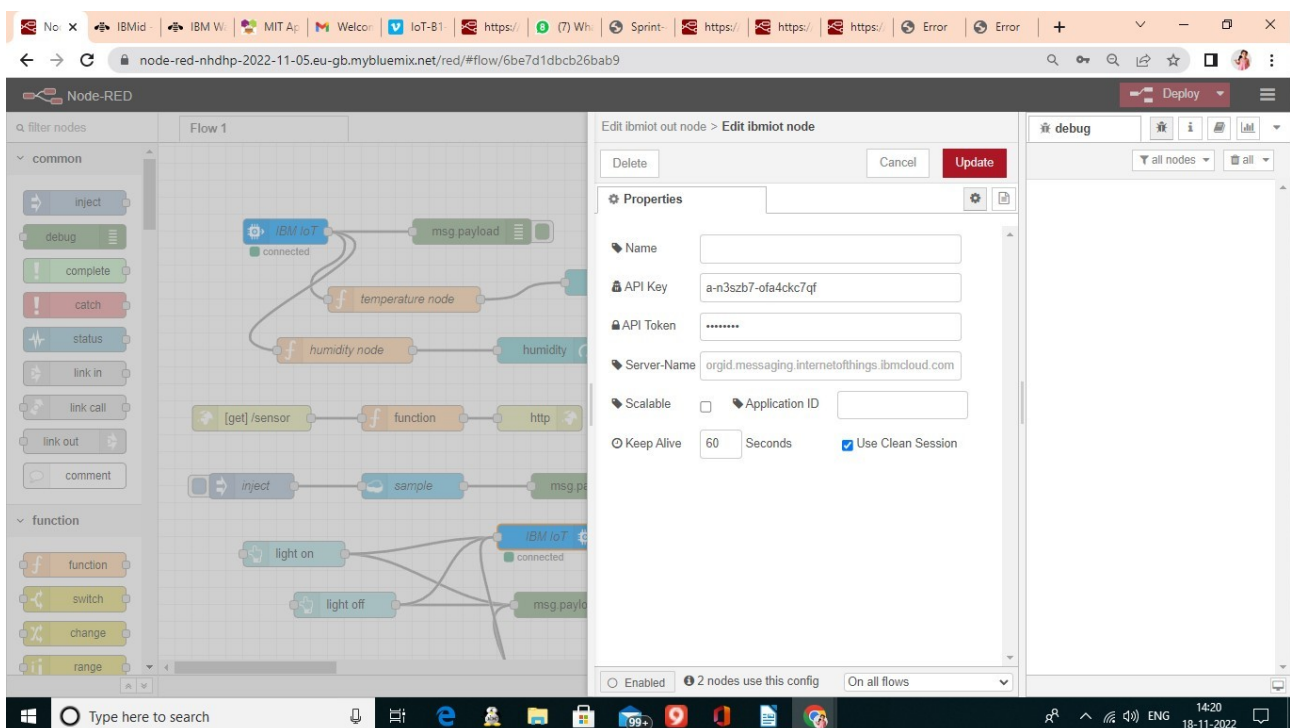
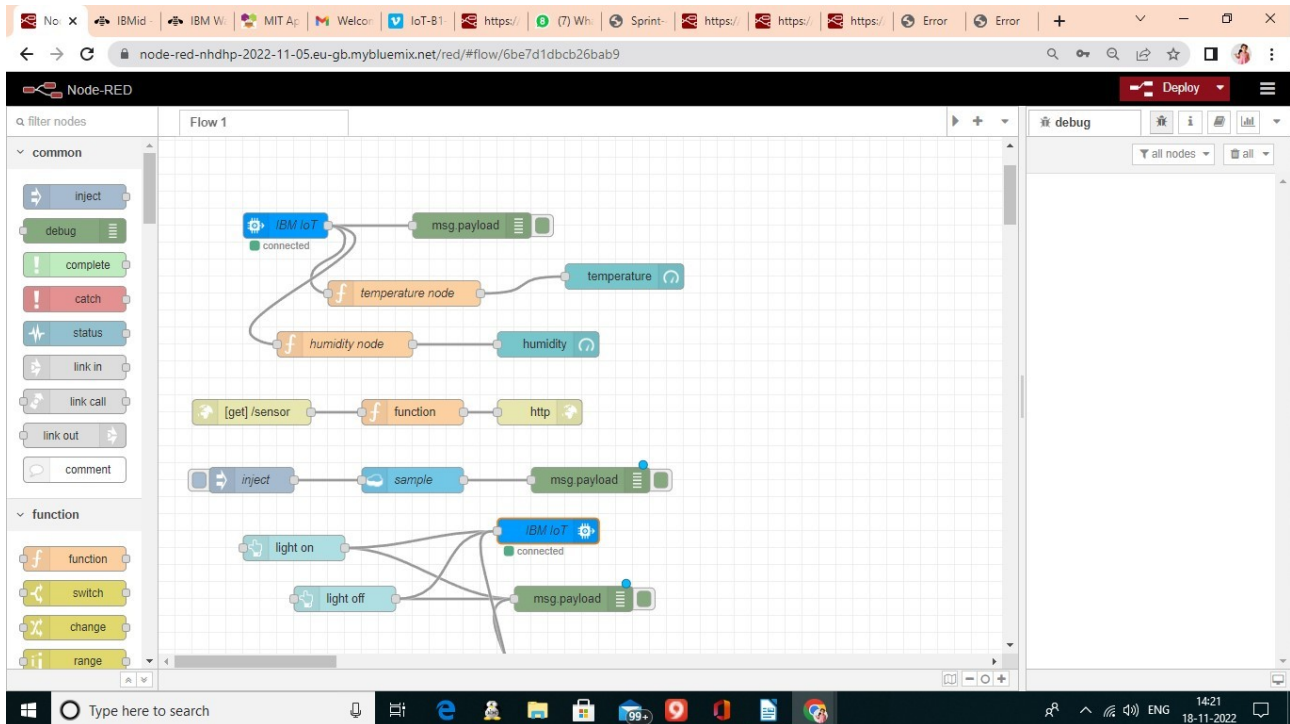


