Project Development Phase
Sprint – 4

Date	17 November 2022
Team ID	PNT2022TMID11546
Project Name	Hazardous Area Monitoring for Industrial Plant powered by IoT
Maximum Marks	

Task:

A mobile application for monitoring the Environment parameters around the region of an industry has been developed using MIT App Inventor.

Screens Information:

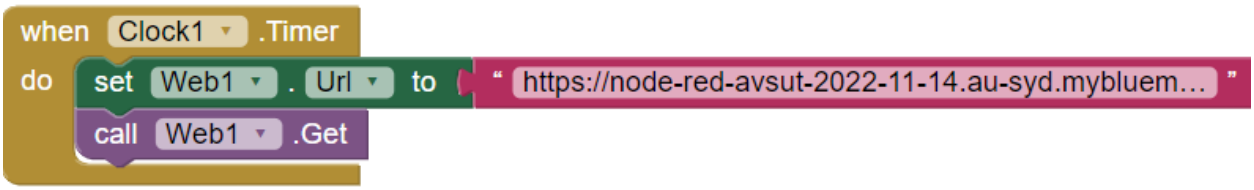
1. **Screen – 1:** It is the entry screen of the mobile application and will be displayed only for 2000 milli-seconds.

2. **Screen – 2:** It is the login page of the application. Each user has their own user id and password, which is known only to them. After validating the credential, the user can access the data captured by the placed device.

3. **Screen – 3:** Environmental parameters in the area of the industry like temperature is obtained via sensors and is sent to the mobile device.

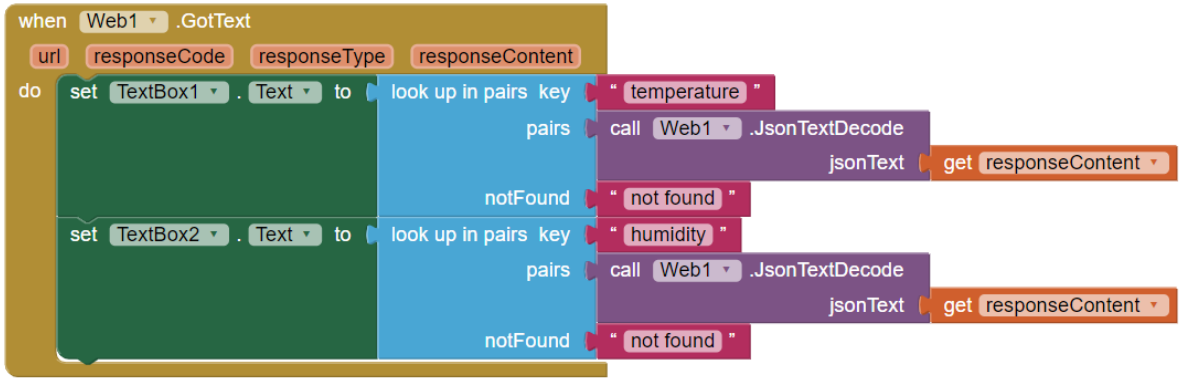
Screen 1:

Designer & Blocks



Screen 2:

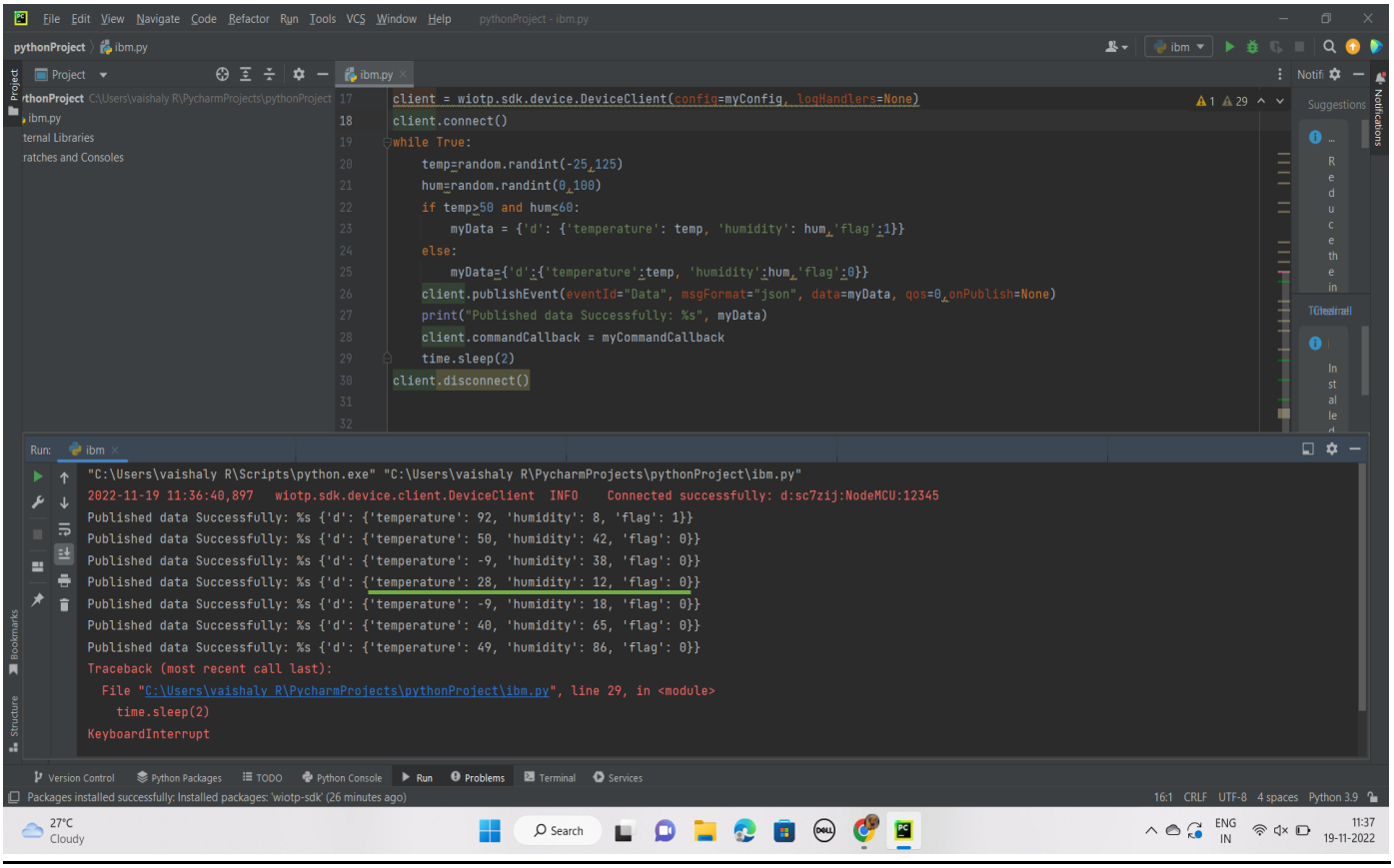
Designer & Blocks

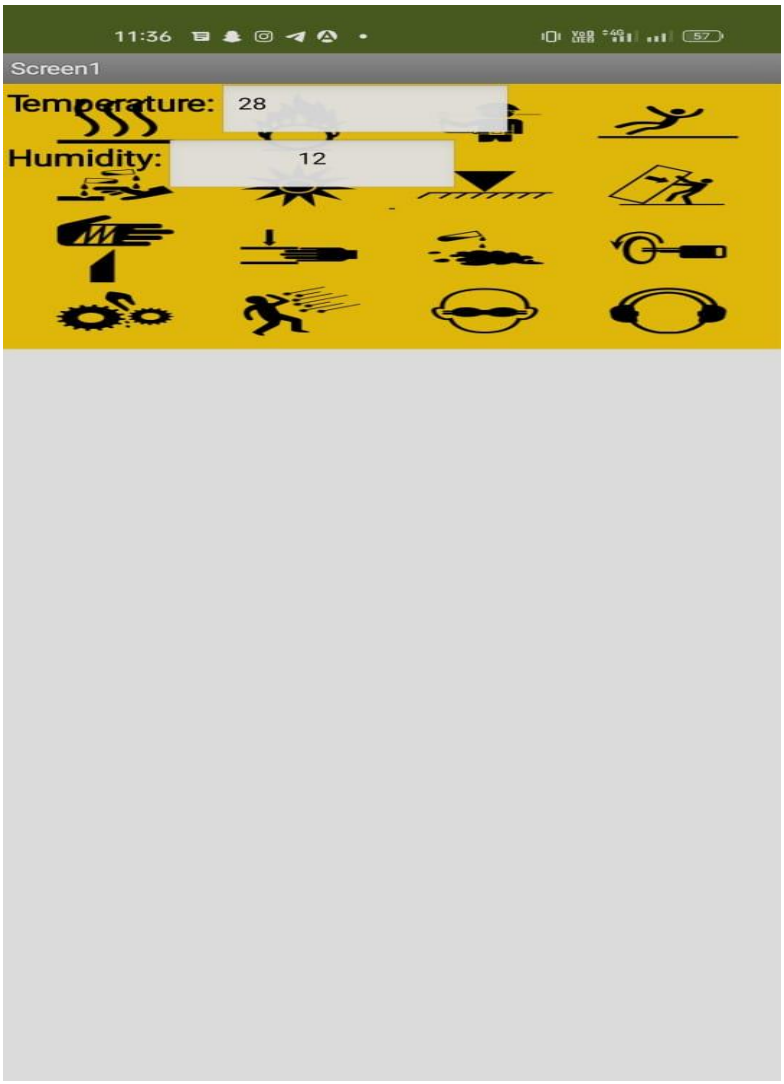


Screen 3:

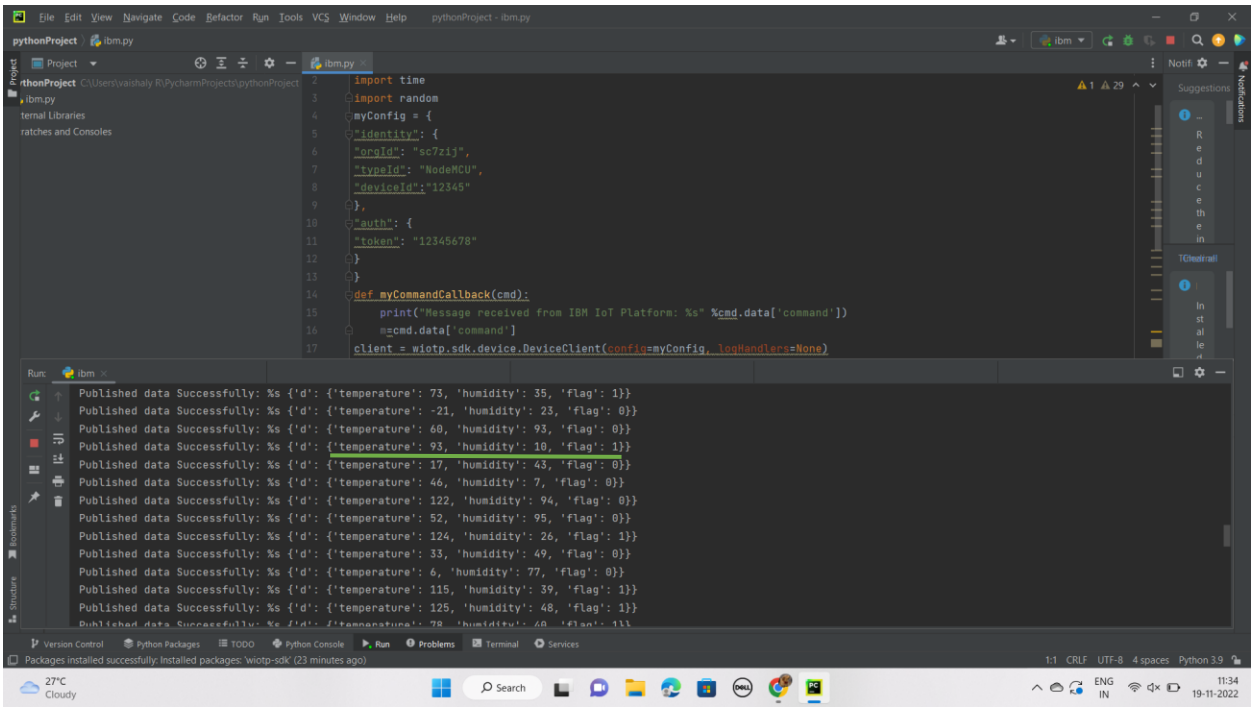
Designer & Blocks

Case 1 (When the temperature is within limit):





Case 2 (When temperature exceeds normal (50 C) value):


File Edit View Navigate Code Refactor Run Tools VCS Window Help
pythonProject - ibm.py
pythonProject
ibm.py
import time
import random
myConfig = {
"identity": {
"orgId": "sc7zij",
"typeId": "NodeMCU",
"deviceId":"12345"
},
"auth": {
"token": "12345678"
}
}
def myCommandCallback(cmd):
print("Message received from IBM IoT Platform: %s" %cmd.data['command'])
m=cmd.data['command']
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
Run:
ibm
Published data Successfully: %s {'d': {'temperature': 73, 'humidity': 35, 'flag': 1}}
Published data Successfully: %s {'d': {'temperature': -21, 'humidity': 23, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 60, 'humidity': 93, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 93, 'humidity': 10, 'flag': 1}}
Published data Successfully: %s {'d': {'temperature': 17, 'humidity': 43, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 46, 'humidity': 7, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 122, 'humidity': 94, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 52, 'humidity': 95, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 124, 'humidity': 26, 'flag': 1}}
Published data Successfully: %s {'d': {'temperature': 33, 'humidity': 49, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 6, 'humidity': 77, 'flag': 0}}
Published data Successfully: %s {'d': {'temperature': 115, 'humidity': 39, 'flag': 1}}
Published data Successfully: %s {'d': {'temperature': 125, 'humidity': 48, 'flag': 1}}
Version Control
Python Packages
TODO
Python Console
Run
Problems
Terminal
Services
Packages installed successfully: Installed packages: 'wiotp-sdk' (23 minutes ago)
1:1 CRLF UTF-8 4 spaces Python 3.9
27°C
Cloudy
Search
ENG
IN
11:34
19-11-2022


11:27
Screen1
Temperature:
93
Humidity:
10
FIRE DETECTED

Source code:

```
import wiotp.sdk.device
import time
import random
myConfig = {
"identity": {
"orgId": "sc7zij",
"typeId": "NodeMCU",
"deviceId":"12345"
},
"auth": {
"token": "12345678"
}
}
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" %cmd.data['command'])
    m=cmd.data['command']
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    temp=random.randint(-25,125)
    hum=random.randint(0,100)
    if temp>50 and hum<60:
        myData = {'d': {'temperature': temp, 'humidity': hum,'flag':1}}
    else:
        myData={'d':{'temperature':temp, 'humidity':hum,'flag':0}}
    client.publishEvent(eventId="Data", msgFormat="json", data=myData,
qos=0,onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

MIT app inventor project link