A circuit board

Description automatically generated

**Environmental Monitoring System**

## **Hosting Your PHP Application and MySQL Database**

**AAA Team | IOT Project | 17/11/2019  
  
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**Introduction**

In this time world is suffering from pollution coming from the factors. The industrial pollution effects the natural environment, atmosphere and human. The project will provide a monitoring system for pollution coming from the factory chimney. An example of industries which will use this project, chemical industries, making Paper industries, Treatment of Water industries and Manufacturing of Sugar. The main goals of the project is to monitoring the parameters which causing pollution and trying to reduce that effect to the environment.  
The three parameters which will be monitoring by the project are CO sensor, Humidity sensor and temperature sensor. The system functions are sending parameters (CO, Temperature, and Humidity) to a website, the system immediately will display the values by using LCD.  
  
**Abstract**

Environment monitoring system in industrial area is system to monitor the pollution coming from the factory chimney and uses Wi-Fi to transfer the data to website. The main objective of the project is to monitor the pollution which comes from factories to protect the environment. It uses monitor the temperature and display on LCD, the values of humidity is displayed on LCD. A wireless System is used to Transfer these data (temperature and humidity) to remote monitoring station.  
  
**How it works**

The microcontroller ( NodeMCU ) takes the values of parameters (CO, Humidity and temperature ) from the sensors ( DHT 11 and MQ -9 ) and sends the data by the connection between ESP 8266 and access point to our domain (aaa-envmon.000webhost.com) as HTTP post request . then php backend code takes the data and stores it in MySQL data base. Website retrieves the data from the data base and display it to the user in a table and chart. **A close up of a device

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Hardware Prototype

**.Source of Pollution:  
  
  
A picture containing floor, indoor, wall, sitting

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. Sensor DHT 11:  
  
A circuit board

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# **. NodMcu : A circuit board Description automatically generatedA circuit board Description automatically generatedA circuit board Description automatically generated**

# **Website Stage** Control Panel of Server A screenshot of a social media post Description automatically generated

Creating a SQL table  
  
A screenshot of a social media post

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A screenshot of a cell phone

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CREATE TABLE SensorData (

id INT(6) UNSIGNED AUTO\_INCREMENT PRIMARY KEY,

sensor VARCHAR(30) NOT NULL,

location VARCHAR(30) NOT NULL,

Temperature VARCHAR(10),

Humidity VARCHAR(10),

reading\_time TIMESTAMP DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP

)

# **A screenshot of a social media post Description automatically generated**

<?php

$servername = "localhost";

// REPLACE with your Database name

$dbname = "esp\_database";

// REPLACE with Database user

$username = "esp\_board";

// REPLACE with Database user password

$password = "AAA123";

// Keep this API Key value to be compatible with the ESP32 code provided in the project page.

// If you change this value, the ESP32 sketch needs to match

$api\_key\_value = "tPmAT5Ab3j7F9";

$api\_key= $sensor = $location = $Temperature = $Humidity = "";

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

    $api\_key = test\_input($\_POST["api\_key"]);

    if($api\_key == $api\_key\_value) {

        $sensor = test\_input($\_POST["sensor"]);

        $location = test\_input($\_POST["location"]);

        $Temperature = test\_input($\_POST["Temperature"]);

        $Humidity = test\_input($\_POST["Humidity"]);

        // Create connection

        $conn = new mysqli($servername, $username, $password, $dbname);

      // Check connection

        if ($conn->connect\_error) {

            die("Connection failed: " . $conn->connect\_error);

        }

        $sql = "INSERT INTO SensorData (sensor, location, Temperature, Humidity)

        VALUES ('" . $sensor . "', '" . $location . "', '" . $Temperature . "', '" . $Humidity . "')";

        if ($conn->query($sql) === TRUE) {

            echo "New record created successfully";

        }

        else {

            echo "Error: " . $sql . "<br>" . $conn->error;

        }

        $conn->close();

    }

    else {

        echo "Wrong API Key provided.";

    }

}

else {

    echo "No data posted with HTTP POST.";

}

function test\_input($data) {

    $data = trim($data);

    $data = stripslashes($data);

    $data = htmlspecialchars($data);

    return $data;

}

# 

# 

# **hosting A screenshot of a cell phone Description automatically generated**

**.IDEs**  
**1. Visual Studio Code   
2. Xampp   
3. 000Webhost.com**

**4. Infinity Free  
5. Eagle PCB Disgn Software  
6. Arduino IDE**

**Skills**

**\* Languages :**

**1. HTML   
2. PHP**

**3. C  
4. CSS  
5. Java Script  
6. Python  
  
\* Technical:  
  
1. PCB Creation  
2. Arduino Programming   
3. Office Skills**

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