SPRINT 3

Configure the connection security and create API keys that are used in the Node RED Service for accessing the IBM IOT platform:



Develop a python script to publish random sensor such as temperature ,moisture,soil and humidity to IBM IoT platform:

PYTHON CODE:

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

#Provide your IBM Watson Device Credentials
organization ="8osflk"
deviceType = "cropprotection99"
deviceId = "cropprotection99"
authMethod="token"
authToken ="duiH-8z@4u@JXTmx20"
# InitializeGPIO
def myCommandCallback(cmd):
    print("Command received: %s" %cmd.data['command'])
    status =cmd.data['command']
    if status=="lighton":
        print("led on")
    else:
        print("led off")
#print(cmd)
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()

#Connectandsendadatapoint"hello"withvalue"world"intothecloudasaneventtye"greeting"10times
deviceCli.connect()

while True:
    #GetSensorDatafromDHT11

    temp=random.randint(0,100)
    humid=random.randint(0,100)
```

```

data={'temperature':temp,'humidity':humid}
    #printdata
def myOnPublishCallback():
    print("Published Temperature=%s C" %temp,"Humidity=%s %" % humid,"to
IBMWatson")

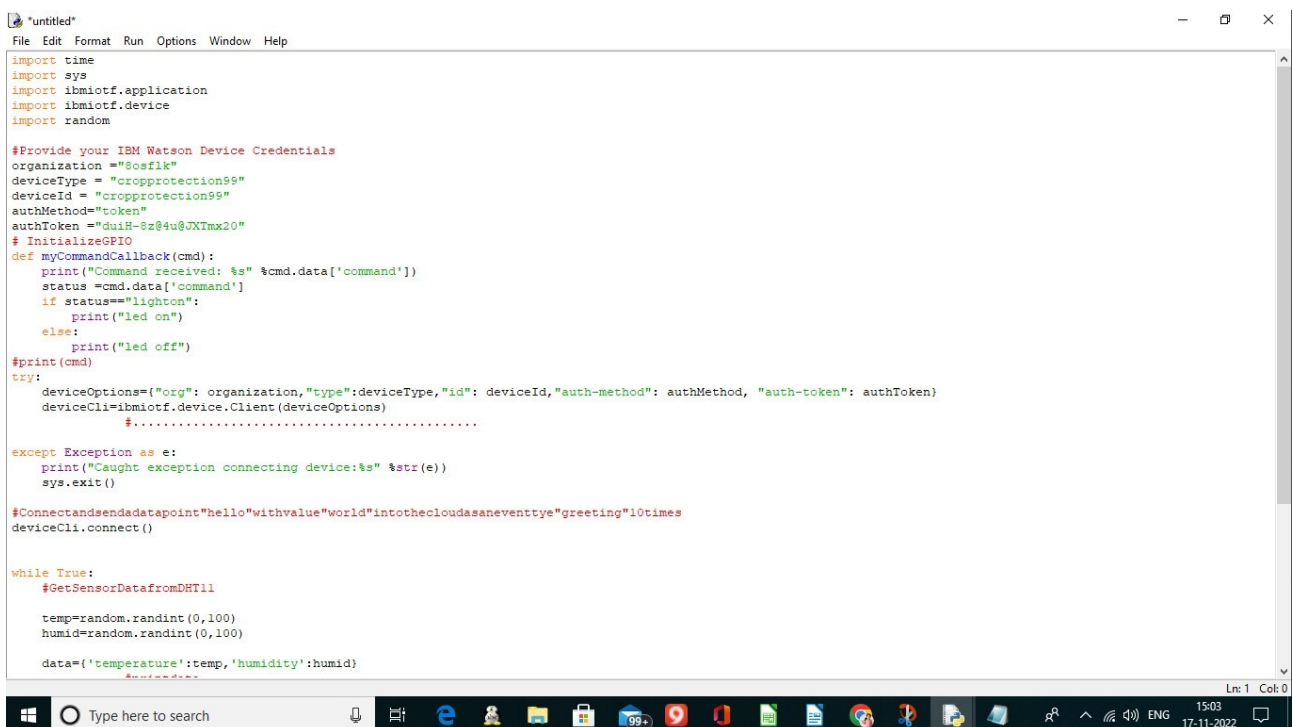
    success=deviceCli.publishEvent("IoTSensor","json",data,qos=0,on_publish=myOnPublis
hCallback)

    if not success:
        print("NotconnectedtoIoTF")
        time.sleep(1)

    deviceCli.commandCallback=myCommandCallback

#Disconnectthedeviceandapplicationfromthecloud
deviceCli.disconnect()

```



```

untitled
File Edit Format Run Options Window Help

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

#Provide your IBM Watson Device Credentials
organization = "80eflk"
deviceType = "CropProtection99"
deviceId = "CropProtection99"
authMethod="token"
authToken = "duiH-8z@4u@JXImx20"
# InitializeGPIO
def myCommandCallback(cmd):
    print("Command received: %s" %cmd.data['command'])
    status =cmd.data['command']
    if status=="lighton":
        print("led on")
    else:
        print("led off")
#Print(cmd)
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()

#Connectandsenddatapoint"hello"withvalue"world"intothecloudasaneventtye"greeting"10times
