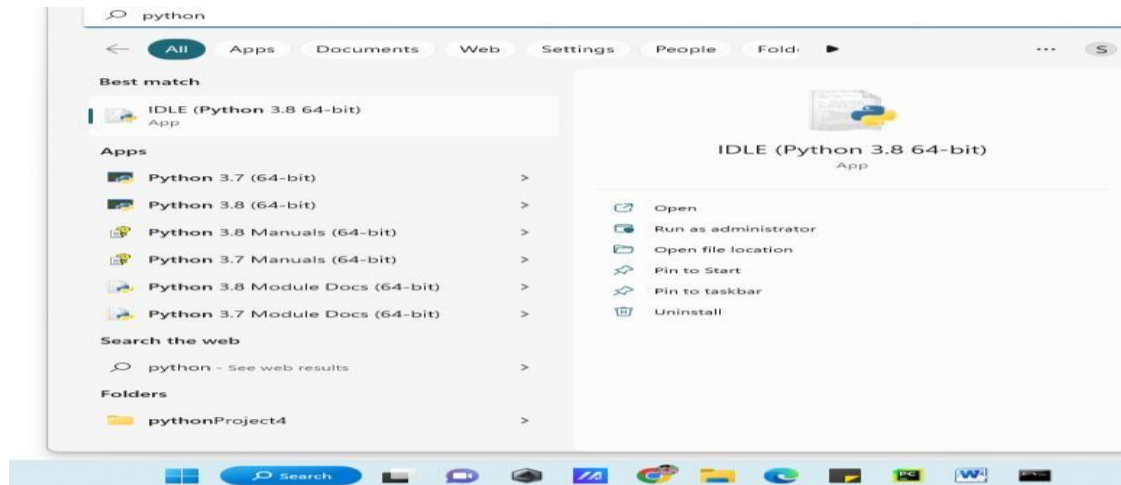


Real-Time River Water Quality Monitoring and Control Systems

- **Install the Python IDE**
- **python libraries:**
- **Install Watson IoT Python SDK to connect to IBM Watson IoT Platform using python code:**
- **give the following command in command prompt: pip install wiotp-sdk**
- **Create a fast SMS service for sending the messages and getting the API**

Date	29/10/2022
Team ID	PNT2022TMID17403
Project Name	Real-Time Water Quality Monitoring And Control System

Python INSTALL & LOGIN:



PYTHON OUTPUT:

The image shows a screenshot of a Python IDE (likely VS Code) with a file named `main.py` open. The script is designed to connect to an IBM Watson IoT device and send sensor data. The code includes comments for replacing placeholder values with actual credentials and device information.

```
1 import random
2 import time
3 import sys
4 import ibmiotf.application
5 import ibmiotf.device
6
7 # Provide your IBM Watson Device Credentials
8 organization = "f5rl2v" # replace it with organization ID
9 deviceType = "weather_device" # replace it with device type
10 deviceId = "weather_today" # replace with device id
11 authMethod = "token"
12 authToken = "2VcVp0RG4rnxixGx" # replace with token
13
14 def myCommandCallback(cmd):
15     print("Command received: %s" % cmd.data)
16     if cmd.data['command'] == 'lighton':
17         print("LIGHT ON")
18     elif cmd.data['command'] == 'lightoff':
19         print("LIGHT OFF")
20
21 try:
22     deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token": authToken}
23     deviceCli = ibmiotf.device.Client(deviceOptions)
24     # .....
25 except Exception as e:
26     print("Caught exception connecting device: %s" % str(e))
27     sys.exit()
28
29 deviceCli.connect()
30 while True:
31     pH = random.randint(0,100)
32     conductivity = random.randint(0,100)
33     T = random.randint(0,100)
34     oxygen = random.randint(0,100)
35     turbidity = random.randint(0,100)
36     #Send Temperature & Humidity to IBM Watson
37     data = {"turbidity":turbidity,"temp":T,"ph":pH,"Salinity":conductivity,"oxygen":oxygen}
38
39     print(data)
```

The IDE interface shows the file explorer on the left with a project named `pythonProject1` containing files like `main.py`, `scratch_1.py`, `scratch_2.py`, and `scratch_3.py`. The bottom status bar indicates the Python version (3.8.10) and the current file (`main.py`).