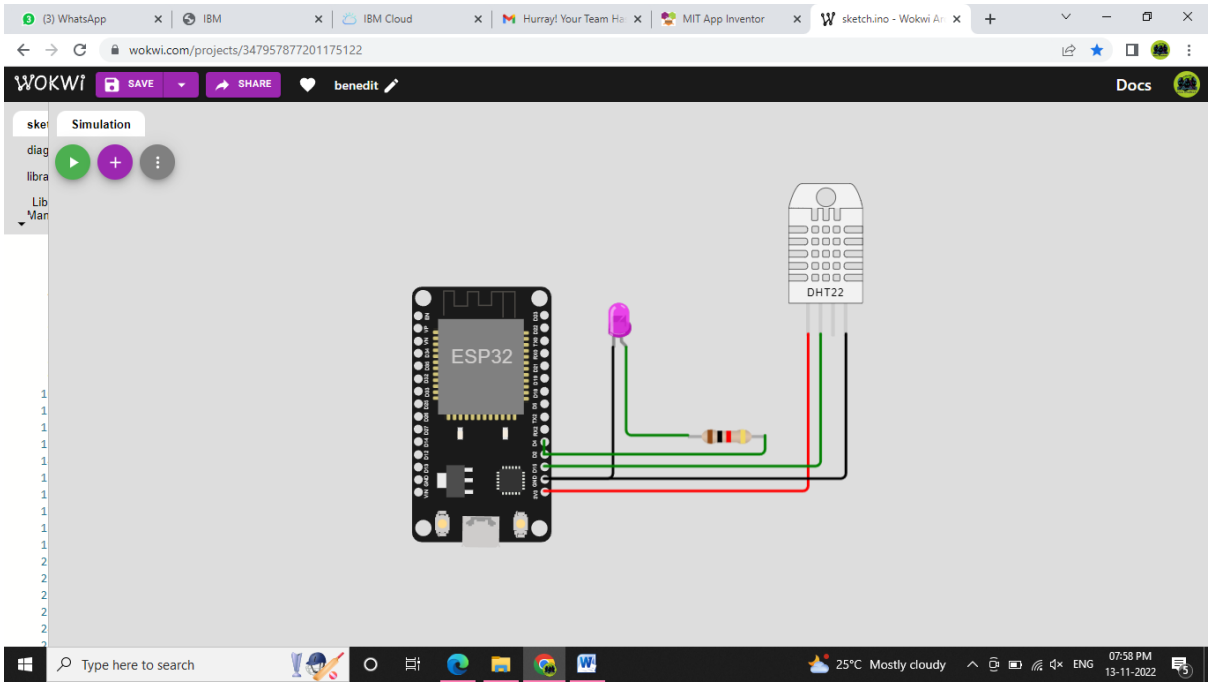
SPRINT DELIVERY-1

DATE	15 November 2022
TEAM ID	PNT2022TMID52158
PROJECT NAME	Smart Farmer - IoT Enabled Smart Farming Application

Connect sensors in ESP8266

- **Circuit Diagram:**



- **This is the Connections of sensors in ESP8266**

Develop a Python Code:

Code:

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

#Provide your IBM Watson Device Credentials
organization = "w9kxol"
deviceType = "123"
deviceId = "1234"
authMethod = "token"
authToken = "987654321"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("motor is on")
    elif status == "motoroff":
        print ("motor is off")
    else :
        print ("please send proper command")

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()

