

USER INTERFACE CREATION

Date	10 November 2022
Team ID	PNT2022TMID06832
Project Name	Industry-Specific Intelligent Fire Management System

WOWKI PLATFORM:

The screenshot displays the WOKWI web-based development environment. The top navigation bar includes links for 'GAME', 'SHARE', and 'sketch.ino'. The main interface is divided into two primary sections: a code editor on the left and a simulation window on the right.

Code Editor: The editor shows a C++ sketch for an ESP32 microcontroller. The code includes headers for `WiFi.h`, `PubSubClient.h`, and `DHTesp.h`. It defines a `WiFiClient` and a `PubSubClient` for connecting to an MQTT broker at `iot-2/cnd/test/fmt/string`. The `setup` function initializes the serial port and the DHT sensor. The `loop` function reads temperature and humidity data from the DHT sensor and publishes it to the MQTT broker. The code also includes logic for detecting fire (based on temperature) and gas leakage (based on humidity).

Simulation Window: The simulation window shows a visual representation of the ESP32 board and its connections. Below the board, a text area displays the simulation output, which includes the following information:

- Connecting to.....
- WiFi CONNECTED
- IP address: 10.10.0.2
- Reconnecting to jescj.messaging.internetofthings.ibmcloud.com
- iot-2/cnd/test/fmt/string
- subscribe to cmd ok
- Temperature: 66.10°C
- Humidity: 6.0%
-
- Sending payload: {"temp":66.10,"ALERT!!":"temperature greater than 38"}
- publish ok
- Flame Status : Fire is Detected
- Sending payload: {"hum":6.00,"ALERT!!":"humidity less than 30"}
- publish ok
- Gas Status : Gas leakage Detected
- Sprinkler status : working
- Exhaust fan Status : working

IBM CLOUD:

The screenshot shows the IBM Watson IoT Platform dashboard. The browser address bar indicates the URL: `jescoj.internetofthings.ibmcloud.com/dashboard/devices/browse`. The user is logged in as `purni1812@gmail.com` with ID `jescoj`.

The dashboard has a sidebar with navigation icons and a top navigation bar with tabs: **Browse**, **Action**, **Device Types**, and **Interfaces**. An **Add Device** button is located in the top right corner.

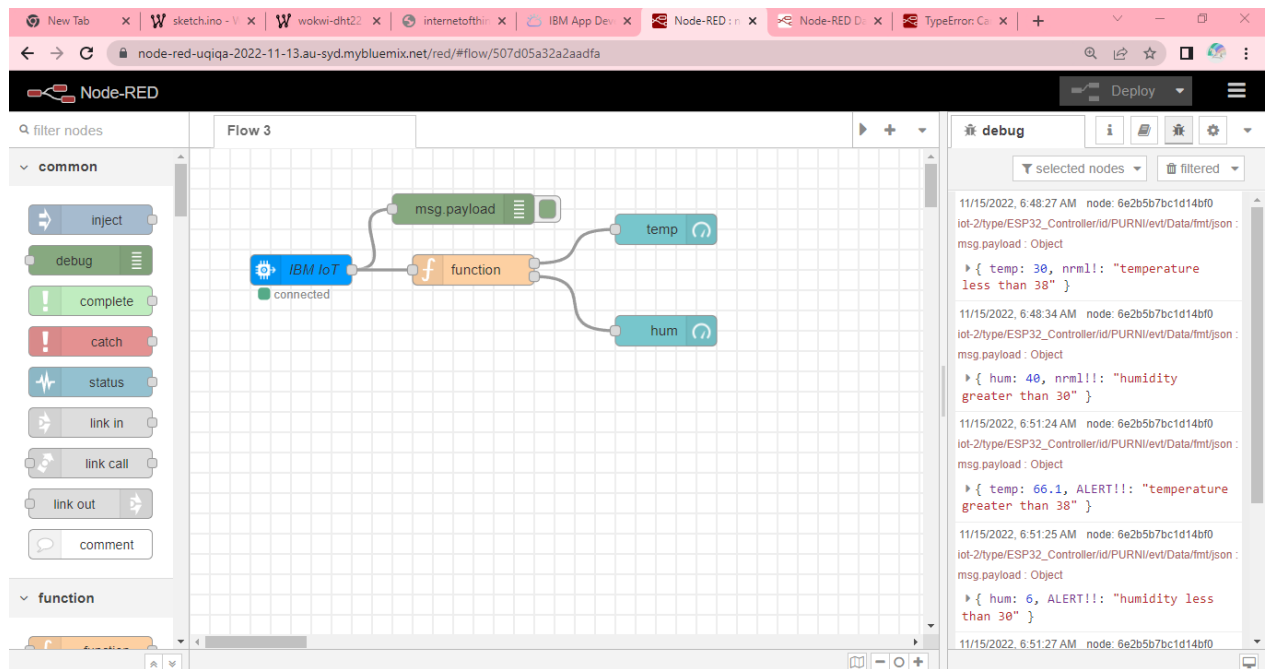
The main content area displays a list of devices. The device **PURNI** is selected and highlighted in blue. Below the device list, a detailed view for **PURNI** is shown, including tabs for **Identity**, **Device Information**, **Recent Events**, **State**, and **Logs**. The **Recent Events** tab is active, showing a live stream of data.

The **Recent Events** table lists the following data:

Event	Value	Format	Last Received
Data	<code>{"hum":6,"ALERT!":{"humidity less than 30"}}</code>	json	a few seconds ago
Data	<code>{"temp":66.1,"ALERT!":{"temperature greater tha...</code>	json	a few seconds ago

At the bottom of the dashboard, there is a pagination bar showing **Items per page 50** and **1-4 of 4 items**. The page number **1 of 1 page** is also displayed.

NODE RED:



USER INTERFACE:

