IOT BASED WEATHER AND TEMPERATURE BOARDCASTING SYSTEM.

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ABSTRACT:

IOT (Internet Of Things) is an essential part of the modern world. IOT can be use for monitoring and broadcasting the weather conditions of the particular place. This system connects throughout the entire world. We can connect the system by WIFI network. This solution helps to make the information visible through cloud. This device basically displays the temperature, pressure, humidity, light intensity, rain value etc…The data that are placed in the cloud will be displayed in the LED panel present in our kit. The system proposed is an advanced solution for monitoring the weather conditions at a particular place and make information visible anywhere in the world. The technology behind this is IOT (Internet of things), which is an advanced and efficient solution for connecting the things to the internet and to connect the entire world of things in a network. Here we connect our system with local WIFI. Through the WIFI our system will get weather data from cloud.

Keywords*:*

Internet of Things; Wi-fi; Wireless; Sensors;

I. INTRODUCTION

The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

A thing in the internet of things can be a person with a heart monitor implant, a farm animal with a biochip

transponder, an automobile that has built-in sensors to alert the driver when tire pressure is low or any other natural or man-made object that can be assigned an IP address and is able to transfer data over a network

Increasingly, organizations in a variety of industries are using IoT to operate more efficiently, better understand customers to deliver enhanced customer service, improve decision-making and increase the value of the business.

II. Literature Survey

This paper considered two physical parameters for monitoring one is temperature and the second one is humidity. ARM 9 microcontrollers is used to process the data .And the LABVIEW software is used for simulation and analysis purpose. This paper considered two parameters one is temperature and the other is light detection. This paper aims to acquire the data from the sensors for monitoring purpose. The author focused only on data acquisition . This paper considered humidity and temperature for logging the data.

The logged data is transferred to the personal computer for analysis. The measured signals are compared with primary standard devices for calibration purpose . This paper focused to provide the weather information for formers. The temperature, humidity and wind speed parameters are transmitted using IEEE 802.4.15 .

This paper aims to regulate the soil mechanism using PIC16F877A microcontroller. The paper considered the temperature, humidity. The measured values are compared with the preset levels. Based on the error signal the water pumping motor is on and off by using relay.

III. SYSTEM ANALYSIS

1. EXISTING SYSTEM

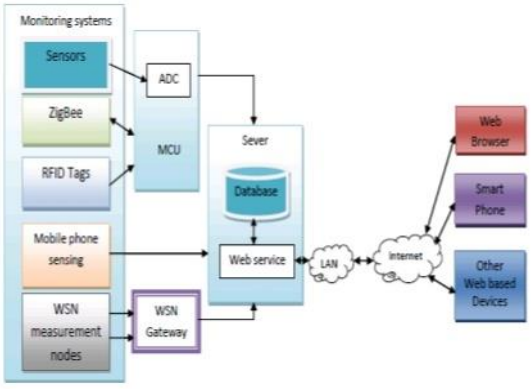

Figure 3.1 Existing System

The gateway acts as the network coordinator in charge of node authentication, message buffering where you can collect, process, analyze, and present your

measurement data. Wireless sensor network management model consists of end device, router, gateway node and management monitoring center. End device is responsible for collecting wireless sensor network data, and sending them to parent node, then data are sent to gateway node from parent node directly or by router. After receiving data from wireless sensor network, gateway node extracts data after analyzing and packaging them into Ethernet format data, sends them to the server. A server is an instance of a computer program that accepts and responds to requests made by another program; known as a client.

2. PROPOSED SYSTEM

The proposed Embedded device is for monitoring Temperature, Humidity, Pressure, light intensity, sound intensity levels and CO levels in the atmosphere to make the environment intelligent or interactive with the objects through wireless communication. The proposed model is which is more adaptable and distributive in nature to monitor the environmental parameters.

IV. SYSTEM DESIGN

The implemented system consists of a microcontroller (LPC2148) as a main processing unit for the entire system and all the sensor and devices can be connected with the microcontroller. The sensors can be operated by the microcontroller to retrieve the data from them and it processes the analysis with the sensor data and updates it to the internet through Wi-FiThe implemented system consists of a microcontroller (LPC2148) as a main processing unit for the entire system and all the sensor and devices can be connected with the microcontroller.

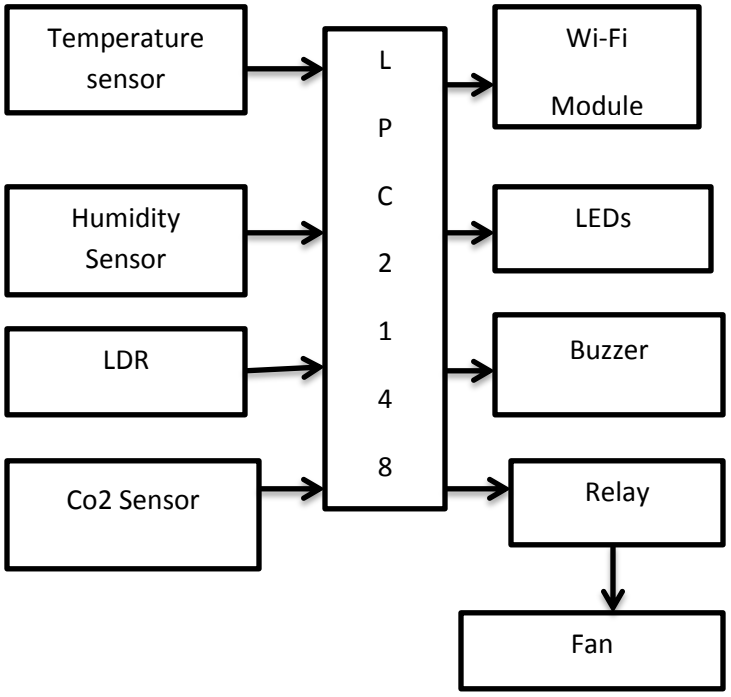

Fig 4.1 Architecture

V. REQUIREMENT ANALYSIS

With more than 10 programmable electronic modules, Codey can be programmed to perform a wide range of fun effects and functions. Codey is an entry-level coding robot

for STEM education, The combination of easy-to-use robotics hardware with graphical programming gives all the opportunity to take their first steps into the world of code and at the same time as they explore their creativity.

- IR transmitter and receiver
- Light sensor
- Voice Sensor
- RGB status indicator
- Gear knob

VI. EXPERIMENTAL RESULTS

Sensors enable the Internet of Things (IoT) by collecting the data for smarter decisions. Learn how TE Connectivity (Sensors enable the Internet of Things (IoT) by collecting the data for smarter decisions. Learn how TE Connectivity (TE) sensors are used in applications including consumer devices, Industry 4.0, and medical applications including remote patient monitoring.TE)

As the Internet of Things (IoT) industry grows, so do the opportunities to utilize sensors. At TE Connectivity (TE), our sensors are utilized in various applications in miniaturized packages, multi-sensor modules, ultra-low power designs, and packages for harsh environments. Reliable, accurate sensors create a foundation for engineers to understand the various properties in applications from motor bearings to patients under home care. Learn more about the sensor technologies available from TE and how they are being used in industrial, personal, and medical applications.

VII. CONCLUSION:

The research and implementation of a system for monitoring the environmental parameters using IoT scenario is accomplished. The system provides a low power solution for establishing a weather station.

The system is tested in an indoor environment and it is successfully updated the weather conditions from sensor data. It is also a less expensive solution due to usage of low power wireless sensors and SoC contained Wi-Fi module.

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