FINAL DELIVERABLES

Date	17 November 2022
Team ID	PNT2022TMID44390
Project Name	Project Title – Smart Farmer - IOT Enabled smart Farming Application

QR CODE FOR APP

EXPERIMENTAL ANALYSIS:

According to our project, ”SMART FARMER - IOT ENABLED SMART FARMING APPLICATION” we have soil moisture,Temperature and Humidity. The random number is automatically generated due to these analysis.

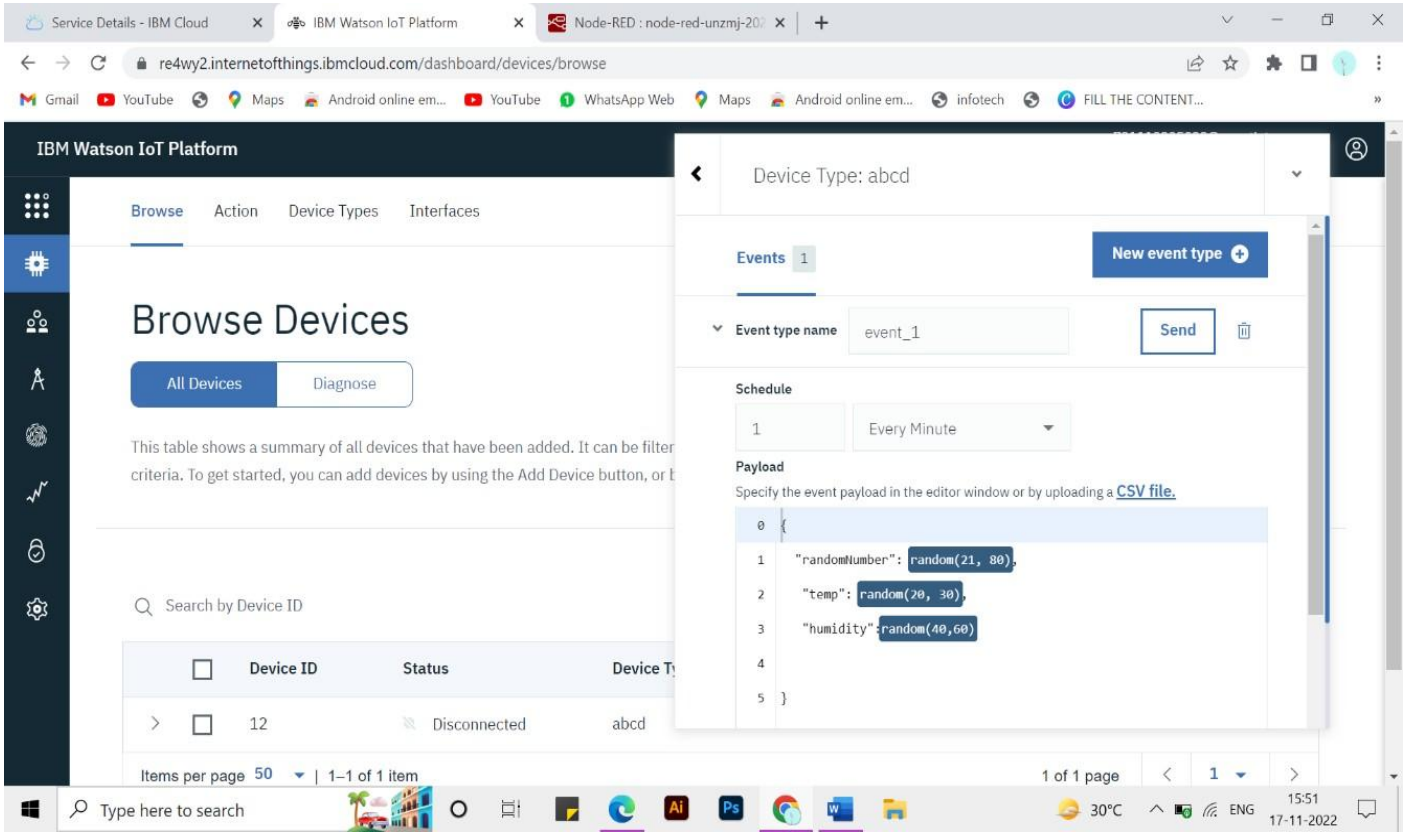
PROPOSED SOLUTION:

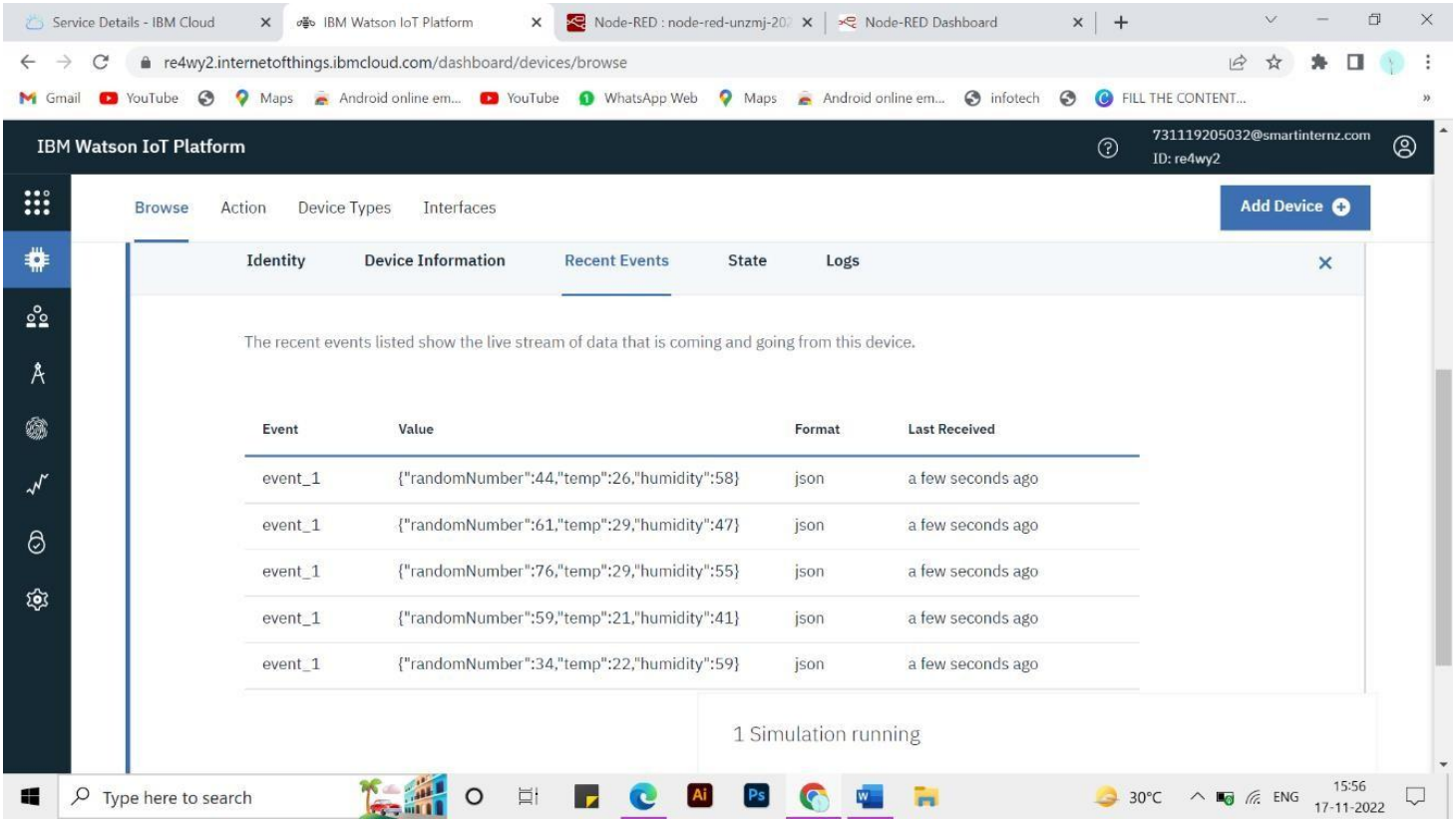
We can use precision farming methodologies. They can make the decision whether to water the crop or postpone it by monitoring the sensor parameters and controlling the motor pumps from the mobile application itself. Automation of watering crops reduces human intervention. IOT in business can instruct systems to autonomously execute transactions in supply chains when certain conditions have been met.Increase productivity and reliability in real time environment.

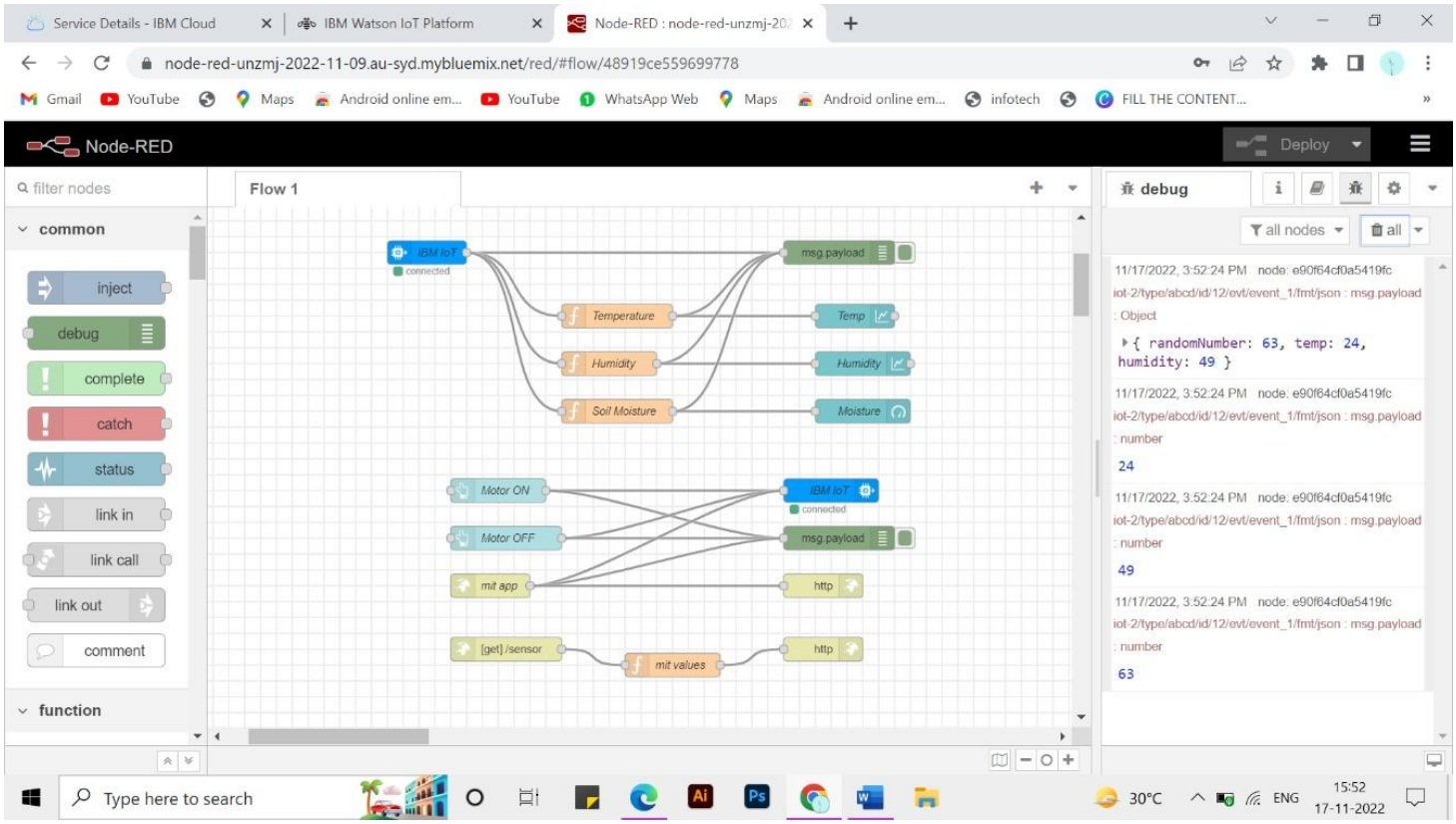
APPLICATIONS:

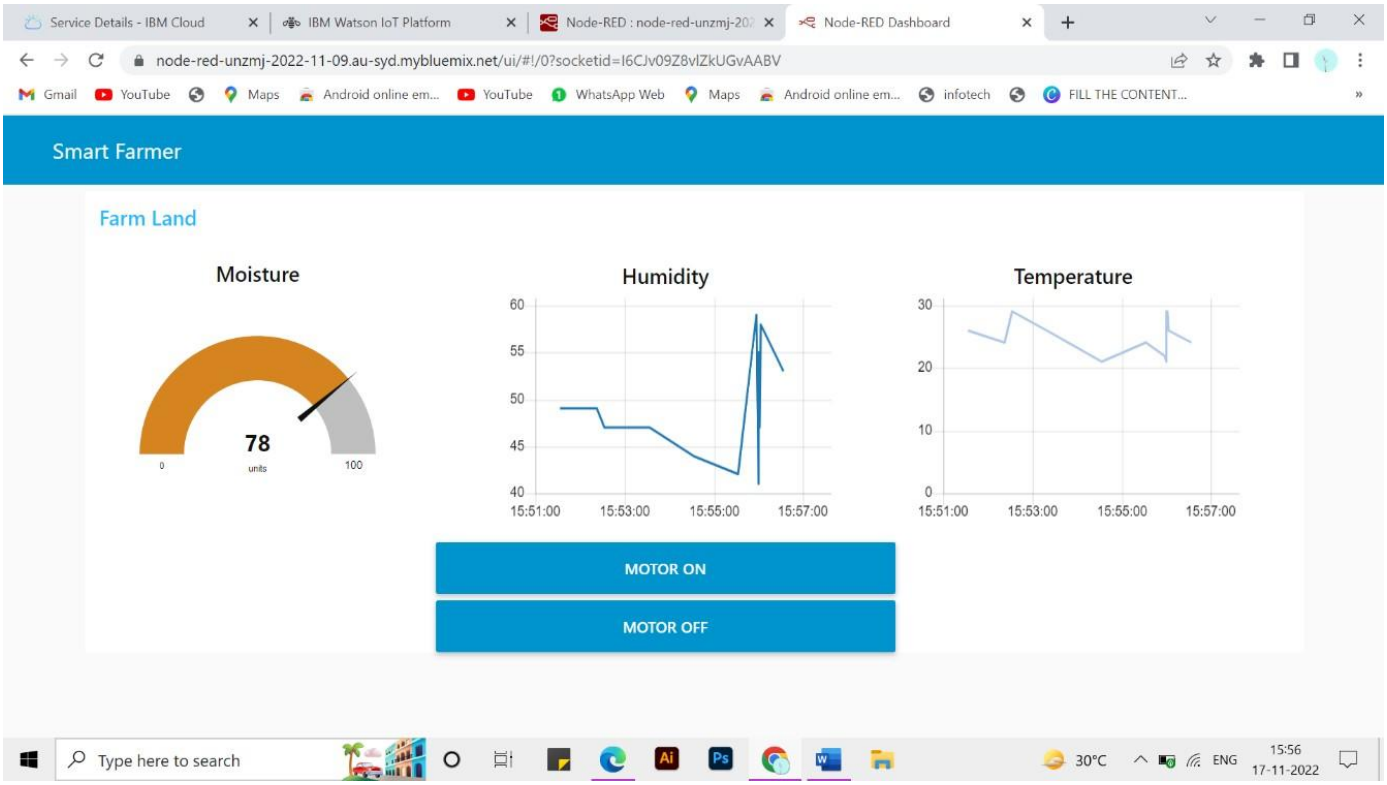
1. Precision Farming
2. Monitor climate conditions
3. Remote sensing
4. Predictive analysis
5. Livestock monitoring

