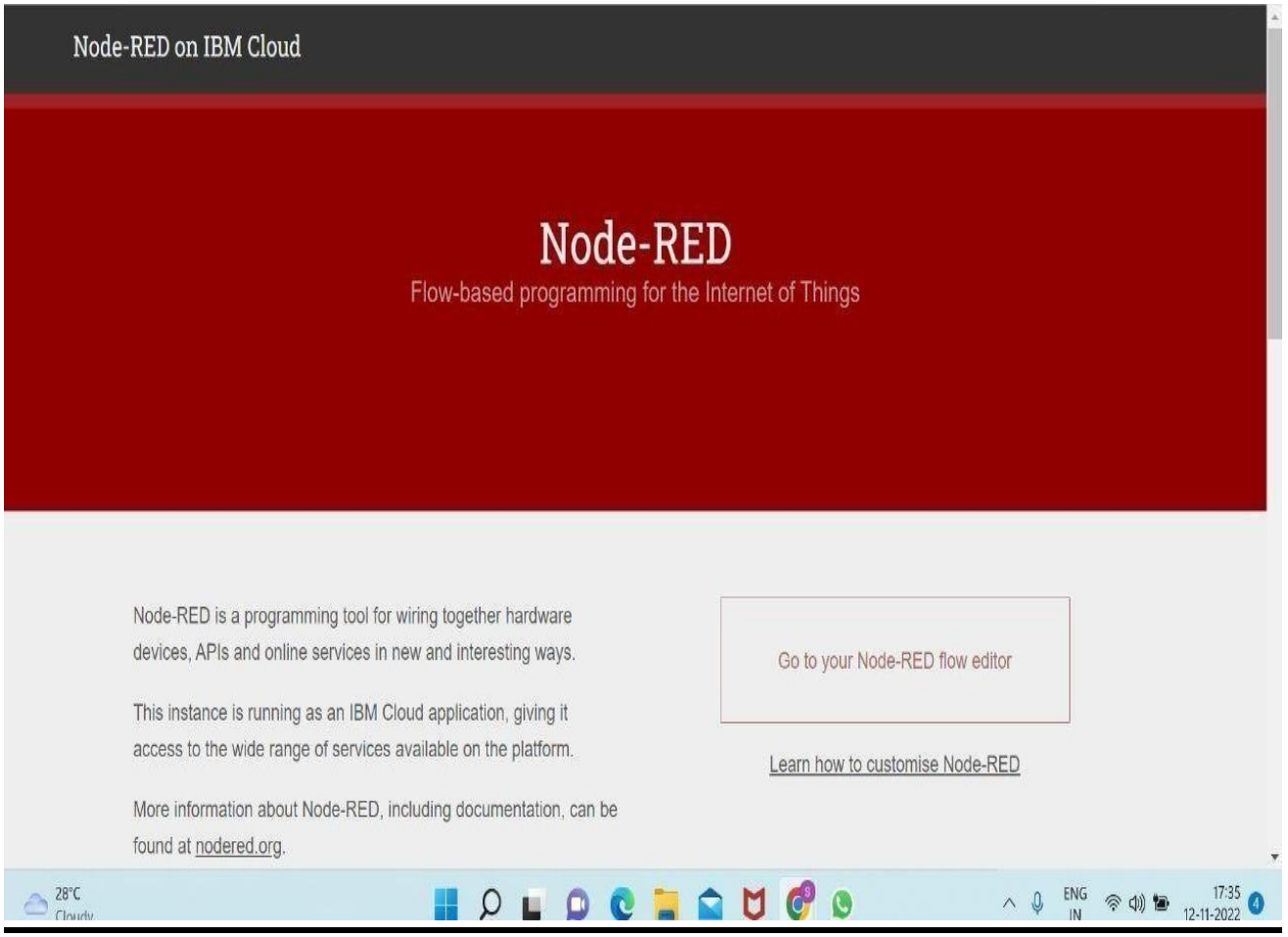
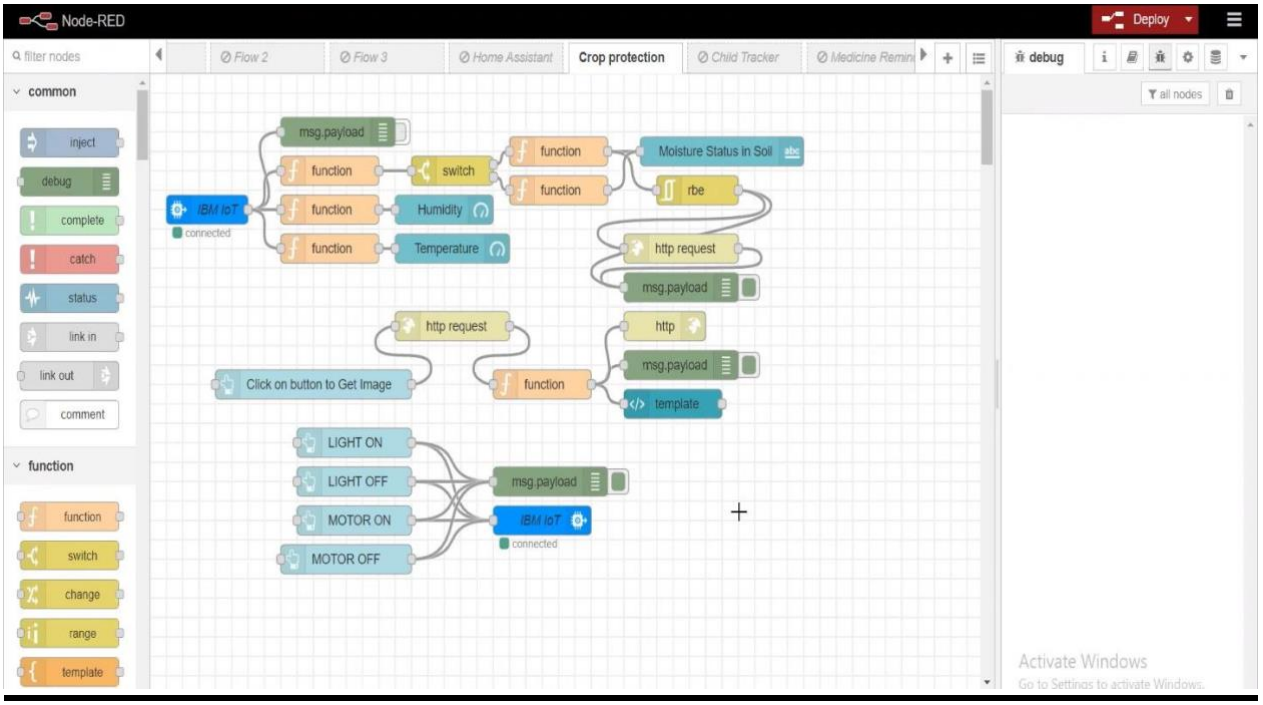
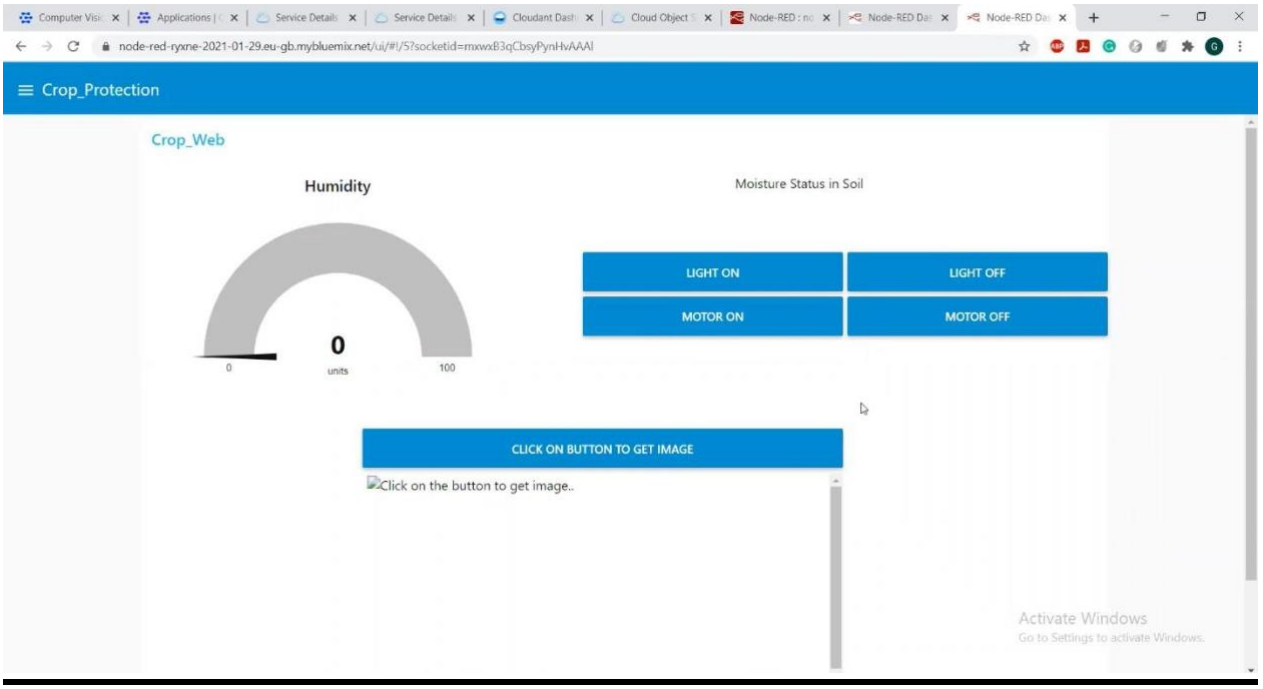
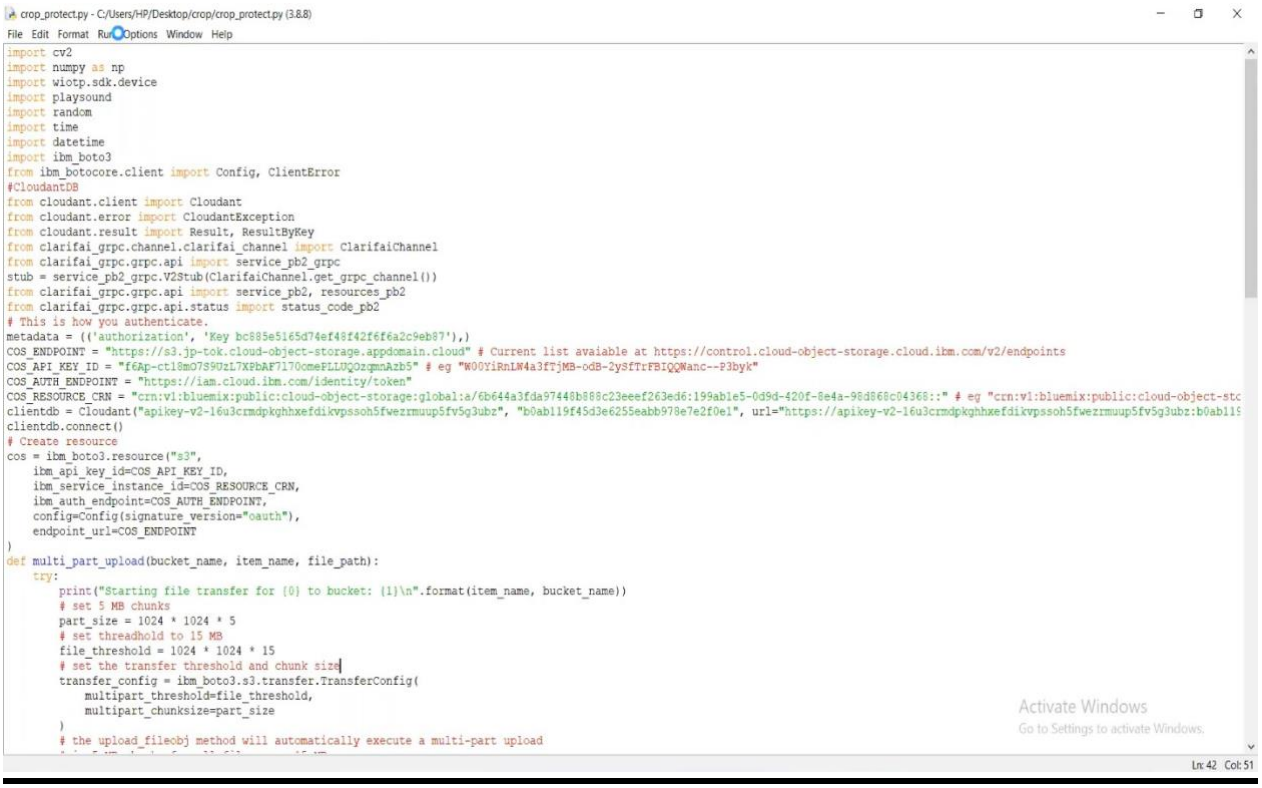
DEVELOP A WEB APPLICATION USING NODERED

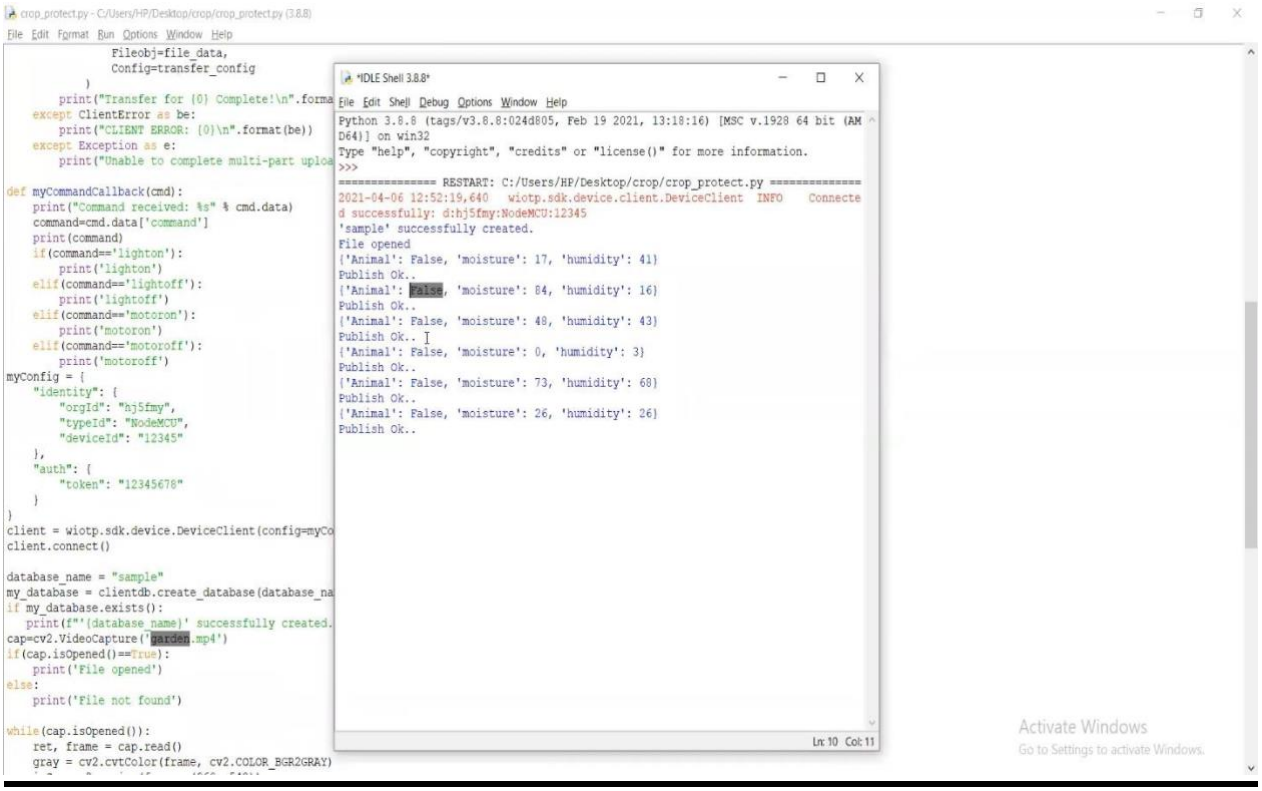
TEAM ID	**PNT2022TMID34153**
TITLE	**IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE**




Node-RED
Deploy
filter nodes
Flow 2
Flow 3
Home Assistant
Crop protection
Child Tracker
Medicine Remin
debug
all nodes
common
inject
debug
complete
catch
status
link in
link out
comment
function
function
switch
change
range
template
msg.payload
function
function
function
IBM IoT
connected
switch
Humidity
Temperature
function
function
Moisture Status in Soil
rbe
http request
msg.payload
http request
Click on button to Get Image
function
http
msg.payload
template
LIGHT ON
LIGHT OFF
MOTOR ON
MOTOR OFF
msg.payload
IBM IoT
connected
Activate Windows
Go to Settings to activate Windows.


node-red-ryxne-2021-01-29.eu-gb.mybluemix.net/ui/#!/5?socketid=mxwxB3qCbsyPynHvAAAI
Crop_Protection
Crop_Web
Humidity
0
units
0
100
Moisture Status in Soil
LIGHT ON
LIGHT OFF
MOTOR ON
MOTOR OFF
CLICK ON BUTTON TO GET IMAGE
Click on the button to get image..
Activate Windows
Go to Settings to activate Windows.


