

SPRINT 4

Date	18 November 2022
Team ID	PNT2022TMID44065
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

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PYTHON SCRIPT :-

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

organization = "zxnybt"
deviceType = "dominators"
deviceId = "12345"
authMethod = "token"
authToken = "123456789"

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data)
    for key in cmd.data.keys():
        if key == 'motor':
            if cmd.data['motor'] == 'ON':
                print("MOTOR is turned ON")

            elif cmd.data['motor'] == 'OFF':
                print("MOTOR is turned OFF")
    try:
```

```
deviceOptions = {"org": organization, "type": deviceType, "id":  
deviceId, "auth-method": authMethod, "auth-token": authToken}  
deviceCli = ibmiotf.device.Client(deviceOptions)
```

```
except Exception as e:
```

```
    print("Caught exception connecting device: %s" % str(e))  
    sys.exit()
```

```
deviceCli.connect()
```

```
while True:
```

```
    temp=random.randint(0,40)  
    Humid=random.randint(0,100)  
    moist=random.randint(0,40)  
    data = { 'temperature' : temp, 'humidity': Humid, 'soil_moisture':moist  
}
```

```
    def myOnPublishCallback():  
        print ("Published Temperature = %s C" % temp, "Humidity = %s  
%%" % Humid, "soil moisture =%s" % moist,"to IBM Watson")
```

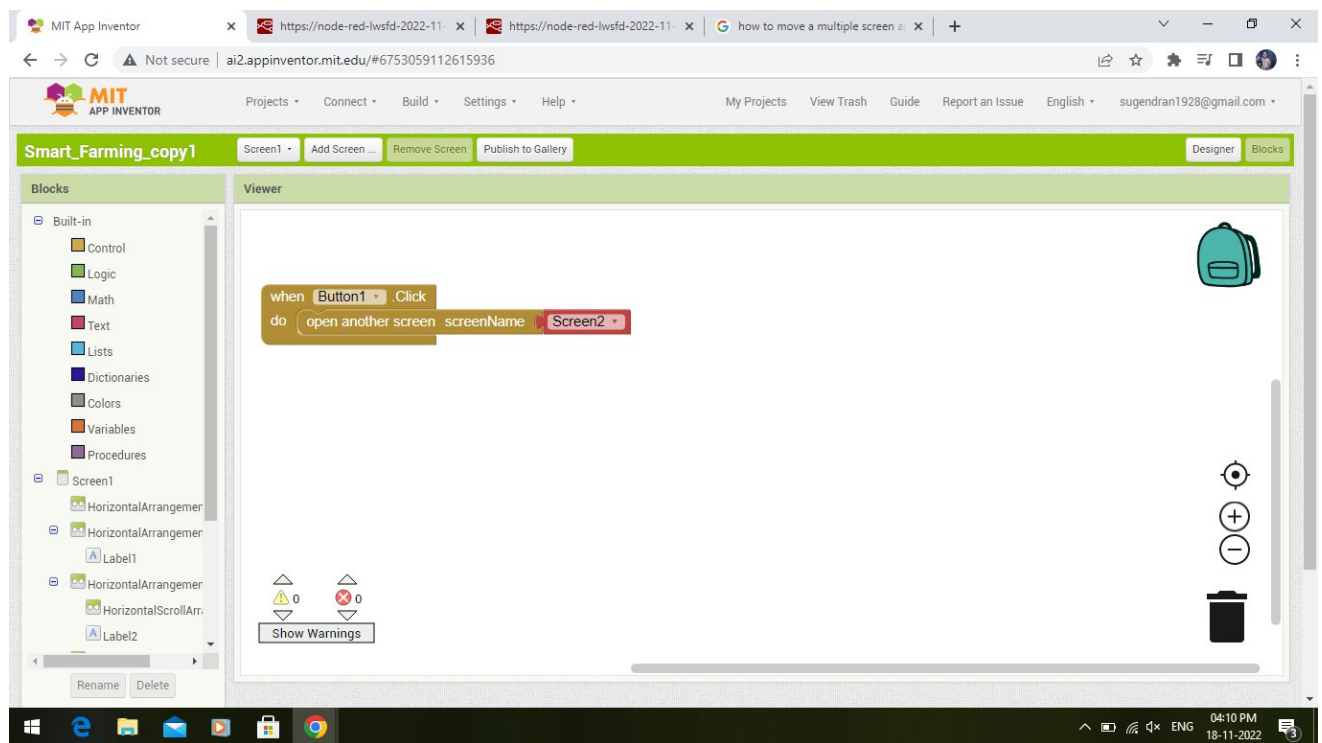
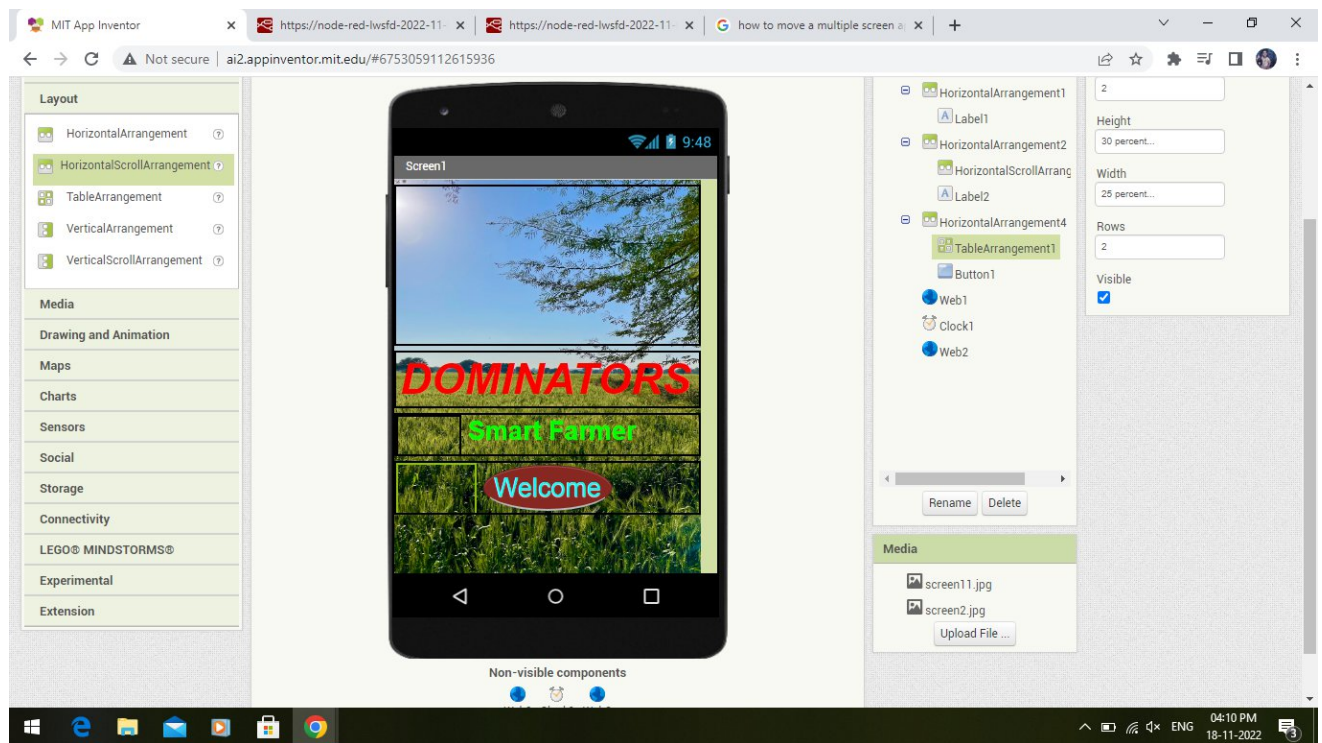
```
    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,  
on_publish=myOnPublishCallback)
```

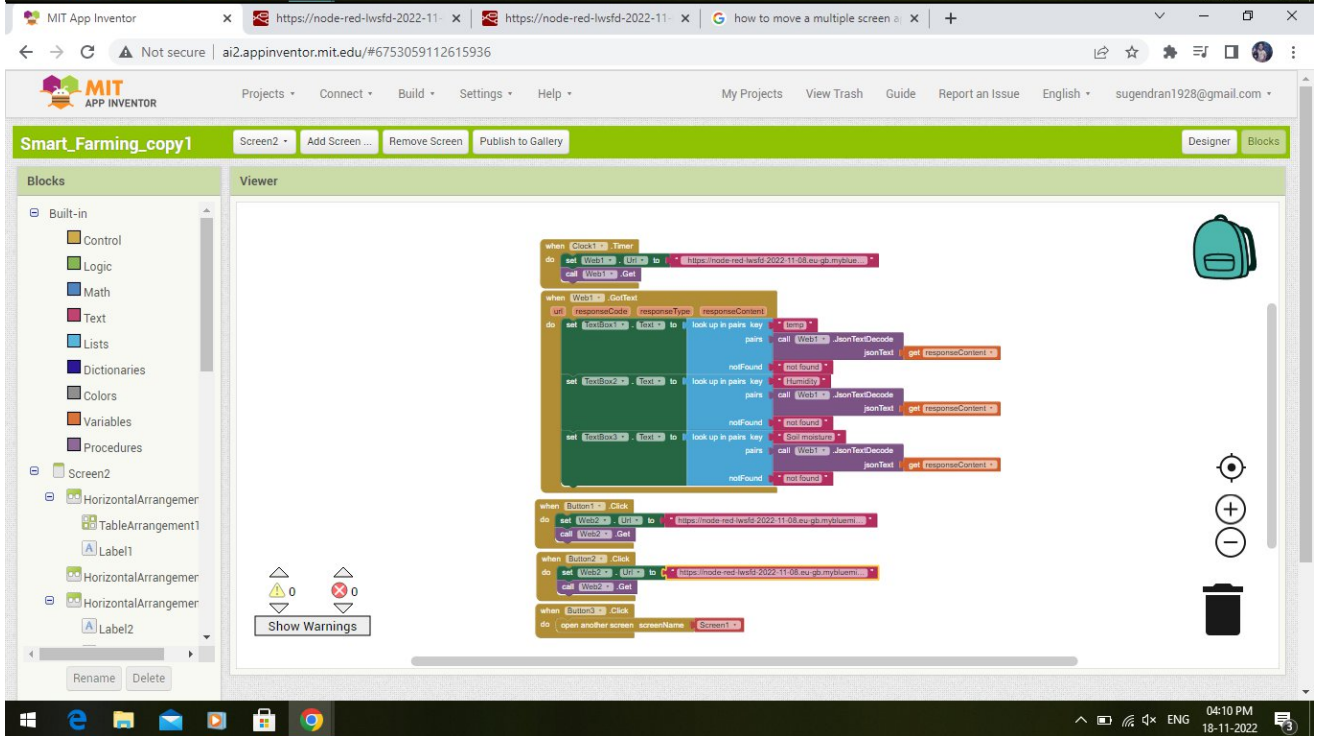
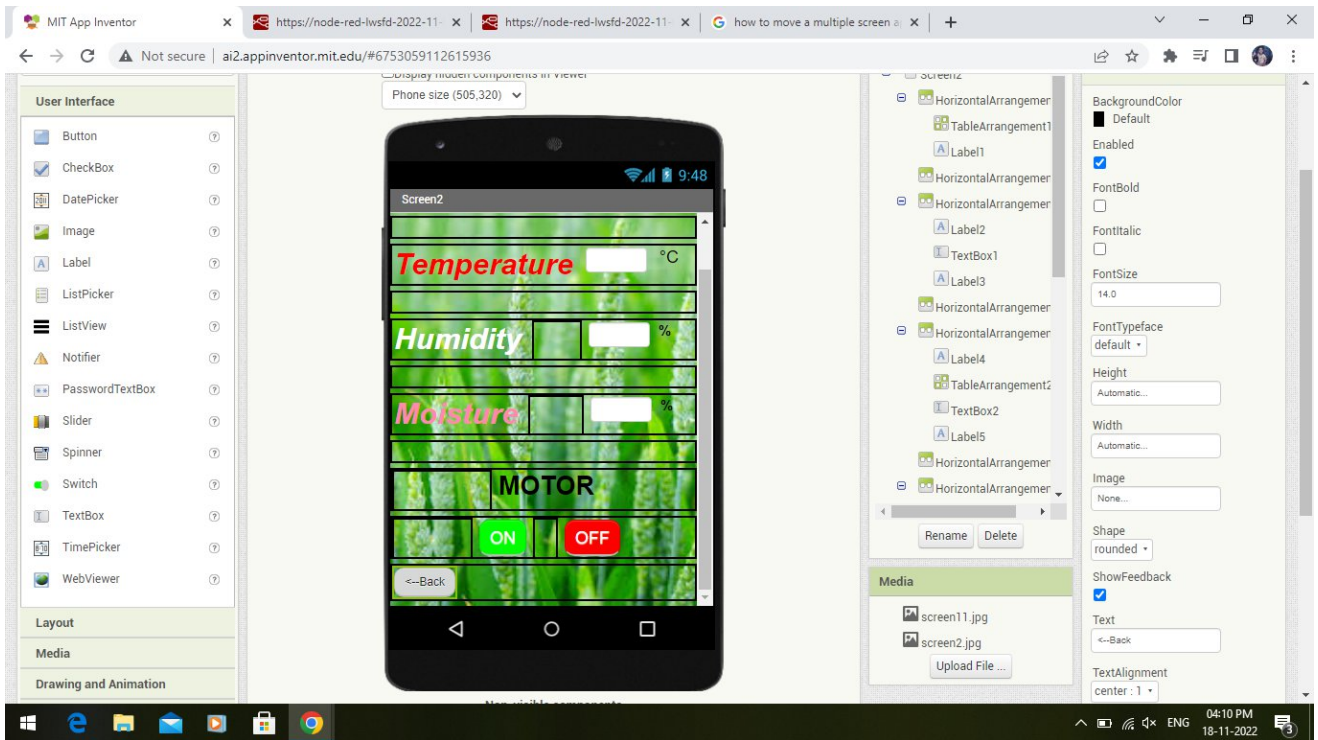
```
    if not success:  
        print("Not connected to IoTf")  
        time.sleep(10)
```

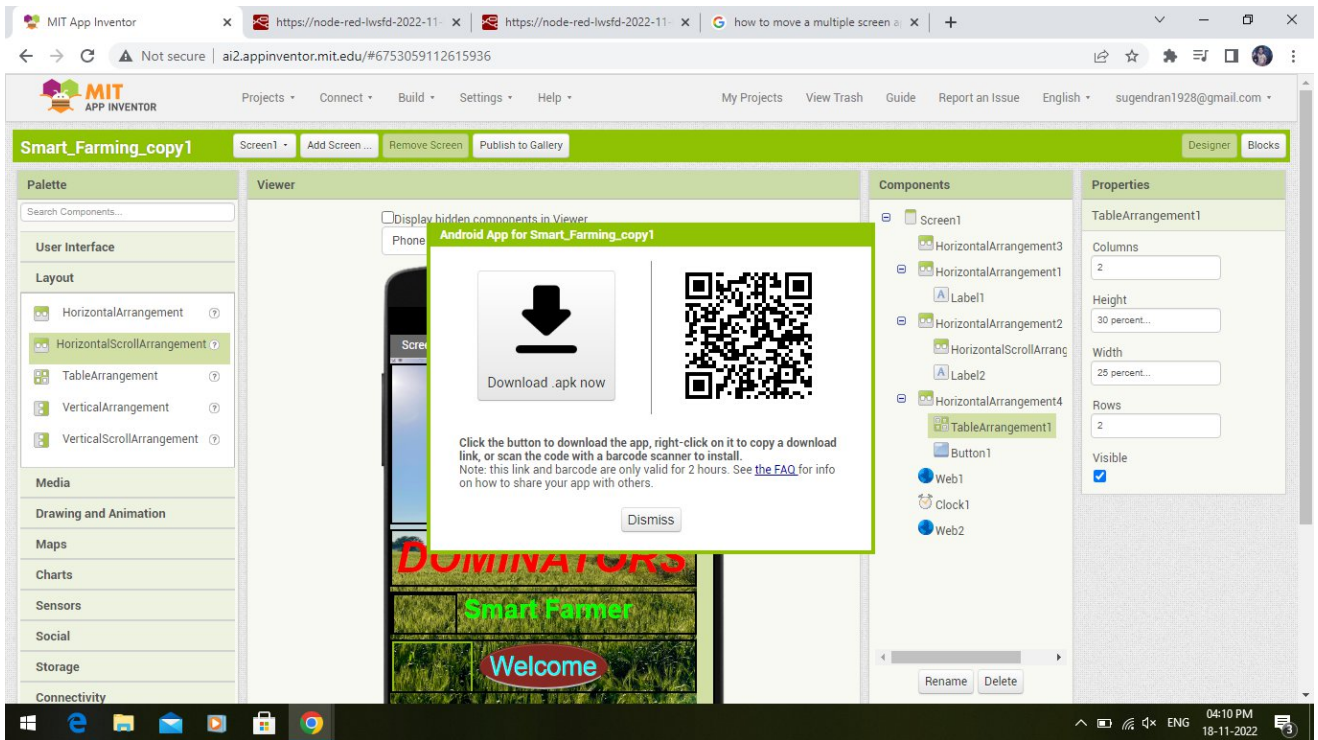
```
    deviceCli.commandCallback = myCommandCallback
```