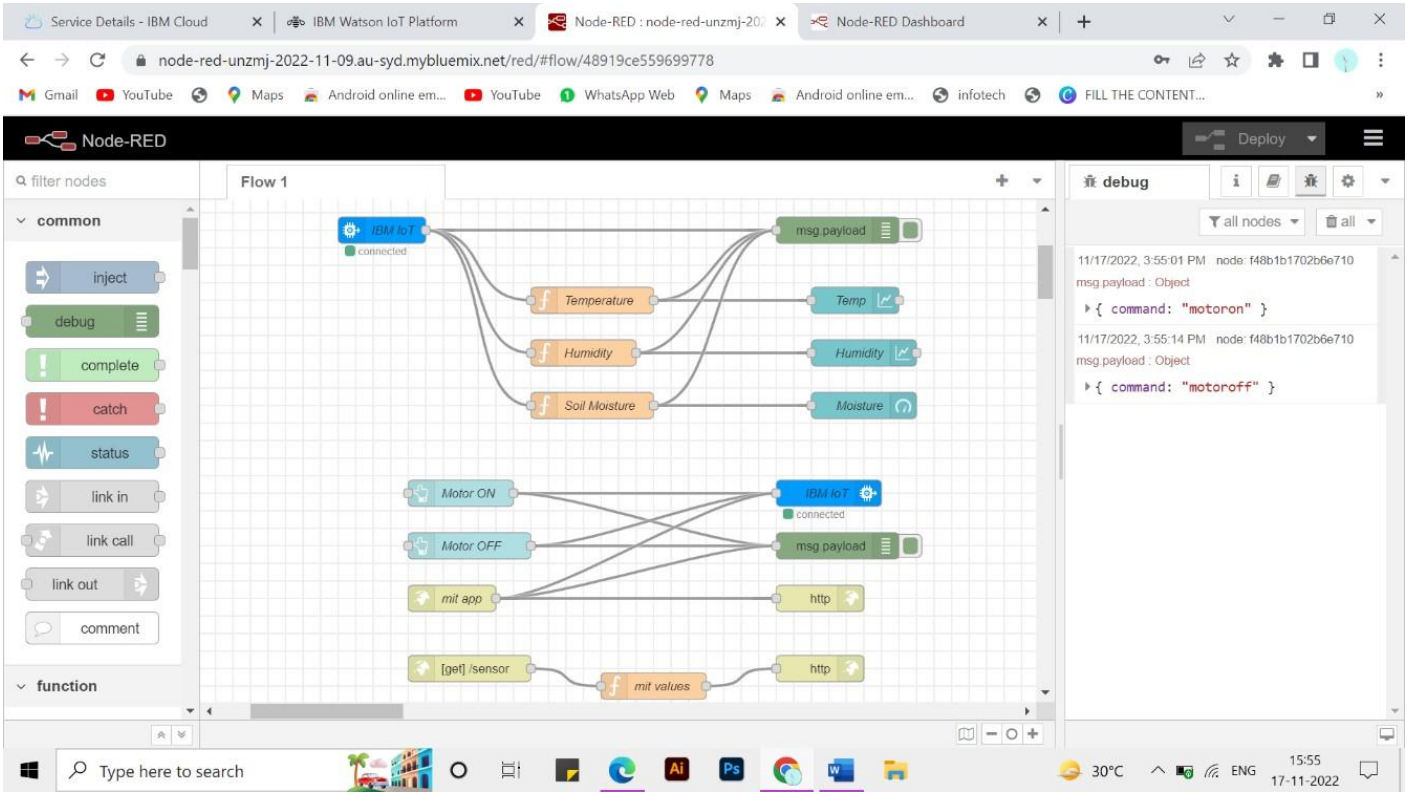
WEB APPLICATION:




Service Details - IBM Cloud
IBM Watson IoT Platform
Node-RED Dashboard
re4wy2.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
731119205032@smartinternz.com
ID: re4wy2
Browse
Action
Device Types
Interfaces
Add Device
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 {"randomNumber":44,"temp":26,"humidity":58} json a few seconds ago
event_1 {"randomNumber":61,"temp":29,"humidity":47} json a few seconds ago
event_1 {"randomNumber":76,"temp":29,"humidity":55} json a few seconds ago
event_1 {"randomNumber":59,"temp":21,"humidity":41} json a few seconds ago
event_1 {"randomNumber":34,"temp":22,"humidity":59} json a few seconds ago
1 Simulation running
Type here to search
30°C
ENG
15:56
17-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
Node-RED : node-red-unzmj-20
node-red-unzmj-2022-11-09.au-syd.mybluemix.net/red/#flow/48919ce559699778
Node-RED
Deploy
filter nodes
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
IBM IoT
connected
msg.payload
Temperature
Temp
Humidity
Humidity
Soil Moisture
Moisture
Motor ON
Motor OFF
mit app
IBM IoT
connected
msg.payload
http
[get] /sensor
mit values
http
debug
all nodes
all
11/17/2022, 3:52:24 PM node: e90f64cf0a5419fc
iot-2/type/abcd/id/12/evt/event_1/fmt/json : msg.payload
: Object
{ randomNumber: 63, temp: 24, humidity: 49 }
11/17/2022, 3:52:24 PM node: e90f64cf0a5419fc
iot-2/type/abcd/id/12/evt/event_1/fmt/json : msg.payload
: number
24
11/17/2022, 3:52:24 PM node: e90f64cf0a5419fc
iot-2/type/abcd/id/12/evt/event_1/fmt/json : msg.payload
: number
49
11/17/2022, 3:52:24 PM node: e90f64cf0a5419fc
iot-2/type/abcd/id/12/evt/event_1/fmt/json : msg.payload
: number
63
Type here to search
30°C
ENG
15:52
17-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
Node-RED : node-red-unzmj-20
Node-RED Dashboard
node-red-unzmj-2022-11-09.au-syd.mybluemix.net/ui/#!/0?socketid=I6CJv09Z8vIZkUGvAABV
Smart Farmer
Farm Land
Moisture
78
units
0
100
Humidity
60
55
50
45
40
15:51:00
15:53:00
15:55:00
15:57:00
Temperature
30
20
10
0
15:51:00
15:53:00
15:55:00
15:57:00
MOTOR ON
MOTOR OFF
Type here to search
30°C
ENG
15:56
17-11-2022