crop_protect.py - C:/Users/HP/Desktop/crop/crop_protect.py (3.8.8)
File Edit Format Run Options Window Help
import cv2
import numpy as np
import wiotp.sdk.device
import playsound
import random
import time
import datetime
import ibm_boto3
from ibm_botocore.client import Config, ClientError
#CloudantDB
from cloudant.client import Cloudant
from cloudant.error import CloudantException
from cloudant.result import Result, ResultByKey
from clarifai_grpc.channel.clarifai_channel import ClarifaiChannel
from clarifai_grpc.grpc.api import service_pb2_grpc
stub = service_pb2_grpc.V2Stub(ClarifaiChannel.get_grpc_channel())
from clarifai_grpc.grpc.api import service_pb2, resources_pb2
from clarifai_grpc.grpc.api.status import status_code_pb2
# This is how you authenticate.
metadata = (('authorization', 'Key bc885e5165d74ef48f42f6f6a2c9eb87'),)
COS_ENDPOINT = "https://s3.jp-tok.cloud-object-storage.appdomain.cloud" # Current list avaiable at https://control.cloud-object-storage.cloud.ibm.com/v2/endpoints
COS_API_KEY_ID = "f6Ap-ct18mO7S9UzL7XPbAF7170omePLLUQOzqmnAzb5" # eg "W00YiRnLW4a3fTjMB-odB-2ySfTrFBIQQWanc--P3byk"
COS_AUTH_ENDPOINT = "https://iam.cloud.ibm.com/identity/token"
COS_RESOURCE_CRN = "crn:v1:bluemix:public:cloud-object-storage:global:a/6b644a3fda97448b888c23eeef263ed6:199ab1e5-0d9d-420f-8e4a-98d868c04368::" # eg "crn:v1:bluemix:public:cloud-object-stc
clientdb = Cloudant("apikey-v2-16u3crmdpkghhxefdikvpssoh5fwezrmuup5fv5g3ubz", "b0ab119f45d3e6255eabb978e7e2f0e1", url="https://apikey-v2-16u3crmdpkghhxefdikvpssoh5fwezrmuup5fv5g3ubz:b0ab11
clientdb.connect()
# Create resource
cos = ibm_boto3.resource("s3",
ibm_api_key_id=COS_API_KEY_ID,
ibm_service_instance_id=COS_RESOURCE_CRN,
ibm_auth_endpoint=COS_AUTH_ENDPOINT,
config=Config(signature_version="oauth"),
endpoint_url=COS_ENDPOINT
)
def multi_part_upload(bucket_name, item_name, file_path):
try:
print("Starting file transfer for {0} to bucket: {1}\n".format(item_name, bucket_name))
# set 5 MB chunks
part_size = 1024 * 1024 * 5
# set threadhold to 15 MB
file_threshold = 1024 * 1024 * 15
# set the transfer threshold and chunk size
transfer_config = ibm_boto3.s3.transfer.TransferConfig(
multipart_threshold=file_threshold,
multipart_chunksize=part_size
)
the upload_fileobj method will automatically execute a multi-part upload
Activate Windows
Go to Settings to activate Windows.
Ln: 42 Col: 51


crop_protect.py - C:/Users/HP/Desktop/crop/crop_protect.py (3.8.8)
File Edit Format Run Options Window Help
Fileobj=file_data,
Config=transfer_config
)
print("Transfer for {0} Complete!\n".forma
except ClientError as be:
print("CLIENT ERROR: {0}\n".format(be))
except Exception as e:
print("Unable to complete multi-part uploa
def myCommandCallback(cmd):
print("Command received: %s" % cmd.data)
command=cmd.data['command']
print(command)
if(command=='lighton'):
print('lighton')
elif(command=='lightoff'):
print('lightoff')
elif(command=='motoron'):
print('motoron')
elif(command=='motoroff'):
print('motoroff')
myConfig = {
"identity": {
"orgId": "hj5fmy",
"typeId": "NodeMCU",
"deviceId": "12345"
},
"auth": {
"token": "12345678"
}
}
client = wiotp.sdk.device.DeviceClient(config=myCo
client.connect()
database_name = "sample"
my_database = clientdb.create_database(database_na
if my_database.exists():
print(f"'{database_name}' successfully created.
cap=cv2.VideoCapture('garden.mp4')
if(cap.isOpened()==True):
print('File opened')
else:
print('File not found')
while(cap.isOpened()):
ret, frame = cap.read()
gray = cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY)
IDLE Shell 3.8.8
File Edit Shell Debug Options Window Help
Python 3.8.8 (tags/v3.8.8:024d805, Feb 19 2021, 13:18:16) [MSC v.1928 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/HP/Desktop/crop/crop_protect.py ==========
2021-04-06 12:52:19,640 wiotp.sdk.device.client.DeviceClient INFO Connecte
d successfully: d:hj5fmy:NodeMCU:12345
'sample' successfully created.