# Connect and send a datapoint "hello" with value "world" into the cloud as an
event of type "greeting" 10 times
deviceCli.connect()

while True:
    #Get Sensor Data from DHT11

    temp=random.randint(90,110)
    Humid=random.randint(60,100)
    moist=random.randint(50,120)
    data = { 'temp' : temp, 'Humid': Humid ,'moist':moist}
    #print data
```

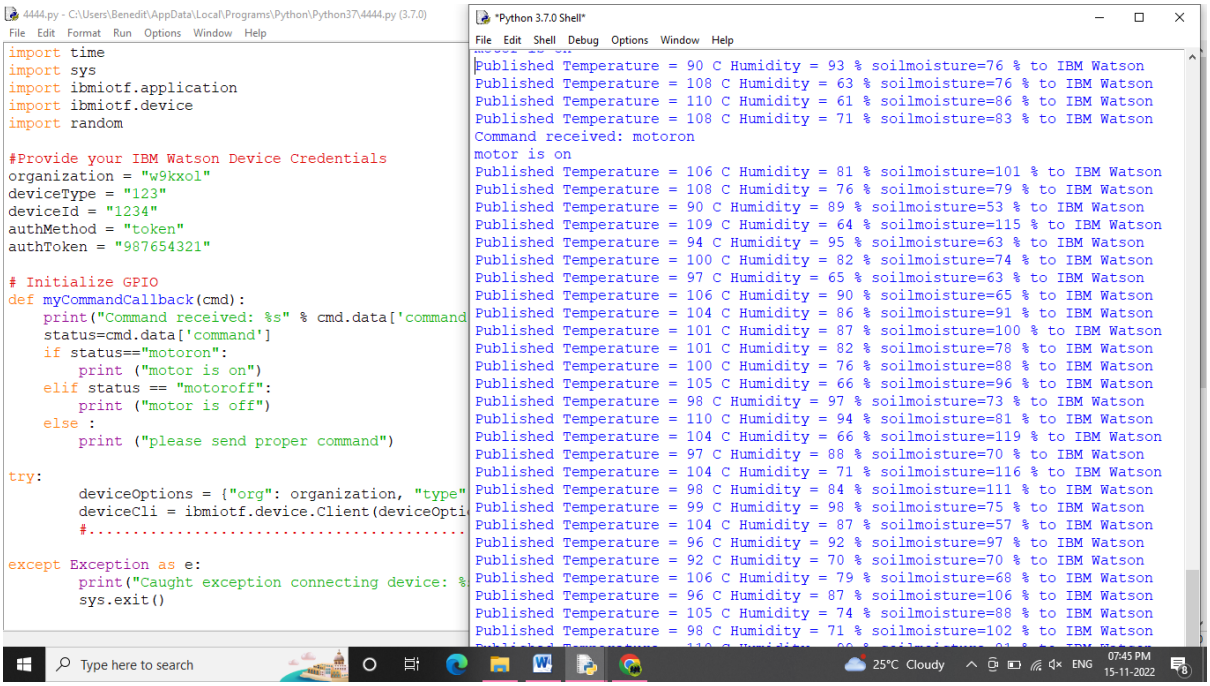
```
def myOnPublishCallback():
    print ("Published Temperature = %s C" % temp, "Humidity = %s %%" %
Humid,"soilmoisture=%s %%" %moist, "to IBM Watson")

