

PROJECT DEVELOPMENT PHASE

SPRINT DELIVERY - 3

Team ID	PNT2022TMID52856
Project Name	SmartFarmer - IoT Enabled Smart Farming Application

BACKLOG

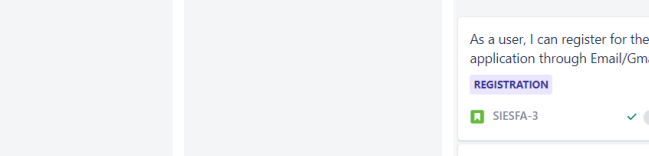
Release	User Story Number	User Story / Task	Story points	Priority	Team members
Sprint-3	USN-3	As a user, I can register for the application through Email/Gmail	1	Medium	Ranga Krishna Prasadh H
Sprint-3	USN-4	As a user, I will receive OTP through email which I will enter in the application.	1	Medium	Sathish P
Sprint-3	USN-29	As an admin, I can customize the data flow to the app (using Node-Red)	5	High	Priya Dharshini C
Sprint-3	USN-19	As a service agent, I can login using username and password and entering the captcha.	2	High	Priya Dharshini C Vishalini A J
Sprint-3	USN-20	As a service agent, I can view the list of service calls pending and the corresponding case details in the dashboard.	2	High	Priya Dharshini C Sathish P
Sprint-3	USN-23	As a helpline admin, I will assign a available service agent to the client when complaint is raised and forward the details of the serviceagent assigned.	2	High	Vishalini A J Sathish P
Sprint-3	USN-24	As a helpline admin, I will add compliant details to the agent dashboard.	2	High	Priya Dharshini C Vishalini A J

Insights

ROADMAP



GROUP BY **None** Insights



TO DO

IN PROGRESS

DONE 8 ISSUES ✓

As a user, I can register for the application through Email/Gmail

REGISTRATION

SIESFA-3 ✓ 1

As a service agent, I can view the list of service calls pending and the corresponding case details in the dashboard.

SERVICE LOG

SIESFA-20 ✓ 2

As a user, I can register for the application through Email/Gmail

REGISTRATION

SIESFA-3 ✓ 1

As a service agent, I can view the list of service calls pending and the corresponding case details in the dashboard.

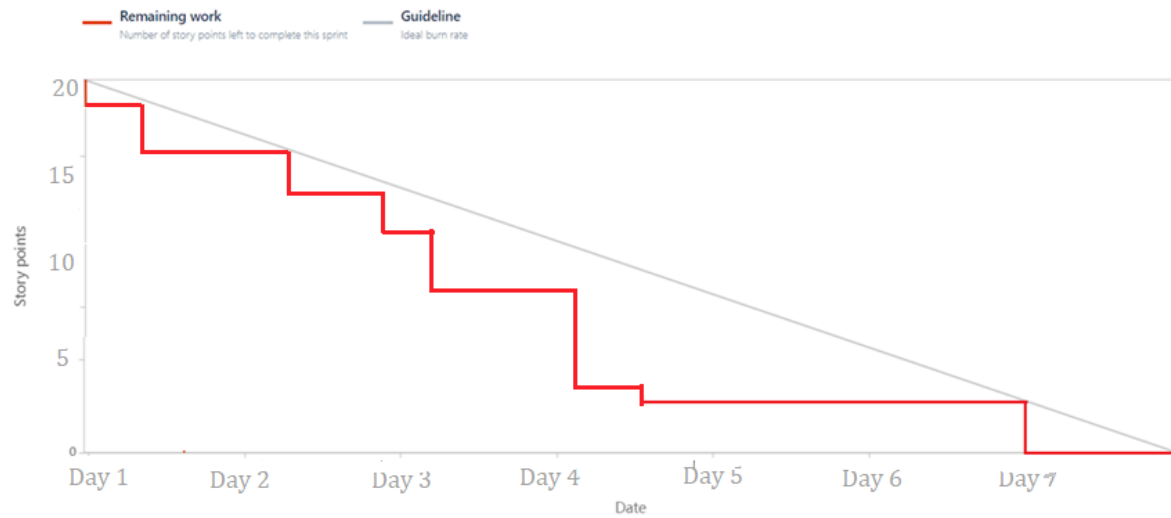
SERVICE LOG

SIESFA-20 ✓ 2

As a helpline admin, I will assign a available service agent to the client when complaint is raised and forward the details of the