File opened
{'Animal': False, 'moisture': 17, 'humidity': 41}
Publish Ok..
{'Animal': False, 'moisture': 84, 'humidity': 16}
Publish Ok..
{'Animal': False, 'moisture': 48, 'humidity': 43}
Publish Ok..
{'Animal': False, 'moisture': 0, 'humidity': 3}
Publish Ok..
{'Animal': False, 'moisture': 73, 'humidity': 68}
Publish Ok..
{'Animal': False, 'moisture': 26, 'humidity': 26}
Publish Ok..
Ln: 10 Col: 11
Activate Windows
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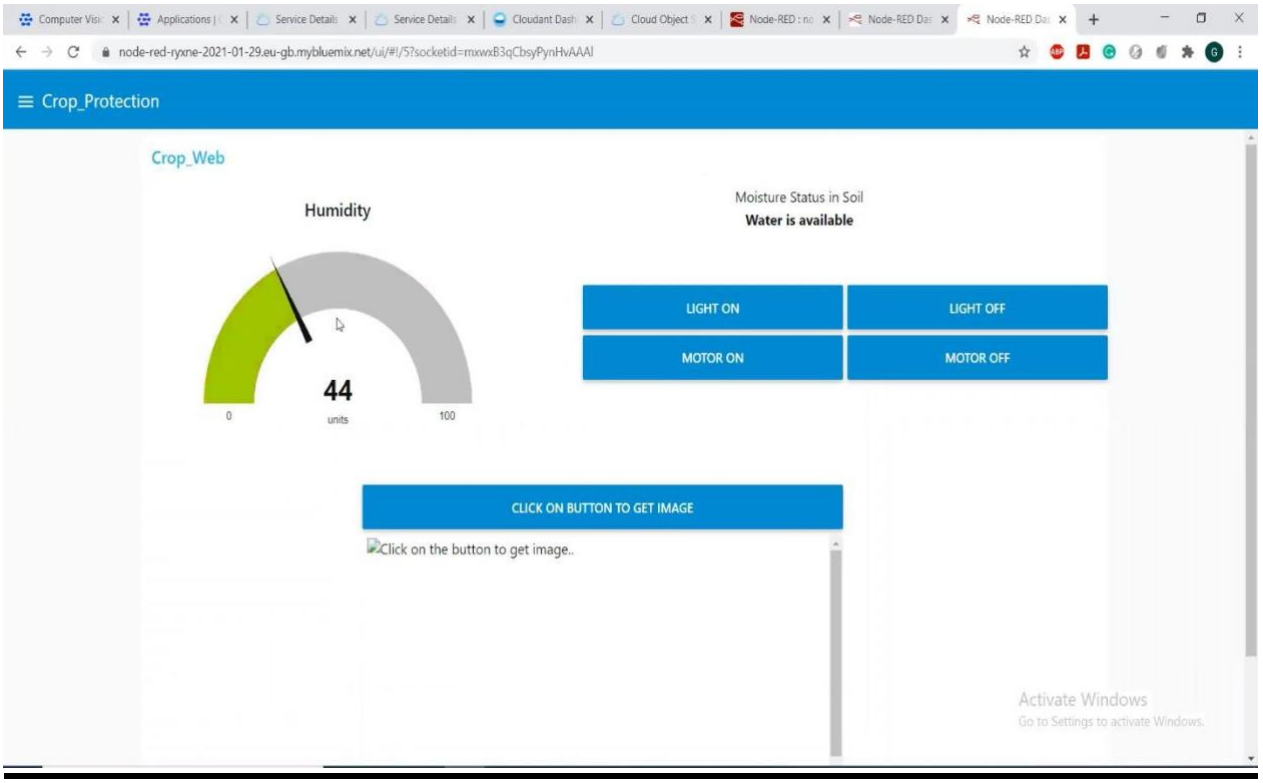
