ABSTRACT

In the era of rapid technological advancement, the Internet of Things (IoT) has become an increasingly popular solution for acquiring and utilizing data effectively. One application that supports comfort and efficiency in indoor environments is an IoT-based temperature and humidity monitoring system. Temperature and humidity monitoring in a room is based on a gadget with the Blynk application. The current system is created using NodeMcu, which utilizes a microcontroller to process data and connect hardware devices to the gadget via Wifi. Implementation on the board connected to a 5-volt power adapter inserts the system through the V pin and ground on NodeMcu. The DHT11 sensor will operate, sending data through NodeMcu, which is then displayed on a smartphone. The information can also be viewed on an LCD 16X2. The successful creation of an automated system for temperature and humidity is connected to a fan. The system functions by sending temperature and humidity sensor data to Blynk and creating a temperature measurement system for the room. The room's temperature and humidity automation system successfully connects to a fan. The system can send and monitor data through Blynk and the LCD 16X2. It can measure temperature and humidity in both open and closed rooms. For room air temperature with an open door, it ranges from 27C to 30C, and in the living room with a closed door, it ranges from 28C to 30C.

Keyword : Temperature, Humidity, Internet of things, monitoring, NodeMcu.