SPRINT BURNDOWN CHART

Date - November 10th 2022 - November 17th, 2022



USN-3

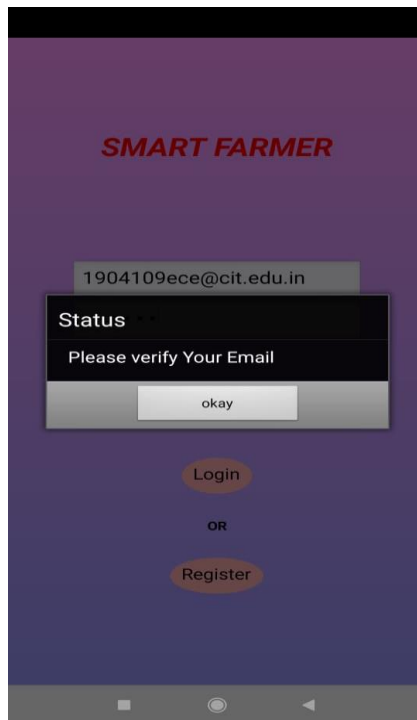
SMART FARMER APP:

The image shows two side-by-side screenshots of the SMART FARMER app's registration/login screen. The background is a gradient from pink at the top to blue at the bottom. The title 'SMART FARMER' is displayed in red. The left screenshot shows the registration form with fields for 'Email' and 'Password'. The right screenshot shows the login form with fields for 'Email' (containing '1904109ece@cit.edu.in') and 'Password' (containing '.....'). Both screens have 'Login' and 'Register' buttons, and an 'OR' separator.

Registration/login screen

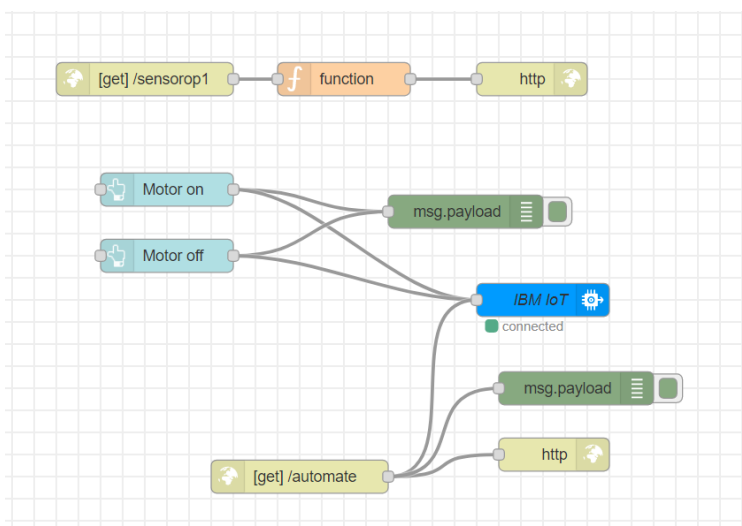
USN-4

EMAIL AUTHENTICATION



USN-29

DATAFLOW FROM NODE-RED TO APP





node-red-wotxv-2022-11-13.eu-gb.mybluemix.net/sensorop1

```
{"Temperature":44,"Soil_moisture":79,"Rain_sensor":328,"pH_sensor":6,"Ambient_Light_LDR":914}
```

node-red-wotxv-2022-11-13.eu-gb.mybluemix.net/automate?command=Motor_off

```
{"command":"Motor_off"}
```

USN-20

SERVICE PENDING LIST

Smart farmer								
File Edit View Insert Format Data Tools Extensions Help Last edit was seconds ago								
100% \$ % .0 .00 123 Default (Ari... 10 B I S A								
C13	fx							
	A	B	C	D	E	F	G	H
1	Timestamp	Email	Queries					
2	11/15/2022 19:09:59	1904109ece@cit.edu.in	Motor not working					
3	11/15/2022 19:20:47	1904104ece@cit.edu.in	Data is not displayed in the app					
4	11/15/2022 19:21:39	1904109ece@cit.edu.in	App not responding					
5								
6								
7								
8								
9								
10								