deviceCli.connect()

while True:
    #GetSensorDatafromDHT11
    temp=random.randint(0,100)
    humid=random.randint(0,100)

    data={'temperature':temp,'humidity':humid}
    #publishdata

```

OUTPUT:

IBM Watson IoT Platform

1 item selected Cancel

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
event_1	{"temperature":95,"humidity":85}	json	a few seconds ago
event_1	{"temperature":85,"humidity":74}	json	a few seconds ago
event_1	{"temperature":42,"humidity":41}	json	a few seconds ago
event_1	{"temperature":44,"humidity":50}	json	a few seconds ago
event_1	{"temperature":30,"humidity":66}	json	a few seconds ago

1 Simulation running

Sprint-3(MKMY) (...docx) Sprint-3(MKMY) (...docx) Sprint-3(MKMY) (...docx) Show all

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help

Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:/Users/Latha/AppData/Local/Programs/Python/Python37/ikmiot.py ==
2022-11-13 22:01:48,939 ibmiotf.device.Client INFO Connected successfully: d:8osflk:cropprotection99:cropprotection99
Published Temperature=9 C Humidity=50 % to IBMWatson
Published Temperature=37 C Humidity=55 % to IBMWatson
Published Temperature=96 C Humidity=60 % to IBMWatson
Published Temperature=4 C Humidity=11 % to IBMWatson
Published Temperature=67 C Humidity=49 % to IBMWatson
Published Temperature=79 C Humidity=13 % to IBMWatson
Published Temperature=83 C Humidity=7 % to IBMWatson
Published Temperature=68 C Humidity=70 % to IBMWatson
Published Temperature=69 C Humidity=68 % to IBMWatson
Published Temperature=61 C Humidity=36 % to IBMWatson
Published Temperature=20 C Humidity=76 % to IBMWatson
Published Temperature=3 C Humidity=93 % to IBMWatson
Published Temperature=41 C Humidity=98 % to IBMWatson
Published Temperature=31 C Humidity=96 % to IBMWatson
Published Temperature=78 C Humidity=22 % to IBMWatson
Published Temperature=65 C Humidity=75 % to IBMWatson
Published Temperature=16 C Humidity=89 % to IBMWatson
Published Temperature=87 C Humidity=95 % to IBMWatson
Published Temperature=7 C Humidity=35 % to IBMWatson
Published Temperature=17 C Humidity=85 % to IBMWatson
Published Temperature=32 C Humidity=74 % to IBMWatson
```