```
deviceCli.disconnect()
```

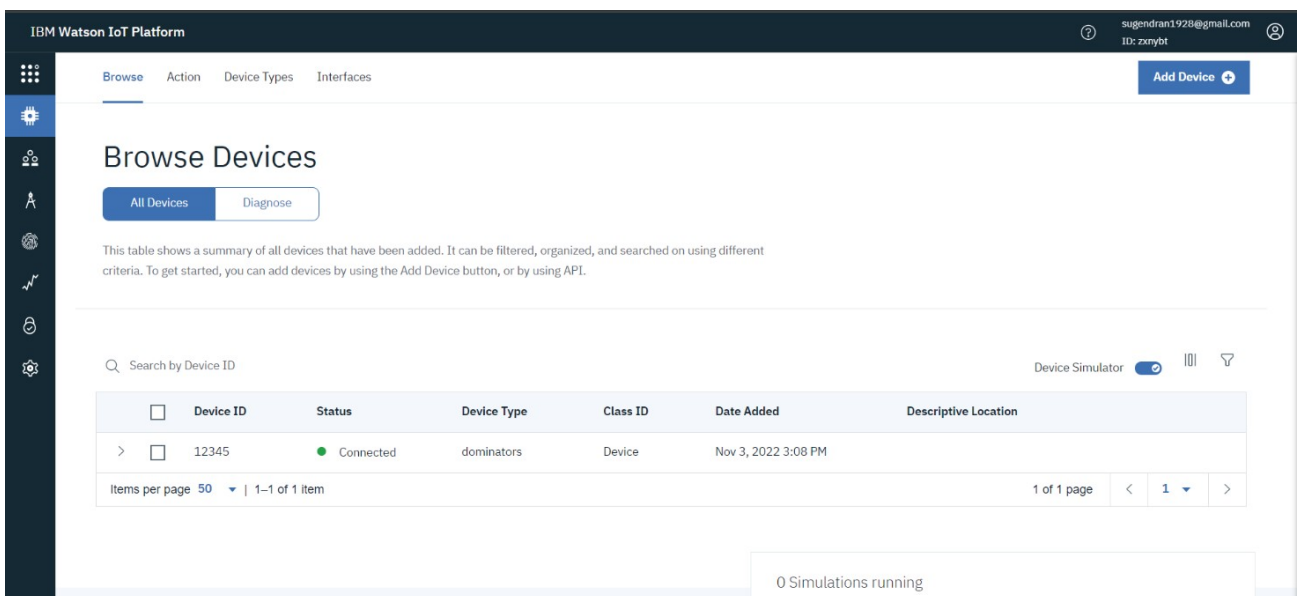
USER APPLICATION OR MOBILE APPLICATION:-







PYTHON SCRIPT CONFIGURED TO IBM WATSON IoT PLATFORM :-



THE SENSOR DATAS IN THE PYTHON SCRIPT WILL BE RECEIVED BY IBM WATSON IOT PLATFORM:-