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

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

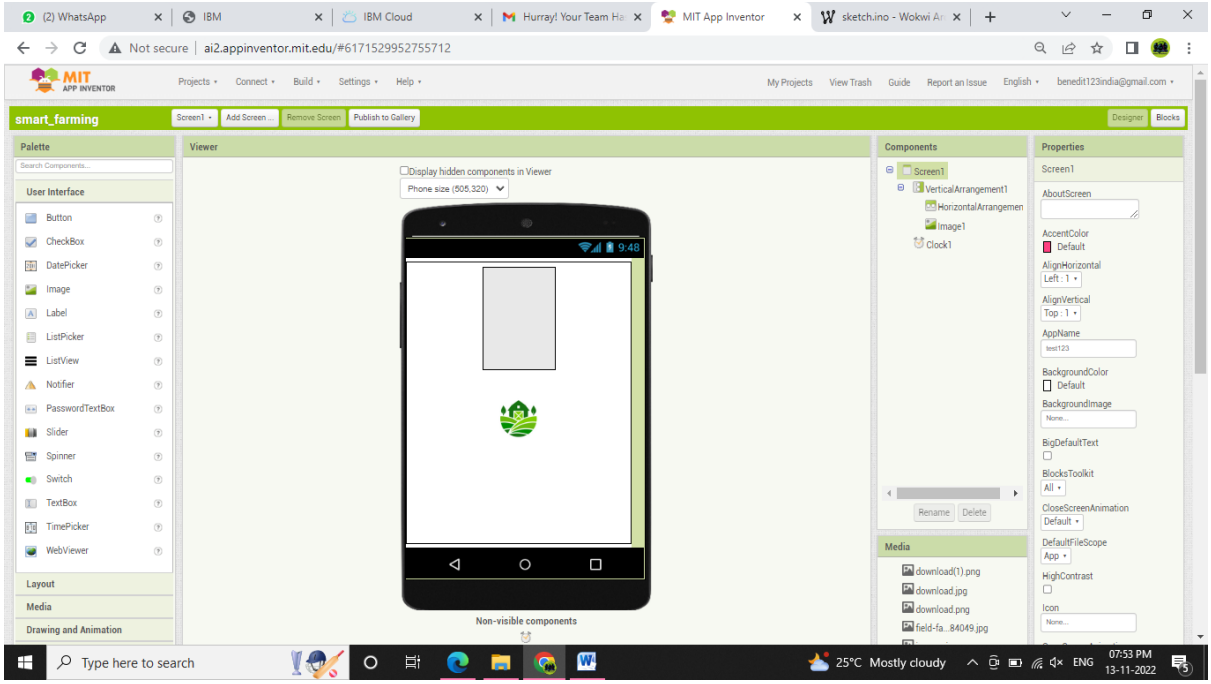
OUTPUT:

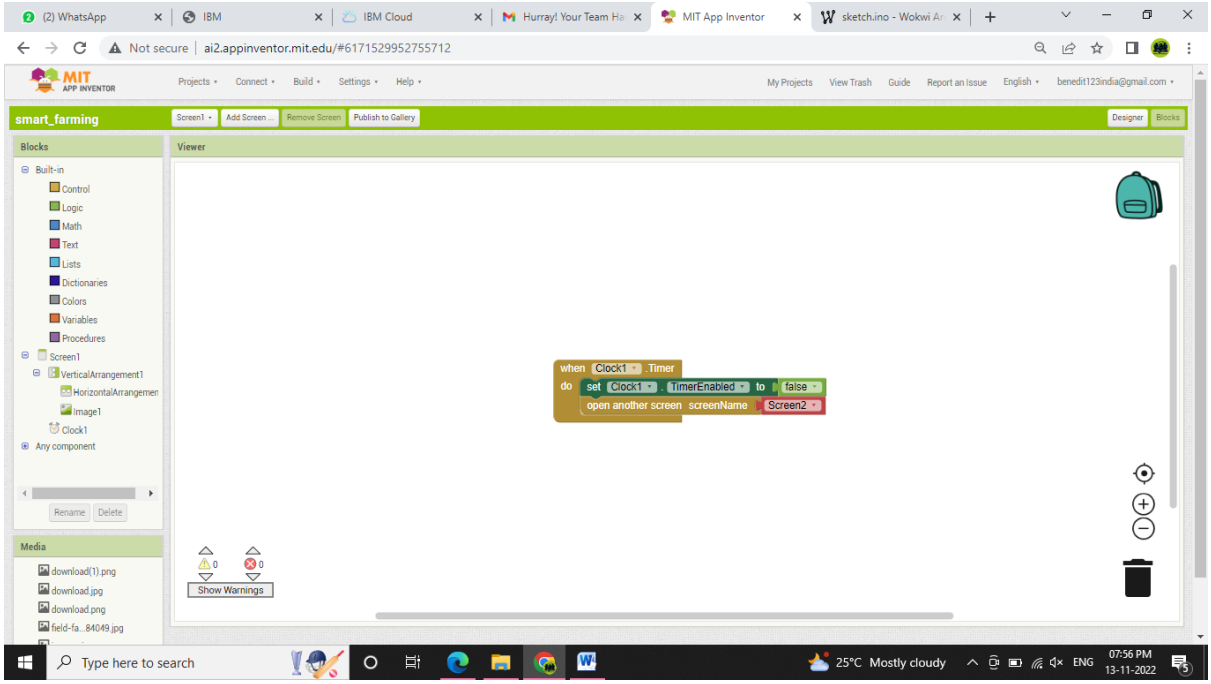


- This is the output for python code

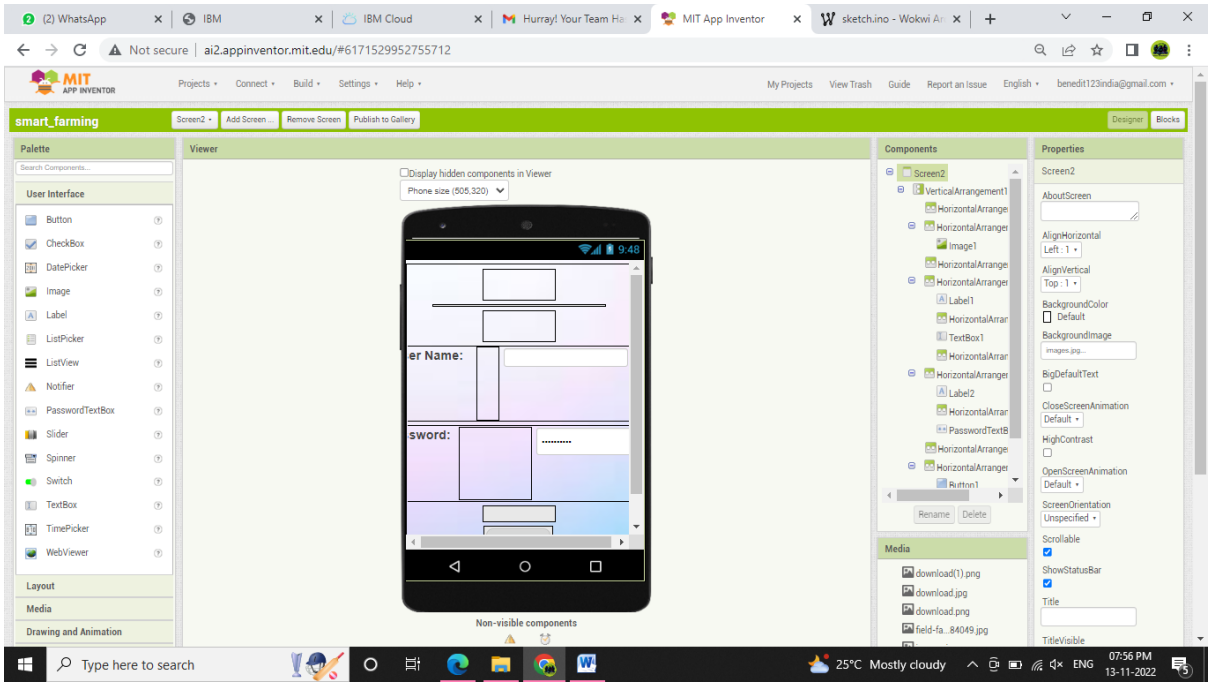
Develop an application with MIT Appinventor:

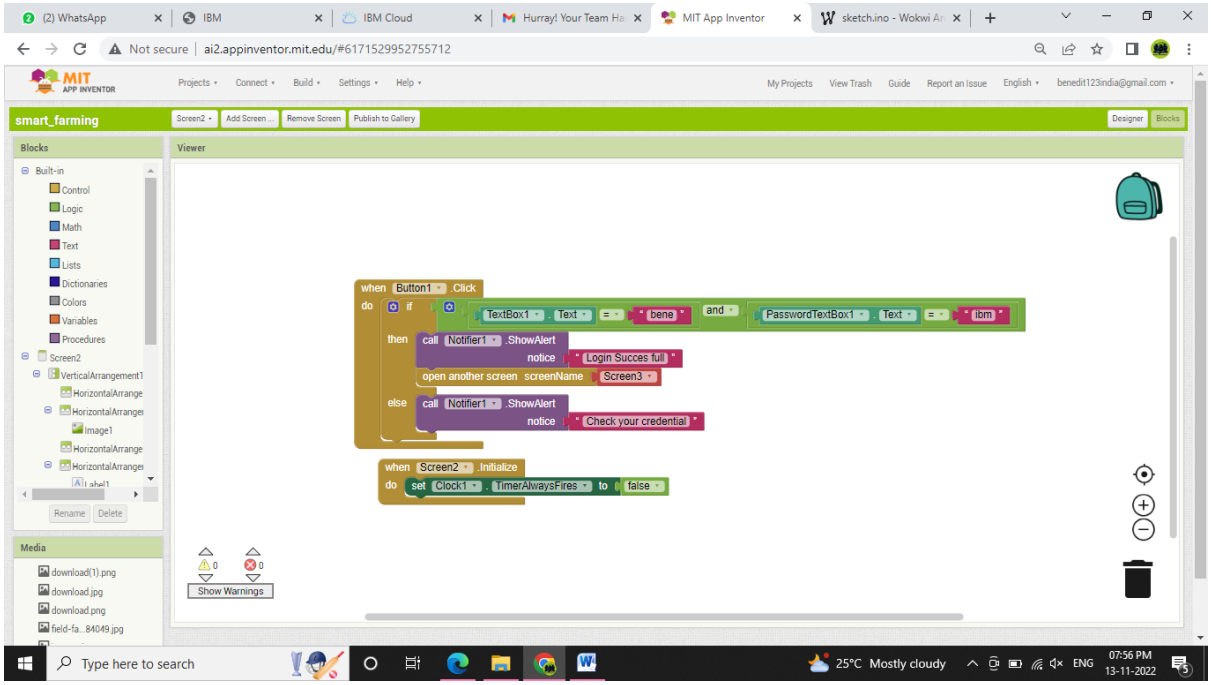
- **Mobile App Opening page:**