Ln: 26 Col: 0

REPORT:

Browser tabs: (no subject) - abinaya3atlassian67, IoT based smart crop protection

URL: abinaya3.atlassian.net/jira/software/projects/IOT/boards/2/backlog

Jira Software navigation: Your work, Projects, Filters, Dashboards, People, Apps, Create

Left sidebar: IoT based smart crop ... Software project, PLANNING (Roadmap, Backlog, Board), DEVELOPMENT (Code), Project pages, Add shortcut, Project settings

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Backlog

Search: [] | Filter: JA S M AP | Epic: [] | Insights

IOT Sprint 3 7 Nov – 12 Nov (4 issues) | 32 | 0 | 0 | Start sprint

- IOT-11 Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM ... | 10 | TO DO | JA
- IOT-12 Create a Node-RED service. | 10 | TO DO | M
- IOT-13 Develop a python script to publish random sensor data such as temperature, moisture, soil and humidity to the IBM ... | 7 | TO DO | S
- IOT-14 After developing python code, commands are received just print the statements which represent the control of the d... | 5 | TO DO | JA

+ Create issue

IOT Sprint 4 14 Nov – 19 Nov (3 issues) | 28 | 0 | 0 | Start sprint

- IOT-15 Publish Data to The IBM Cloud. | 8 | TO DO | AP

System tray: 5:33 AM 11/18/2022

Browser tabs: (no subject) - abinaya3atlassian67, IoT based smart crop protection

URL: abinaya3.atlassian.net/jira/software/projects/IOT/boards/2/backlog?isInsightsOpen=true

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Insights IOT Sprint 3

Sprint commitment

32 points | Over target of 9 - 11 points

10 | Average points completed over the last 2 sprints

Issue type breakdown

Your top issue type to focus on in this sprint.

Story []

Give feedback

System tray: 5:34 AM 11/18/2022

Browser tabs: (no subject) - abinaya3atlassian67, IOT board - Agile board - Jira

URL: abinaya3.atlassian.net/jira/software/projects/IOT/boards/2?isInsightsOpen=true

Jira Software navigation: Your work, Projects, Filters, Dashboards, People, Apps, Create

Left sidebar: IoT based smart crop ... Software project, PLANNING (Roadmap, Backlog, Board), DEVELOPMENT (Code, Project pages, Add shortcut, Project settings)

Header: Does your team need more from Jira? Get a free trial of our Standard plan.

Projects / IoT based smart crop protection system for agriculture

IOT Sprint 3

0 days remaining [Complete sprint](#)

GROUP BY: None [Insights](#)