Service Details - IBM Cloud
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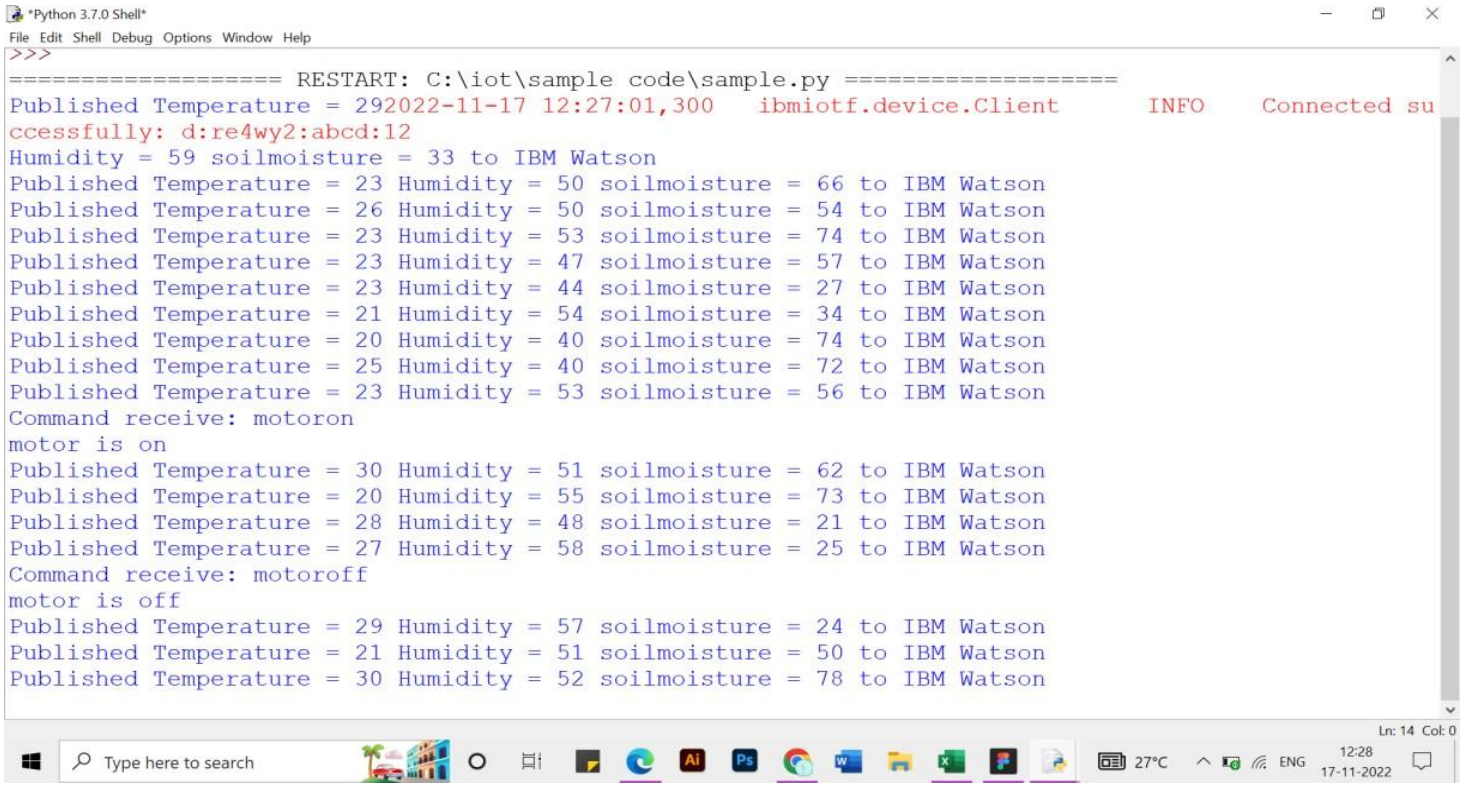
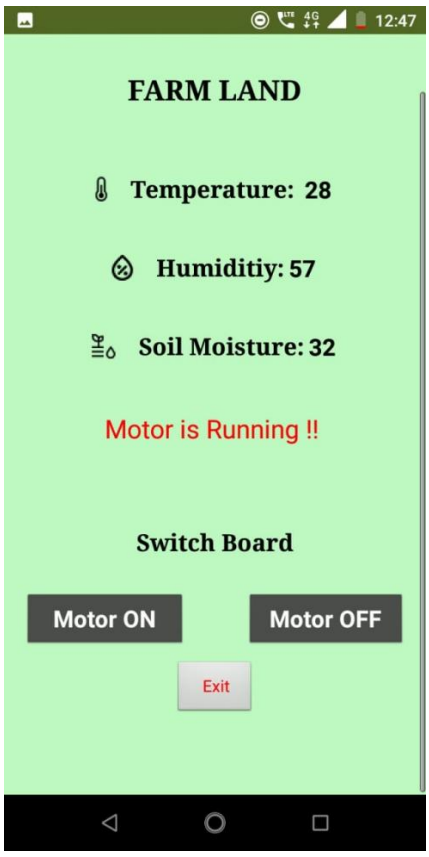
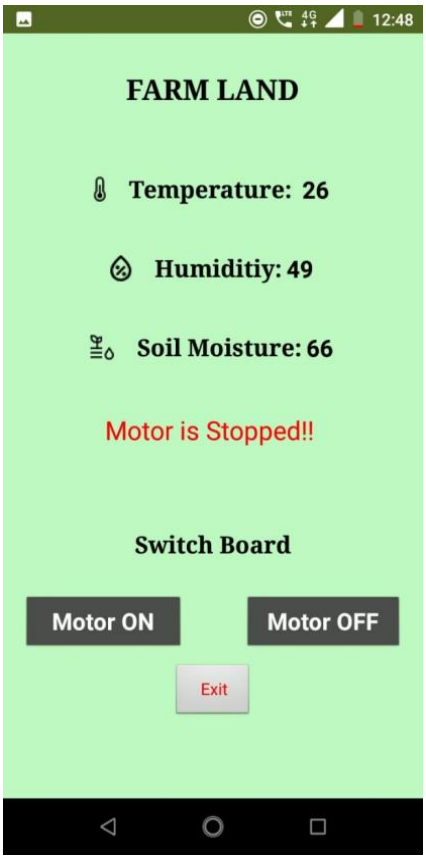
Node-RED Dashboard
node-red-unzmj-2022-11-09.au-syd.mybluemix.net/red/#flow/48919ce559699778
Node-RED
Deploy
filter nodes
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
Flow 1
IBM IoT
connected
msg.payload
Temperature
Temp
Humidity
Humidity
Soil Moisture
Moisture
Motor ON
Motor OFF
mit app
[get] /sensor
mit values
http
http
debug
all nodes
all
11/17/2022, 3:55:01 PM node: f48b1b1702b6e710
msg.payload : Object
{ command: "motoron" }
11/17/2022, 3:55:14 PM node: f48b1b1702b6e710
msg.payload : Object
{ command: "motoroff" }
Type here to search
30°C
ENG
15:55
17-11-2022



MOBILE APPLICATION:





CONCLUSION:

So after knowing about some IOT applications in agriculture, we can say that it is definitely revolutionize the agriculture industry in a few years. IOT has been applied in several areas of agriculture. A lot of research is underway to ensure more IOT devices are used to make the managing of farms easier and increase productivity. IOT is allowing farmers to easily obtain data that is useful in many ways such as decision making. With the increasing demand for food due to the rapid population increase, we expect more IOT applications in the next few years.The system uses information from soil moisture sensors to irrigate the soil to avoid the damage of crops due to over irrigation or under irrigation. The project provided us with an opportunity to study the existing systems, along with their features and drawbacks. Future work includes the usage of the application in the native languages. Also giving notifications in native audio format to assist the farmers.

FUTURE SCOPE:

IOT is bound to be an effective technology in the future, and IOT enabled devices are likely to be all-pervasive, from industry to households. The future scope of IOT is bright and varied, and it is only a matter of time before the above applications of the technology are realized. IOT smart agriculture products are designed to help monitor crop fields using sensors and by automating irrigation systems. As a result, farmers and associated brands can easily monitor the field conditions from anywhere without any hassle.

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editorijettcs@ gmail. com, 2(5).
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