PYTHON 3.7 - CODE

Python script to publish and subscribe to IBM IoT platform

```
import wiotp.sdk.device
import time
import os
import datetime
import random

#IBM CREDENTIALS
myConfig = {
```

```
"identity": {
"orgId":"94ab7c",
"typeId":"Node",
"deviceId": "esp2"
},
"auth": {
"token": "ChVhYc0Dz(AD*rSw9A"
} }
```

```
client = wiotp.sdk.device.DeviceClient (config=myConfig,logHandlers=None)
client.connect ()
```

```
#Commands received through App/node red
```

```
def myCommandCallback (cmd) :
    print ("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    if (m=="Motor_on"):
        print ("Motor is switched on")
    elif (m=="Motor_off"):
        print ("Motor is switched OFF")
    print (" ")
```

```
while True:
```

```
    #Generate random sensor values
    soil=random.randint (1,100)
    temp=random.randint (-10,60)
    ldr=random.randint (0, 1023)
    rain=random.randint (0, 1023)
    ph=random.randint (5, 9)
    #Publish and subscribe to IBM IoT platform
    myData={'Temperature':temp,'Soil_moisture': soil ,'Ambient_Light_LDR' :ldr,'
        Rain_sensor':rain,'pH_sensor':ph}
    client.publishEvent (eventId="status", msgFormat="json", data=myData, qos=0 ,
        onPublish=None)
    print ("Published data Successfully: ", myData)
    time.sleep (2)
    client.commandCallback = myCommandCallback
client.disconnect ()
```