IN PROGRESS

IN REVIEW

JA

M

S

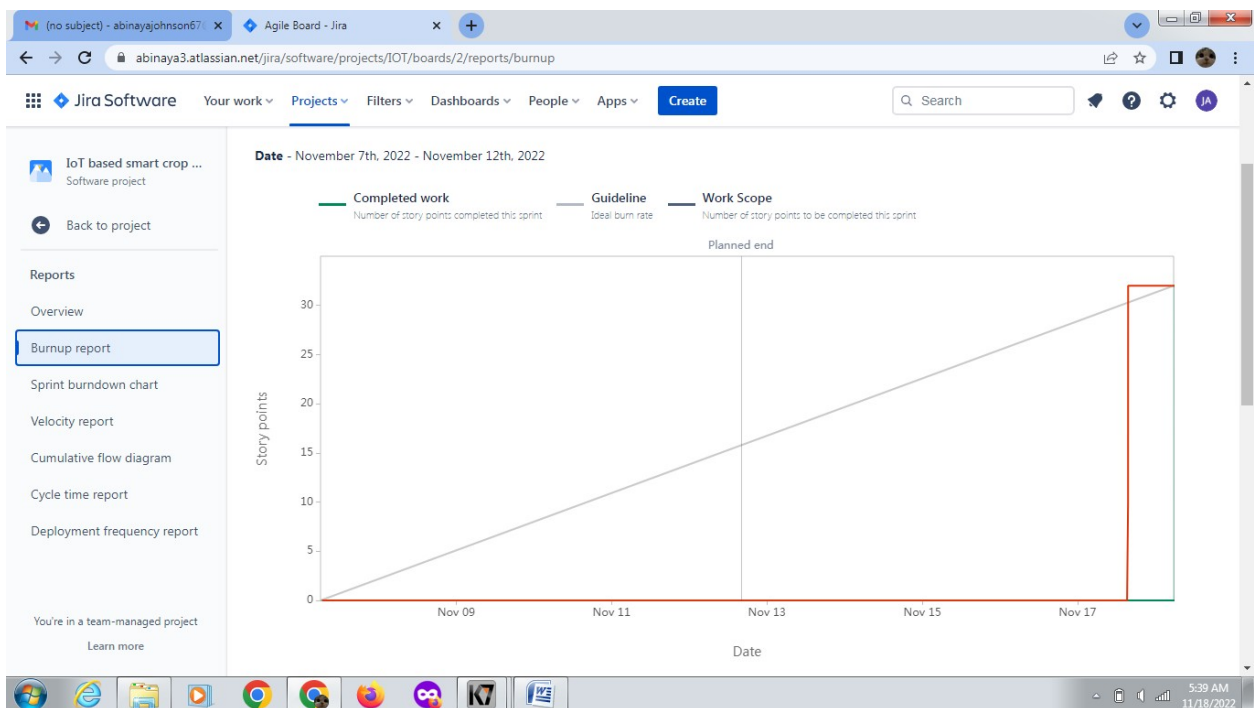
Insights IOT SPRINT 3

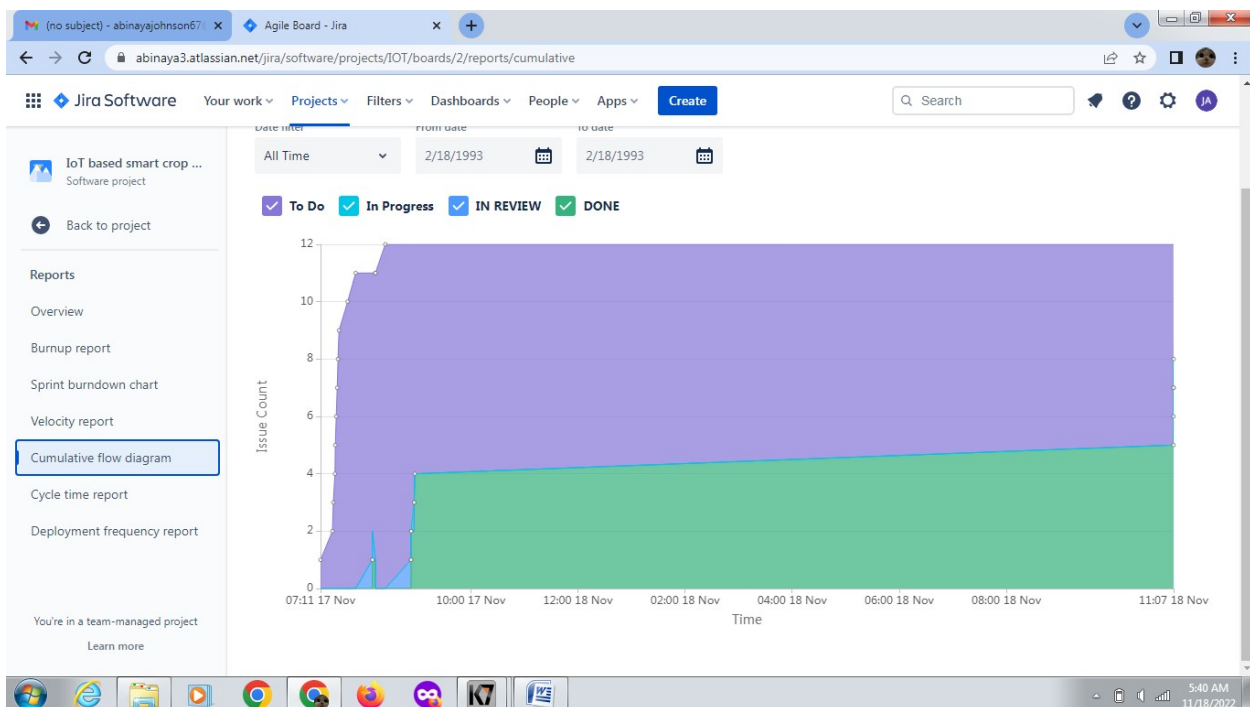
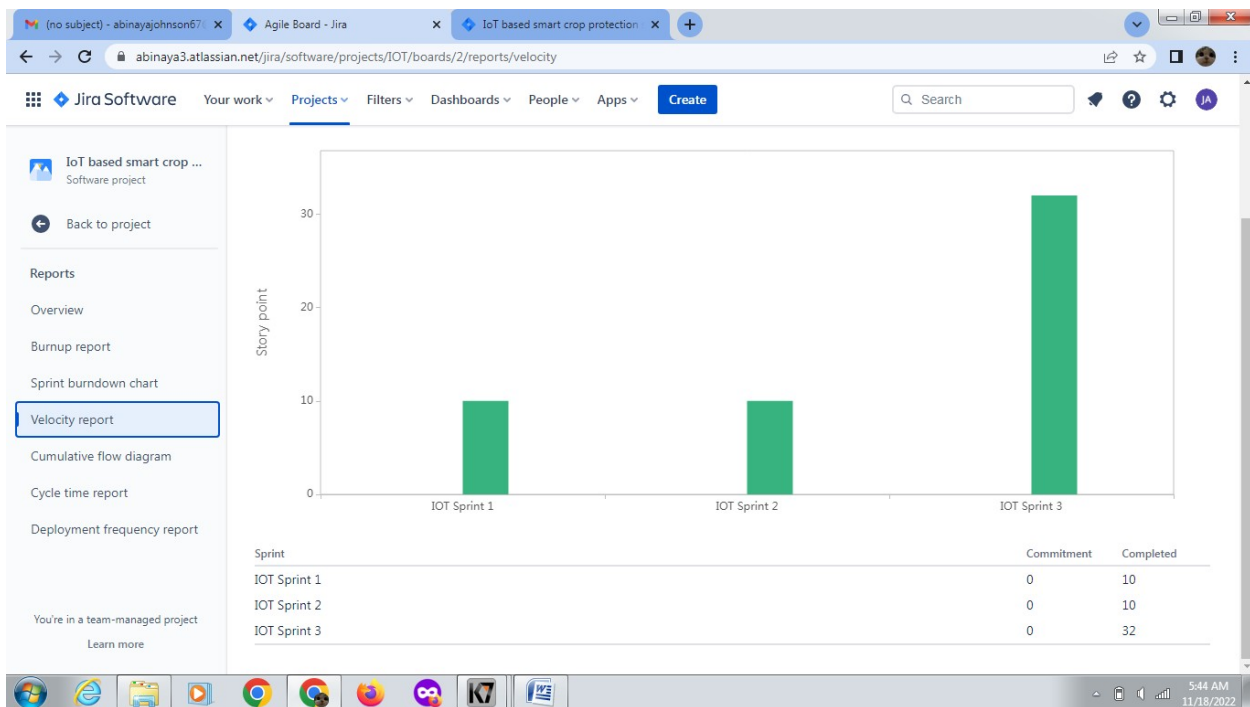
Sprint progress 100% done

Done	In progress	Not started
100%	0%	0%

Sprint burndown
Add estimates to manage and maintain scope
This insight helps you compare planned work against completed work, so you can track scope and pivot as needed. [Learn more](#)

Epic progress





The screenshot displays the Jira Roadmap interface for the project "IoT based smart crop protection system for agriculture". The main view is a timeline showing three sprints: "IOT Sprint 2", "IOT Sprint 3", and "IOT Sprint 4". A task titled "IOT-17 Registration" is assigned to "IOT Sprint 4". The interface includes a sidebar with navigation options such as "Planning", "Backlog", "Board", "Development", and "Code". The top navigation bar shows the Jira Software logo and various filters. The bottom status bar indicates the user is in a team-managed project.