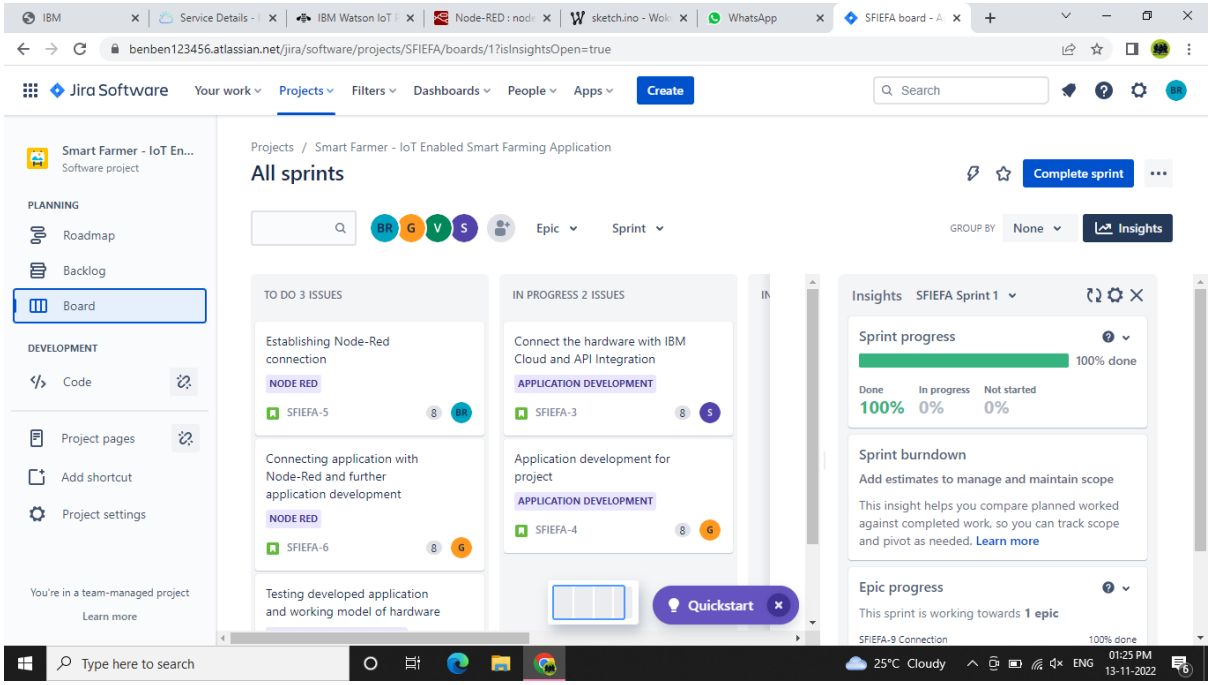


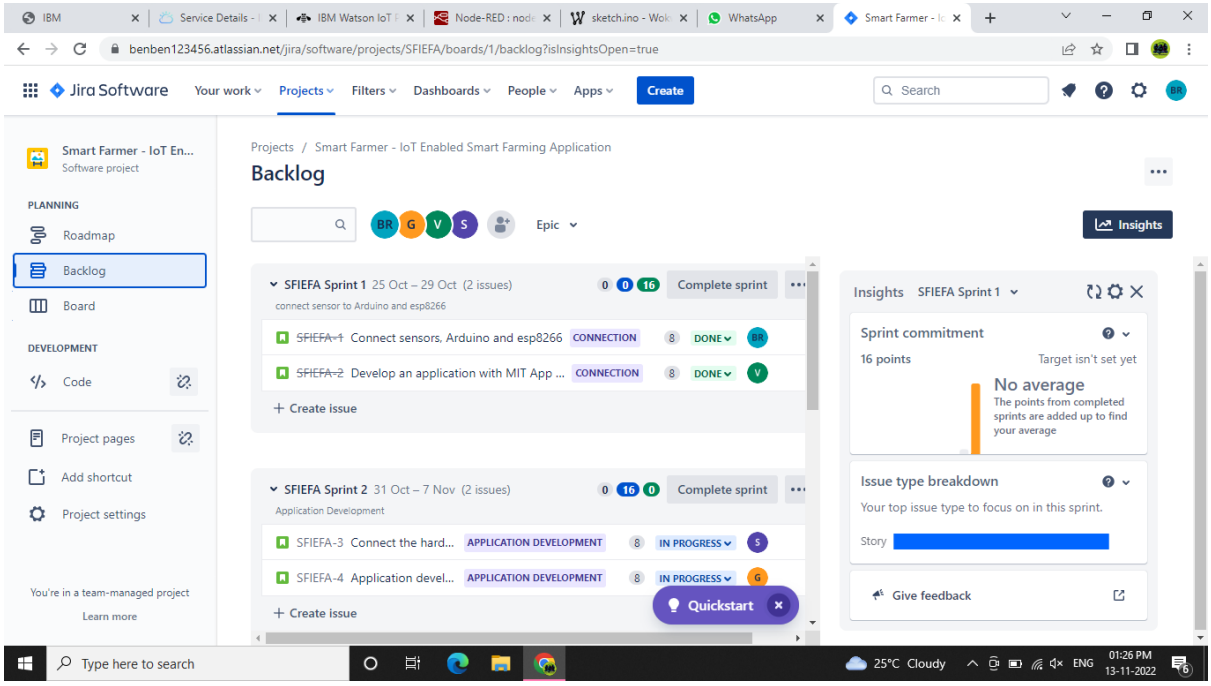
- **Mobile App Login page :**

