buzzer
    digitalWrite(BUZZER_PIN, HIGH);
    Serial.println("Water is cloudy!");
  } else {
    digitalWrite(BUZZER_PIN, LOW);
  }

  // Check temperature
```

```
  if (temperatureValue < 25) {
    // If temperature is too low, activate heater (not implemented)
    Serial.println("Temperature is too low!");
  }

  // Perform feeding action every 24 hours
  static unsigned long lastFeedingTime = 0;
  unsigned long currentTime = millis();
  if (currentTime - lastFeedingTime >= 86400000) { // 24 hours in milliseconds
    feedFish();
    lastFeedingTime = currentTime;
  }

  delay(1000);
}

void feedFish() {
  // Move servo motor to dispense food
  servo.write(90);
  delay(1000);
  servo.write(0); // Return servo to initial position
}
```