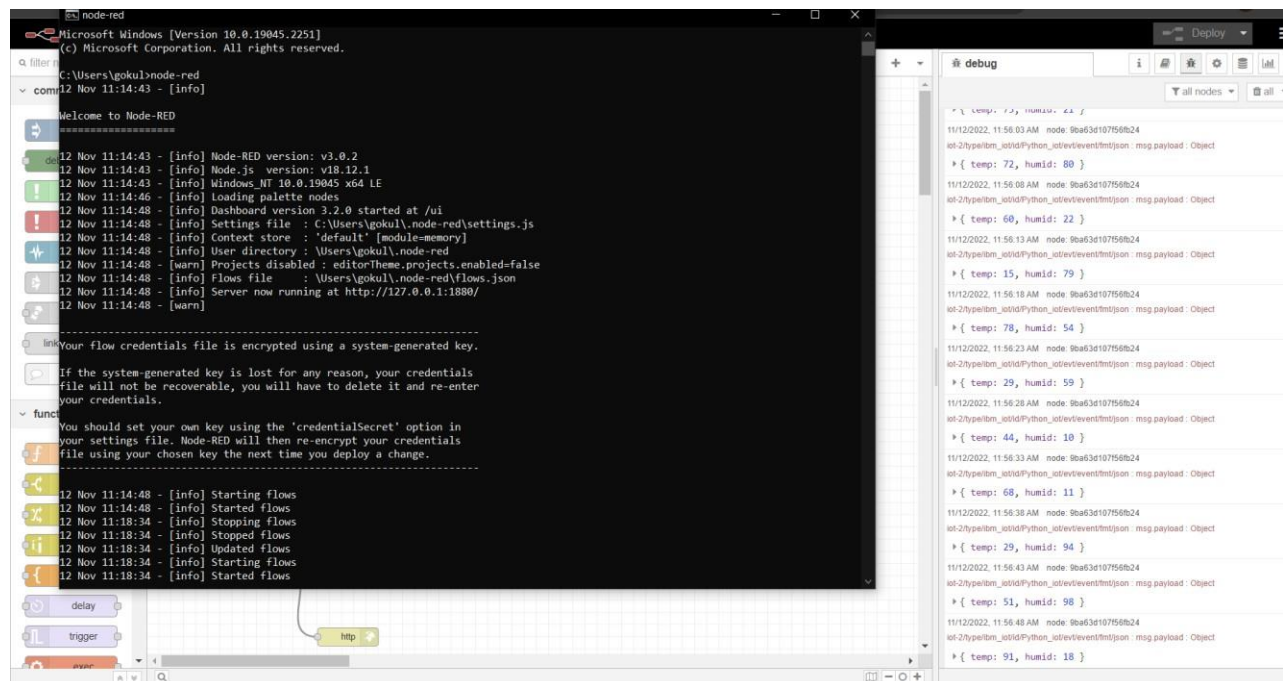
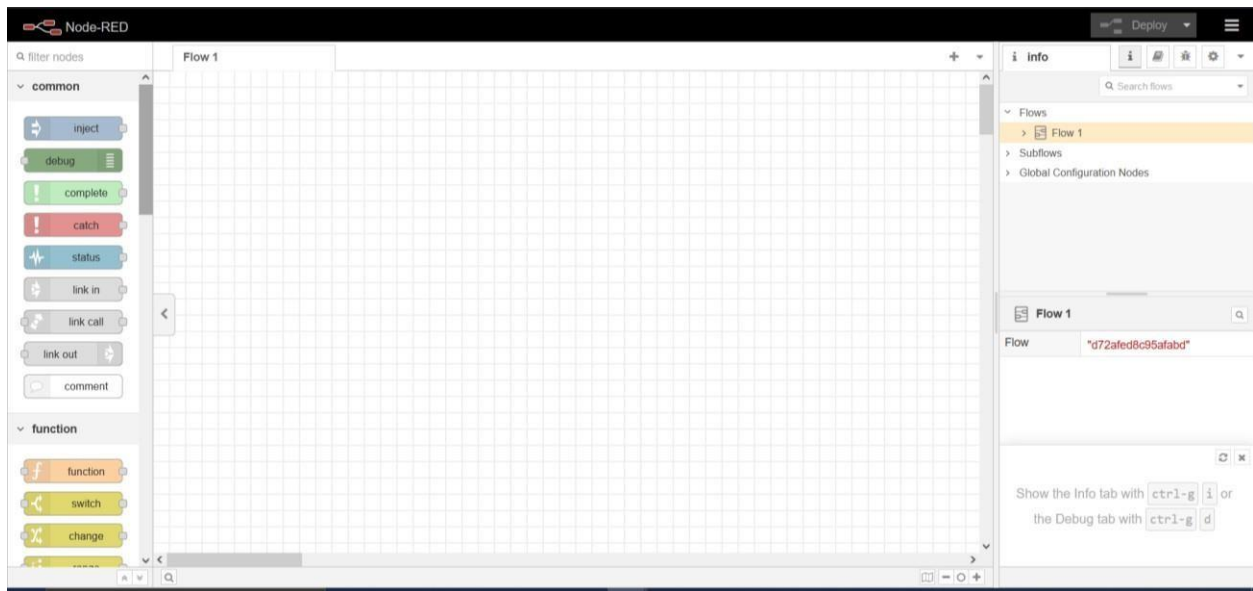


## CREATION OF NODE-RED

Date	13 November 2022
Team ID	PNT2022TMID03570
Project Name	Real – time River Water Quality Monitoring and Control System
Maximum Marks	4 Marks

Our task to create node-red is successfully done. A screenshot of this node-red screen is attached below:



The screenshot shows the Visual Studio Code editor with a Python file named `ibm.py`. The script is designed to connect to IBM Watson IoT and publish sensor data. It includes a `deviceCli.connect()` call, a `while True` loop that generates random pH and turbidity values, and a `myOnPublishCallback` function that prints the data. The terminal window at the bottom displays the output of the script, showing multiple "Data publish" messages with random temperature and humidity values being sent to IBM Watson.

```
Python > ibm.py >
32 deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod,
33                 "auth-token": authToken}
34 deviceCli = ibmiotf.device.Client(deviceOptions)
35 # .....
36
37 except Exception as e:
38     print("caught exception connecting device: %s" % str(e))
39     sys.exit()
40
41 deviceCli.connect()
42
43 while True:
44     pH = random.randint(0,100)
45     turbidity = random.randint(0,100)
46     # Send Temperature & Humidity to IBM Watson
47     data = {'temp':pH, 'humid':turbidity} #output
48
49
50 # print data
51 def myOnPublishCallback():
52     print("Data publish ",data, "to IBM Watson")
53
54
55 success = deviceCli.publishEvent("event", "json", data, 0, myOnPublishCallback)
56 if not success:
57     print("Not connected to IoTF")
58     time.sleep(5)
```

OUTPUT

```
Data publish {'temp': 60, 'humid': 24} to IBM Watson
Data publish {'temp': 83, 'humid': 94} to IBM Watson
Data publish {'temp': 0, 'humid': 33} to IBM Watson
Data publish {'temp': 22, 'humid': 3} to IBM Watson
Data publish {'temp': 12, 'humid': 91} to IBM Watson
Data publish {'temp': 60, 'humid': 85} to IBM Watson
Data publish {'temp': 22, 'humid': 2} to IBM Watson
Data publish {'temp': 71, 'humid': 46} to IBM Watson
Data publish {'temp': 2, 'humid': 76} to IBM Watson
Data publish {'temp': 72, 'humid': 60} to IBM Watson
```