```
Python 3.9.8 (tags/v3.9.8:bb3fcdcf, Nov 5 2021, 20:48:33) [MSC
v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more in
formation.
>>>
===== RESTART: C:\Users\sugen\OneDrive\Desktop\try1.
py =====
2022-11-17 19:33:43.811 ibmiotf.device.Client INFO C
connected successfully: d:zxnybt:dominators:12345
Published Temperature = 22 C Humidity = 0 % to IBM Watson
Published Temperature = 25 C Humidity = 77 % to IBM Watson
Published Temperature = 13 C Humidity = 10 % to IBM Watson
Published Temperature = 39 C Humidity = 34 % to IBM Watson
Published Temperature = 22 C Humidity = 43 % to IBM Watson
Published Temperature = 1 C Humidity = 63 % to IBM Watson
```

Service Details

IBM Watson IoT

Node-RED : n

Node-RED Da

New Tab

+

zxnybt.internetofthings.ibmcloud.com/dashboard/devices/browse

Gmail YouTube Maps Translate News Placement Written L...

IBM Watson IoT Platform

sugendran1928@gmail.com ID: zxnybt

Browse Action Device Types Interfaces

Add Device

12345 Connected dominators Device Nov 3, 2022 3:08 PM

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
IoTSensor	["temperature":1,"humidity":63,"soil_moisture":...	json	a few seconds ago
IoTSensor	["temperature":22,"humidity":43,"soil_moisture":...	json	a few seconds ago
IoTSensor	["temperature":39,"humidity":34,"soil_moisture":...	json	a few seconds ago

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0 Simulations running