SMARTFARMER - IOT ENABLED SMART FARMING APPLICATION

PROBLEM STATEMENT:

To create IoT-based agriculture system that helps the farmer in monitoring different parameters of his field like soil moisture, temperature, and humidity using some sensors.

DESCRIPTION:

Remote sensing in agriculture is the revolutionizing the way the data is acquired from different nodes in farm 'IOT-based remote sensing utilizes sensors placed along with the farms like weather stations for gathering data, which is transmitted to analytical tools for analysis. Farmers can monitor the crops from the analytical dashboard and take actions based on the insights.

PROJECT OBJECTIVES:

- Gain knowledge of Watson IoT Platform.
- Connecting IoT devices to the Watson IoT platform and exchanging the sensor data.
- Explore python client libraries of Watson IoT Platform.
- Gain knowledge on IBM Cloudant DB
- Configuring APIs using Node-RED for communicating with a mobile application.
- Creating a Mobile Application through which the user interacts with the IoT device.

TECHNICAL ARCHITECTURE:
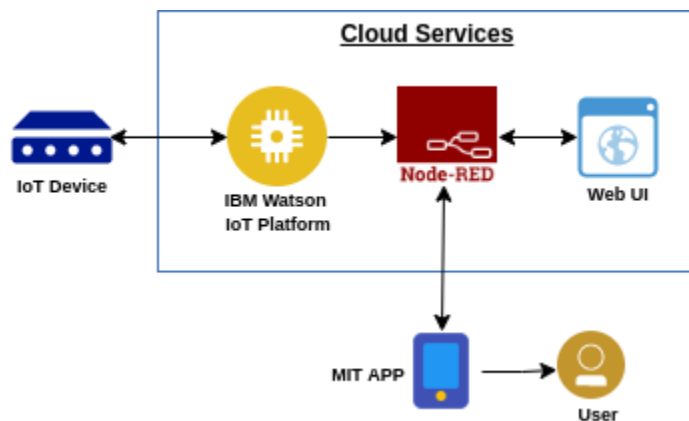
SCREENSHOTS OF SESSION OUTCOMES:

Variables & Datatypes in Python:

IoT-B4-4M6E(Evening Session)-Day-6

```
"""
A=4+3j
print (A)
b=True
c=False
print (b)
print (c)

d="harish"
print (d)
print (len(d))

print (d[2])

#silicing
print(d[0:4]) #(start_index, stop_index-1)
print (d[0::2])#(start_index, stop_index-1,gap)
```

Python 3.7.0 Shell

File Edit Shell Debug Options Window Help

```
False
harish
6
>>>
================ RESTART: C:/Users/hp/Desktop/variables1.py ================
(4+3j)
True
False
harish
6
r
>>>
================ RESTART: C:/Users/hp/Desktop/variables1.py ================
(4+3j)
True
False
harish
6
r
har
>>>
================ RESTART: C:/Users/hp/Desktop/variables1.py ================
(4+3j)
True
False
harish
6
r
hari
>>>
================ RESTART: C:/Users/hp/Desktop/variables1.py ================
(4+3j)
True
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harish
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hrs
>>>
```

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IoT-B4-4M6E(Evening Session)-Day-6

File Edit Format Run Options Window Help

```
COLLECTION DATA TYPE:
a)LIST
b)TUPLE
C)SET
D)DICITIONARY
A=4+3j
print (A)
b=True
c=False
print (b)
print (c)
"""
d="welcome to traning session"
print (d)
print (len(d))

print (d[2])

#silicing
print(d[0:4]) #(start_index, stop_index-1)
print (d[0::3])#(start_index, stop_index-1,gap)
print (d[-8:])# reverse order (start_index, stop_index-1,gap)


a="       welcome to traning session       "

print (a)

print (a.strip())#lstrip,rstrip

print (a.count ('n'))#count

print (a.replace ("session","classess"))
```

Ln: 64 Col: 12