PYTHON CODE EXECUTION

```
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/DELL/AppData/Local/Programs/Python/Python37/python_watson_publish.py
2022-11-18 00:30:29,592 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:94ab7c:Node:esp2Published data Successfully
{'Temperature': 13, 'Soil_moisture': 31, 'Ambient_Light_LDR': 162, 'Rain_sensor': 412, 'pH_sensor': 7}
Published data Successfully: {'Temperature': -7, 'Soil_moisture': 82, 'Ambient_Light_LDR': 775, 'Rain_sensor': 649, 'pH_sensor': 9}
Published data Successfully: {'Temperature': 32, 'Soil_moisture': 7, 'Ambient_Light_LDR': 383, 'Rain_sensor': 264, 'pH_sensor': 6}
Published data Successfully: {'Temperature': 59, 'Soil_moisture': 3, 'Ambient_Light_LDR': 336, 'Rain_sensor': 893, 'pH_sensor': 5}
Published data Successfully: {'Temperature': 16, 'Soil_moisture': 18, 'Ambient_Light_LDR': 260, 'Rain_sensor': 955, 'pH_sensor': 6}
Published data Successfully: {'Temperature': 2, 'Soil_moisture': 5, 'Ambient_Light_LDR': 769, 'Rain_sensor': 1019, 'pH_sensor': 7}
Published data Successfully: {'Temperature': 38, 'Soil_moisture': 71, 'Ambient_Light_LDR': 518, 'Rain_sensor': 57, 'pH_sensor': 8}
Published data Successfully: {'Temperature': -3, 'Soil_moisture': 100, 'Ambient_Light_LDR': 770, 'Rain_sensor': 326, 'pH_sensor': 8}
Published data Successfully: {'Temperature': 48, 'Soil_moisture': 9, 'Ambient_Light_LDR': 304, 'Rain_sensor': 776, 'pH_sensor': 7}
Published data Successfully: {'Temperature': 33, 'Soil_moisture': 24, 'Ambient_Light_LDR': 581, 'Rain_sensor': 158, 'pH_sensor': 6}
Published data Successfully: {'Temperature': 53, 'Soil_moisture': 80, 'Ambient_Light_LDR': 618, 'Rain_sensor': 874, 'pH_sensor': 6}
Published data Successfully: {'Temperature': 25, 'Soil_moisture': 54, 'Ambient_Light_LDR': 746, 'Rain_sensor': 537, 'pH_sensor': 6}
Published data Successfully: {'Temperature': -5, 'Soil_moisture': 89, 'Ambient_Light_LDR': 482, 'Rain_sensor': 738, 'pH_sensor': 9}
Published data Successfully: {'Temperature': 12, 'Soil_moisture': 25, 'Ambient_Light_LDR': 290, 'Rain_sensor': 953, 'pH_sensor': 9}
Published data Successfully: {'Temperature': -9, 'Soil_moisture': 64, 'Ambient_Light_LDR': 583, 'Rain_sensor': 637, 'pH_sensor': 8}
Published data Successfully: {'Temperature': 9, 'Soil_moisture': 44, 'Ambient_Light_LDR': 609, 'Rain_sensor': 330, 'pH_sensor': 7}
Published data Successfully: {'Temperature': 11, 'Soil_moisture': 69, 'Ambient_Light_LDR': 261, 'Rain_sensor': 445, 'pH_sensor': 8}
Published data Successfully: {'Temperature': 48, 'Soil_moisture': 73, 'Ambient_Light_LDR': 966, 'Rain_sensor': 135, 'pH_sensor': 5}
Message received from IBM IoT Platform: Motor_on
Motor is switched on

Published data Successfully: {'Temperature': -10, 'Soil_moisture': 41, 'Ambient_Light_LDR': 429, 'Rain_sensor': 296, 'pH_sensor': 7}
Published data Successfully: {'Temperature': 53, 'Soil_moisture': 77, 'Ambient_Light_LDR': 465, 'Rain_sensor': 152, 'pH_sensor': 5}
Published data Successfully: {'Temperature': 35, 'Soil_moisture': 48, 'Ambient_Light_LDR': 446, 'Rain_sensor': 152, 'pH_sensor': 5}
Published data Successfully: {'Temperature': 42, 'Soil_moisture': 20, 'Ambient_Light_LDR': 894, 'Rain_sensor': 547, 'pH_sensor': 5}
Published data Successfully: {'Temperature': 26, 'Soil_moisture': 41, 'Ambient_Light_LDR': 212, 'Rain_sensor': 529, 'pH_sensor': 8}
Published data Successfully: {'Temperature': 58, 'Soil_moisture': 43, 'Ambient_Light_LDR': 709, 'Rain_sensor': 256, 'pH_sensor': 6}
Message received from IBM IoT Platform: Motor_off
Motor is switched OFF

Published data Successfully: {'Temperature': 7, 'Soil_moisture': 33, 'Ambient_Light_LDR': 897, 'Rain_sensor': 976, 'pH_sensor': 8}
Published data Successfully: {'Temperature': 60, 'Soil_moisture': 11, 'Ambient_Light_LDR': 157, 'Rain_sensor': 841, 'pH_sensor': 9}
Published data Successfully: {'Temperature': 26, 'Soil_moisture': 83, 'Ambient_Light_LDR': 1018, 'Rain_sensor': 207, 'pH_sensor': 9}
Published data Successfully: {'Temperature': 30, 'Soil_moisture': 39, 'Ambient_Light_LDR': 836, 'Rain_sensor': 311, 'pH_sensor': 5}
```

OUTPUT

IBM Watson IoT Platform1904106ece@kit.edu.inID: 94ab7c

BrowseActionDevice TypesInterfacesAdd Device

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
>	Rk44	Disconnected	esp32_node	Device	Nov 1, 2022 10:50 PM	
▼	esp2	Connected	Node	Device	Nov 13, 2022 2:13 PM	→ ...

IdentityDevice InformationRecent EventsStateLogs

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

Event	Value	Format	Last Received
status	{"Temperature":33,"Soil_moisture":17,"Ambient...	json	a few seconds ago
status	{"Temperature":54,"Soil_moisture":43,"Ambient...	json	a few seconds ago
status	{"Temperature":44,"Soil_moisture":86,"Ambient...	json	a few seconds ago
status	{"Temperature":59,"Soil_moisture":14,"Ambient...	json	a few seconds ago
status	{"Temperature":8,"Soil_moisture":73,"Ambient_...	json	a few seconds ago