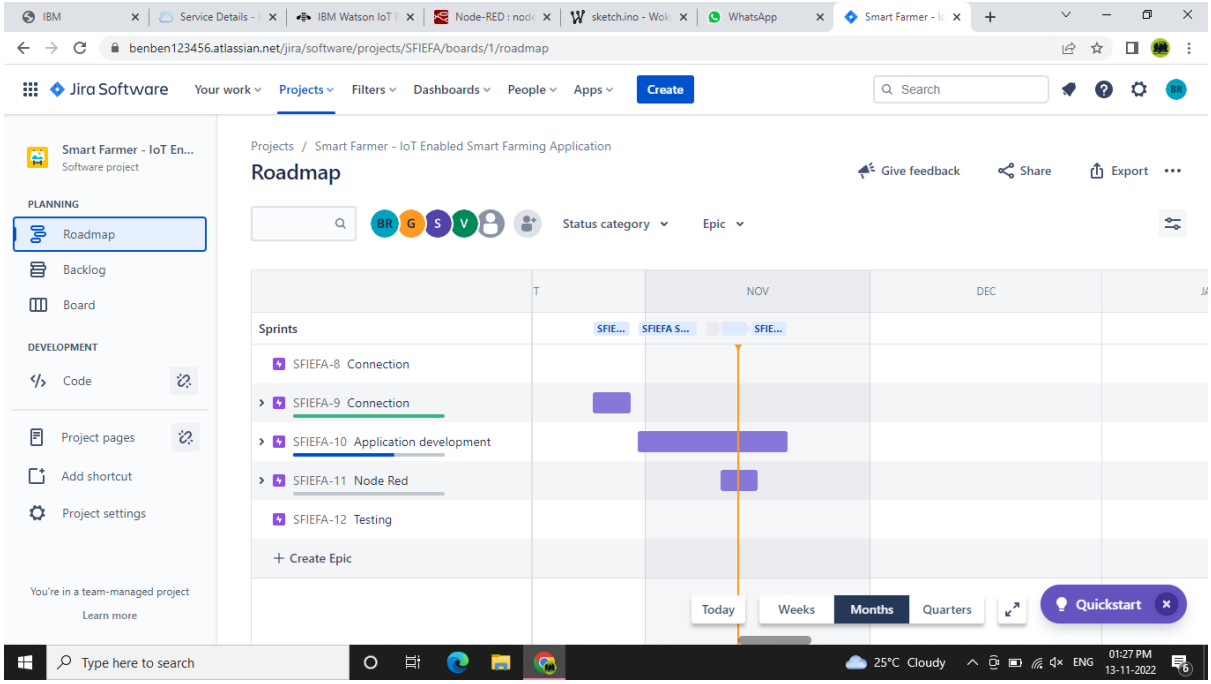




JIRA Software Sprint Planning:



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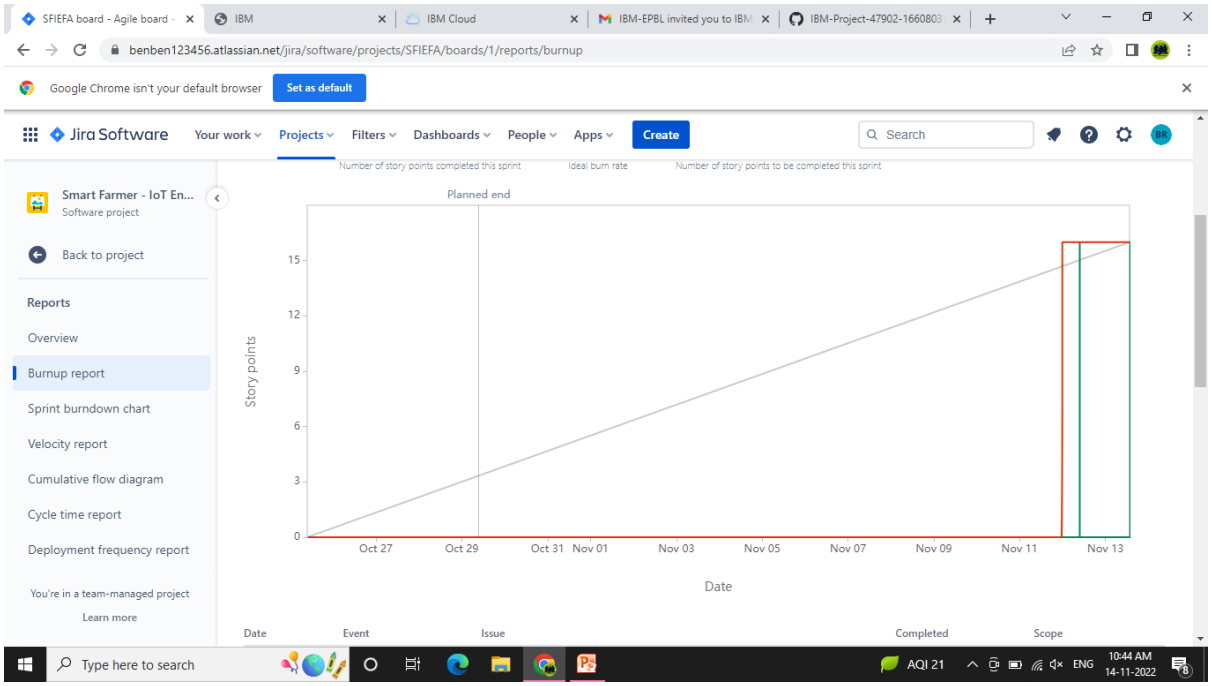
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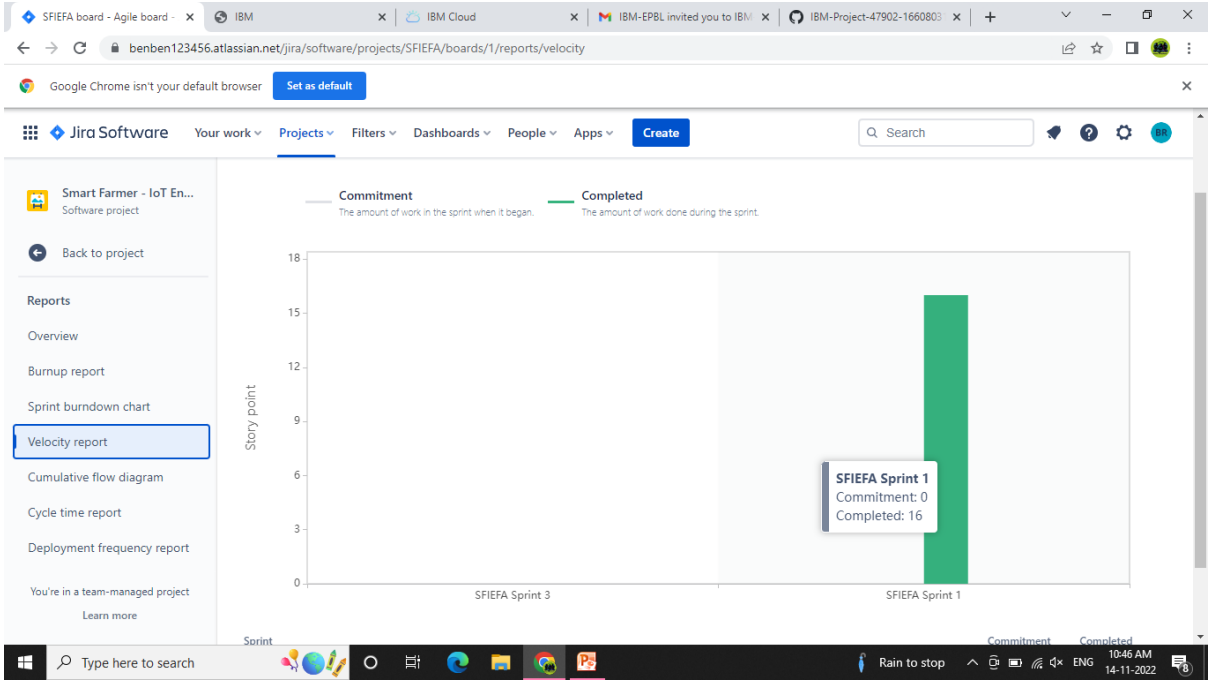
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