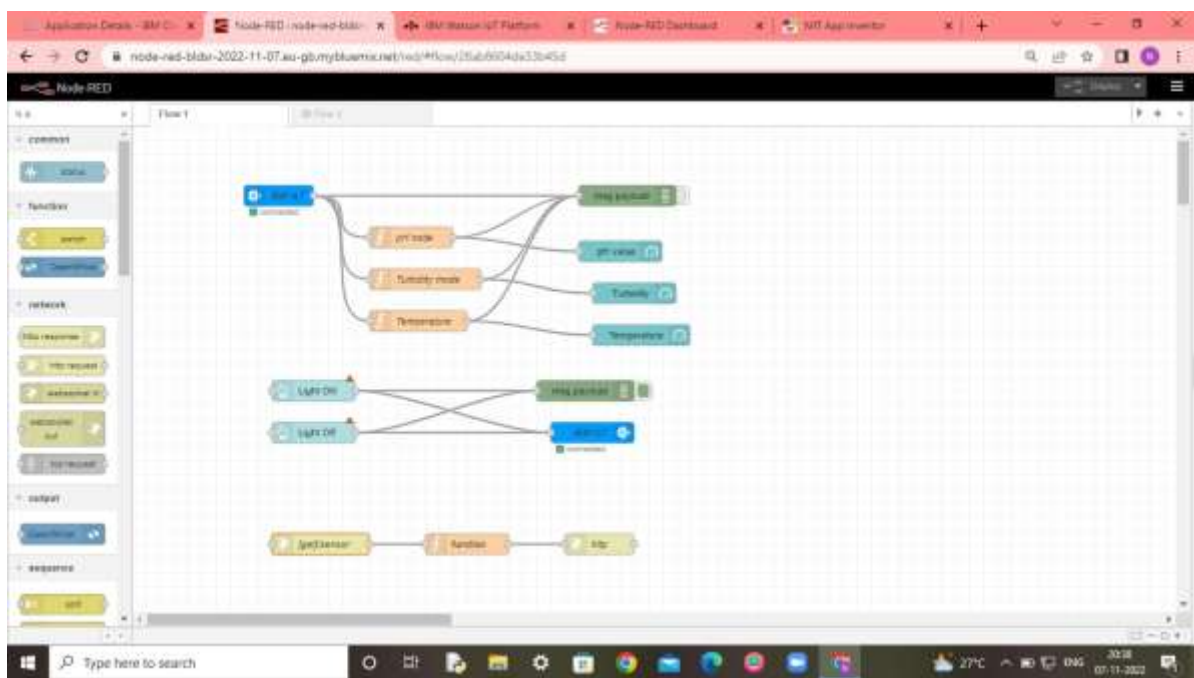


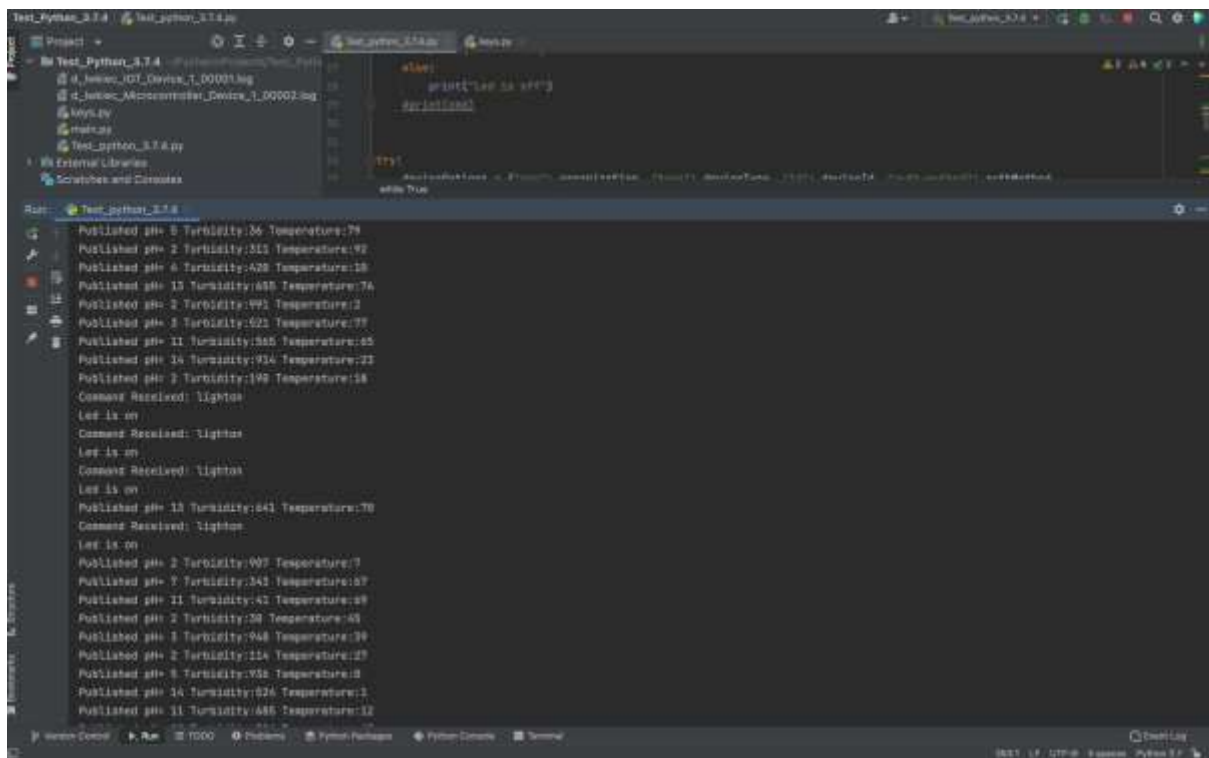
## WEB UI – TO MAKE USER TO INTERACT