# ENVIRONMENTAL MONITORING USING IOT

**PHASE 5 PROJECT DOCUMENT**

**TITLE: C PROGRAMMING CODE FOR ENVIRONMENTAL MONITORING USING IOT TO CHECK TEMPERATURE AND HUMIDITY LEVEL**

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**Creating an entire C language code for an environmental monitoring project using IoT involves a substantial amount of code and considerations. Here's a simple outline to get you started:**

**C programming code for environmental monitoring using IOT**

**#include<stdio.h>**

**#include<stdlib.h>**

**#include<stdint.h>**

**#include<string.h>**

**#include<time.h>**

**#include<unistd.h>**

**// Define sensor pins or addresses**

**#define TEMPERATURE\_SENSOR\_PIN A0**

**#define HUMIDITY\_SENSOR\_PIN A1**

**// Function to read temperature from sensor**

**Float readtemperature()**

**{**

**// Implement code to read temperature from sensor**

**}**

**// Function to read humidity from sensor**

**Float readhumidity()**

**{**

**// Implement code to read humidity from sensor**

**}**

**// Function to send data to IOT device**

**Void senddatatoIOT(float temperature, float humidity) {**

**// Implement code to send data to IOT device (e.g., using MQTT or HTTP)**

**}**

**intmain()**

**{**

**// Initialize IOT connection (e.g., connect to Wi-Fi or cellular network)**

**While (1) {**

**// Read environmental data**

**Float temperature = readtemperature();**

**Float humidity = readhumidity();**

**// Print data to console (optional)**

**printf(“Temperature: %.2f °C, Humidity: %.2f%%\n”, temperature, humidity);**

**// Send data to IOT device**

**senddatatoiot(temperature, humidity);**

**// Wait for a specified interval (e.g., 1 minute)**

**Sleep(60);**

**}**

**Return 0;**

**}**

**This is a basic template, and you would need to fill in the details for reading sensor data and sending it to your specific IoT device. Make sure to include the necessary libraries for your sensors and IoT communication in your project.**

**Also, remember to handle errors, implement security measures, and consider power-saving strategies, depending on the requirements of your IoT project.**

**To create a C language code for environmental monitoring to find temperature, humidity using IOT**

**Creating a complete C code for an environmental monitoring project involves a bit more detail, and it greatly depends on the specific hardware and IoT platform you’re using. Below is a simplified example using hypothetical functions for reading temperature and humidity, as well as sending data to an imaginary IoT platform.**

**#include<stdio.h>**

**#include<stdlib.h>**

**#include<stdint.h>**

**#include<unistd.h>**

**// Function to read temperature from sensor**

**Float readtemperature()**

**{**

**// Implement code to read temperature from your sensor**

**// For example, you might use a temperature sensor library or interact with a hardware interface**

**// Replace the following line with your actual sensor reading code**

**Return 25.5;**

**}**

**// Function to read humidity from sensor**

**Float readhumidity()**

**{**

**// Implement code to read humidity from your sensor**

**// Replace the following line with your actual sensor reading code**

**Return 60.0;**

**}**

**// Function to send data to IoT platform**

**THANKYOU**