node-red-ryxne-2021-01-29.eu-gb.mybluemix.net/ui/#!/5?socketid=mxwxB3qCbsyPynHvAAAI
Crop_Protection
Crop_Web
Humidity
44
0
units
100
Moisture Status in Soil
Water is available
LIGHT ON
LIGHT OFF
MOTOR ON
MOTOR OFF
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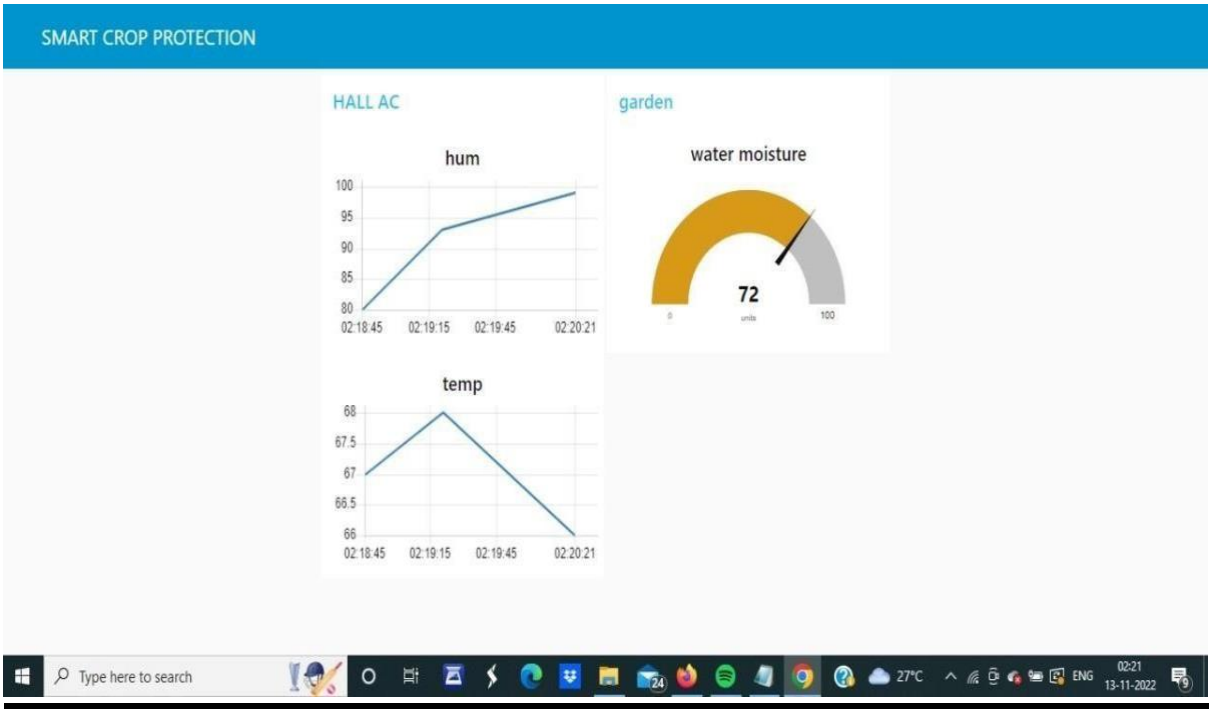
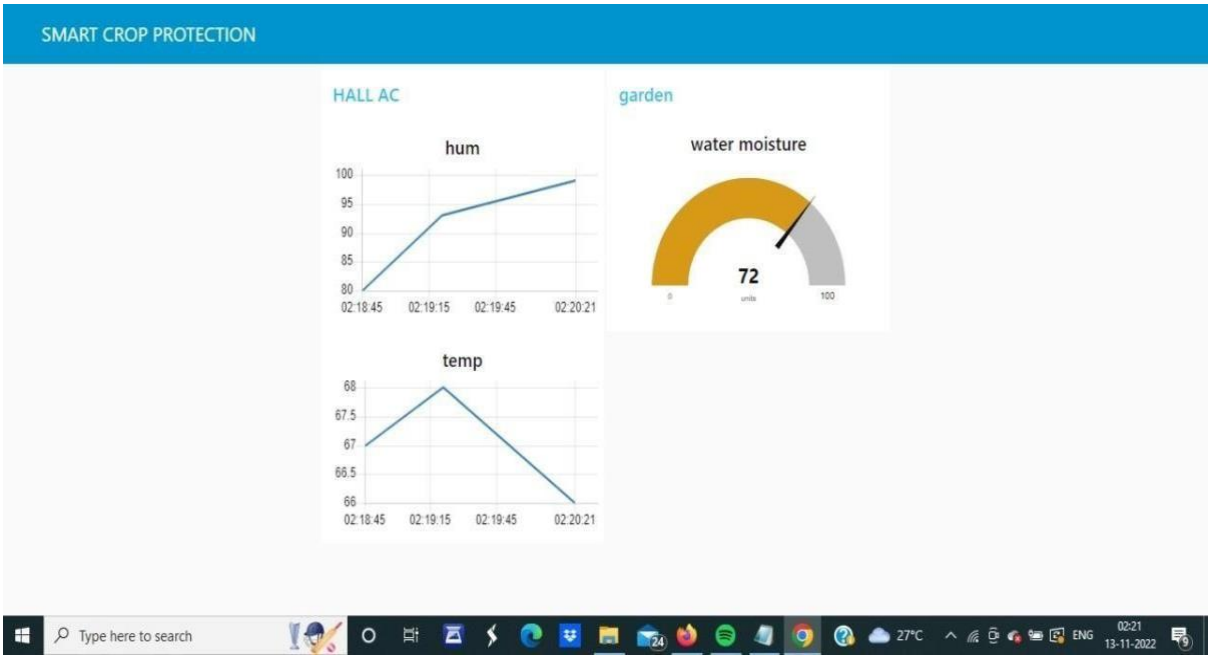
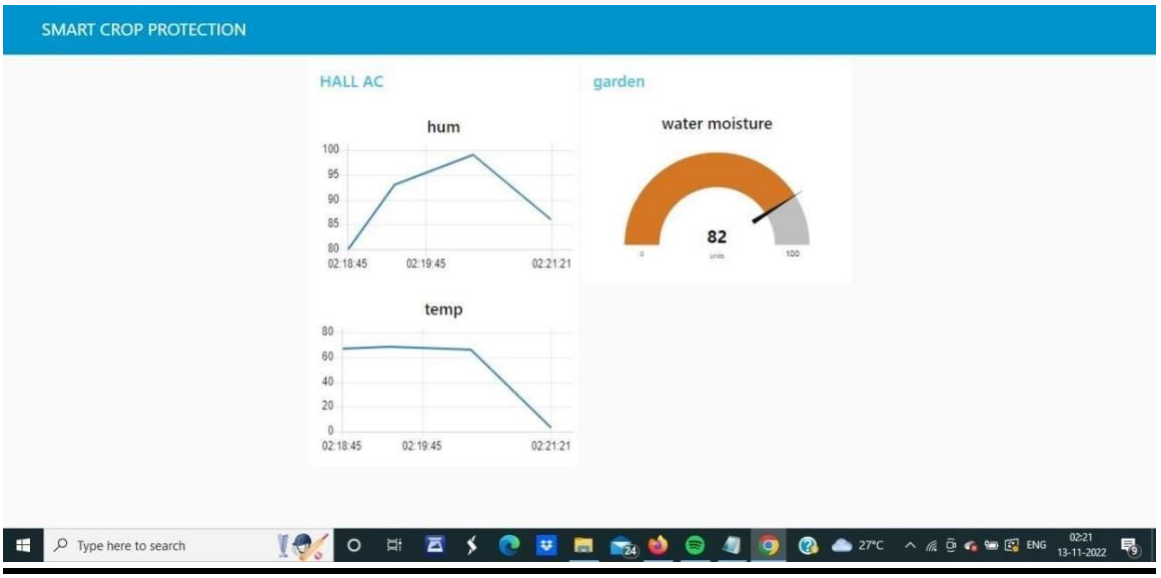

SMART CROP PROTECTION
HALL AC
hum
100
95
90
85
80
02:18:45
02:19:15
02:19:45
02:20:21
temp
68
67.5
67
66.5
66
02:18:45
02:19:15
02:19:45
02:20:21
garden
water moisture
72
100
Type here to search
27°C
ENG
02:21
13-11-2022


SMART CROP PROTECTION
HALL AC
hum
100
95
90
85
80
02:18:45
02:19:15
02:19:45
02:20:21
temp
68
67.5
67
66.5
66
02:18:45
02:19:15
02:19:45
02:20:21
garden
water moisture
72
0
100
Type here to search
27°C
ENG
02:21
13-11-2022


SMART CROP PROTECTION
HALL AC
hum
100
95
90
85
80
02:18:45
02:19:45
02:21:21
temp
80
60
40
20
0
02:18:45
02:19:45
02:21:21
garden
water moisture
82
0
100
Type here to search
27°C
ENG
02:21
13-11-2022