WITH THE SOFTWARE



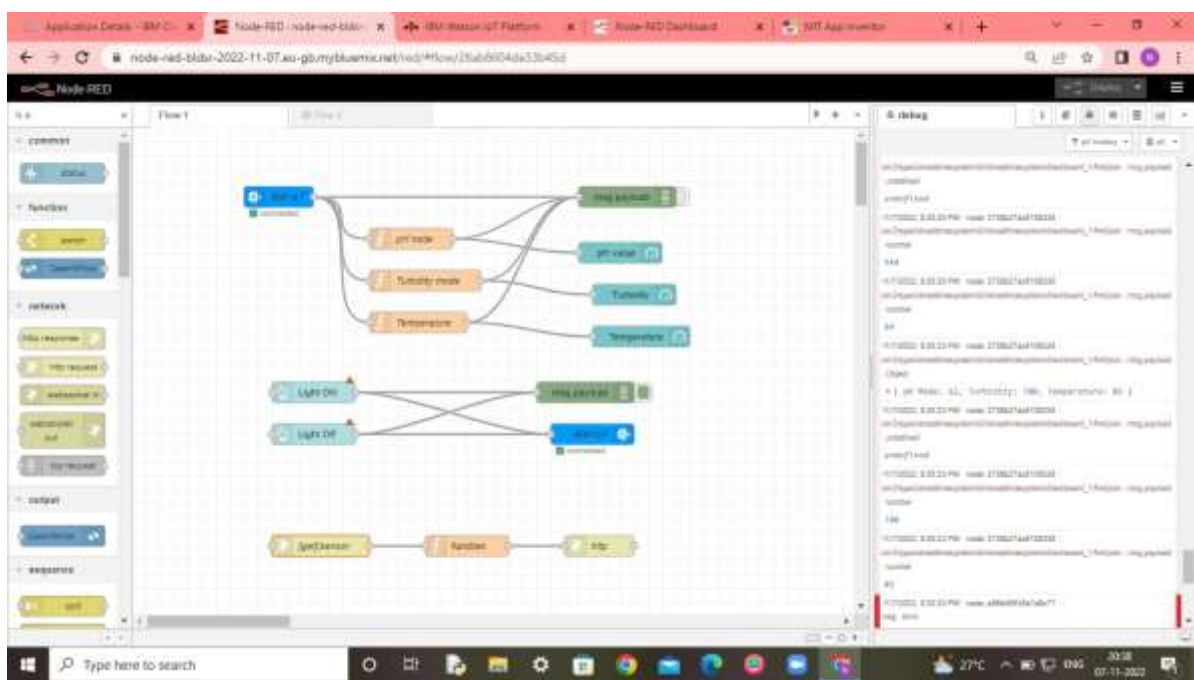
**FIGURE-1: WEB UI CREATED USING NODE RED DASHBOARD**



**FIGURE2: WHEN THE LIGHTON BUTTON IS PRESSED**



**FIGURE3: PYCHARM SOFTWARE OUTPUT CONSOLE WHEN LIGHT ON BUTTON ON WEB UI IS PRESSED**



**FIGURE4: WHEN LIGHTOFF BUTTON IS PRESSED ON THE WEB UI**

The screenshot displays the PyCharm IDE interface. The top pane shows a Python script with a while loop that prints "Led is off" and a try block for MQTT communication. The bottom pane, titled "Test\_python\_3.7.4", shows the output of the script. The output consists of multiple lines of sensor data (pH, Turbidity, Temperature) and MQTT messages. The messages include "Published pH: 8 Turbidity: 699 Temperature: 68", "Published pH: 11 Turbidity: 344 Temperature: 70", "Published pH: 10 Turbidity: 629 Temperature: 93", "Published pH: 8 Turbidity: 75 Temperature: 79", "Command Received: Lightoff", "Led is off", "Command Received: Lightoff", "Led is off", "Command Received: Lightoff", "Led is off", "Published pH: 11 Turbidity: 517 Temperature: 28", "Published pH: 1 Turbidity: 561 Temperature: 38", "Published pH: 9 Turbidity: 687 Temperature: 34", "Published pH: 11 Turbidity: 884 Temperature: 51", "Published pH: 1 Turbidity: 719 Temperature: 56", "Published pH: 14 Turbidity: 689 Temperature: 68", "Published pH: 9 Turbidity: 79 Temperature: 75", "Published pH: 11 Turbidity: 588 Temperature: 76", "Command Received: Lightoff", "Led is off", "Command Received: Lightoff", "Led is off", "Published pH: 1 Turbidity: 386 Temperature: 11", "Published pH: 8 Turbidity: 837 Temperature: 72", "Published pH: 11 Turbidity: 389 Temperature: 61", "Published pH: 7 Turbidity: 884 Temperature: 11", "Published pH: 8 Turbidity: 668 Temperature: 28".

```
Test_python_3.7.4 - Test_python_3.7.4.py
Project: Test_python_3.7.4
- Test_python_3.7.4
  - __init__.py
  - __main__.py
  - Test_python_3.7.4.py
  - External Libraries
  - Packages and Consoles
Run: Test_python_3.7.4
Published pH: 8 Turbidity: 699 Temperature: 68
Published pH: 11 Turbidity: 344 Temperature: 70
Published pH: 10 Turbidity: 629 Temperature: 93
Published pH: 8 Turbidity: 75 Temperature: 79
Command Received: Lightoff
Led is off
Command Received: Lightoff
Led is off
Command Received: Lightoff
Led is off
Published pH: 11 Turbidity: 517 Temperature: 28
Published pH: 1 Turbidity: 561 Temperature: 38
Published pH: 9 Turbidity: 687 Temperature: 34
Published pH: 11 Turbidity: 884 Temperature: 51
Published pH: 1 Turbidity: 719 Temperature: 56
Published pH: 14 Turbidity: 689 Temperature: 68
Published pH: 9 Turbidity: 79 Temperature: 75
Published pH: 11 Turbidity: 588 Temperature: 76
Command Received: Lightoff
Led is off
Command Received: Lightoff
Led is off
Published pH: 1 Turbidity: 386 Temperature: 11
Published pH: 8 Turbidity: 837 Temperature: 72
Published pH: 11 Turbidity: 389 Temperature: 61
Published pH: 7 Turbidity: 884 Temperature: 11
Published pH: 8 Turbidity: 668 Temperature: 28
```

**FIGURE 5: PYCHARM SOFTWARE OUTPUT CONSOLE WHEN LIGHT OFF BUTTON ON WEB UI IS PRESSED**