

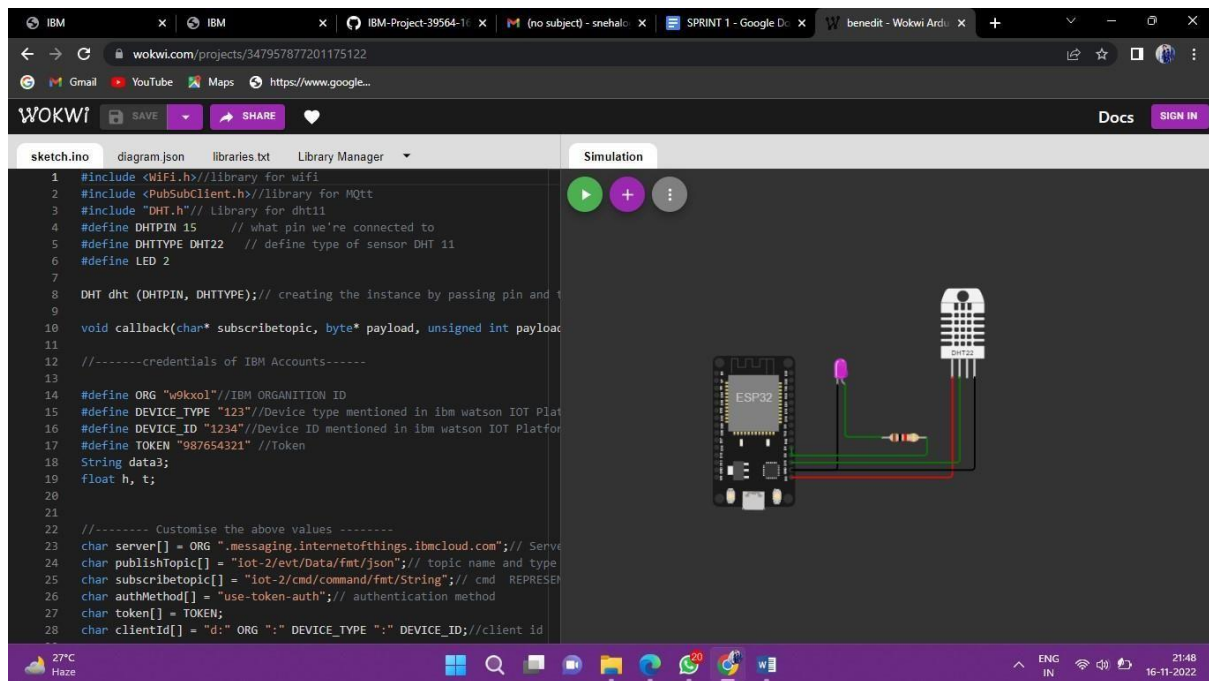
SMART FARMER – IOT ENABLEDD SMART FARMING APPLICATION

PROJECT DEVELOPMENT – DELIVERY OF SPRINT - 1

DATE	08 NOVEMBER 2022
TITLE	SMART FARMER – IOT ENABLED SMART FARMING APPLICATION
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Connect Sensor in ESP8266

CIRCUIT DIAGRAM:



Develop a Python Code:

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

#Provide your IBM Watson Device Credentials
organization = "w9kxol" deviceType = "123"
deviceId = "1234" authMethod = "token"
authToken =
"987654321"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command'] if status=="motoron":
    print ("motor is on") elif status == "motoroff": print
    ("motor is off") else :
    print ("please send proper command") try:
    deviceOptions = {"org": organization, "type":
    deviceType, "id": deviceId, "authmethod":
    authMethod, "auth-token": authToken} deviceCli
    = ibmiotf.device.Client(deviceOptions)
        #..... except

Exception as e:

print("Caught exception connecting device: %s" %
                                str(e))

    sys.exit()

# Connect and send a datapoint "hello" with value
"world" into the cloud as an event of type
"greeting" 10 times deviceCli.connect()
while True:
    #Get Sensor Data from DHT11

    temp=random.randint(90,110)
    Humid=random.randint(60,100)
```

```

moist=random.randint(50,120)  data = { 'temp' :
temp, 'Humid': Humid , 'moist':moist}
#print data  def myOnPublishCallback():  print
("Published Temperature = %s C" % temp,
"Humidity = %s %"
% Humid,"soilmoisture=%s %" % moist, "to IBM
Watson")

success = deviceCli.publishEvent("IoTSensor",
"json", data,
qos=0, on_publish=myOnPublishCallback
)
if not success:  print("Not connected
to IoTTF")
time.sleep(10)

deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()

```

OUTPUT:

```

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

import random

#Provide your IBM Watson Device Credentials
organization = "wskcc03"
deviceType = "123"
deviceId = "1234"
authMethod = "token"
authToken = "997654321"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: '%s' & cmd.data['command']")
    status=cmd.data['command']
    if status=="motoron":
        print("motor is on")
    elif status=="motoroft":
        print("motor is off")
    else:
        print("please send proper command")

try:
    deviceOptions = {"org": organization, "type":
deviceCli = ibmiotf.device.Client(deviceOptions)

except Exception as e:
    print("Caught exception connecting device: %s" %
sys.exit()

```

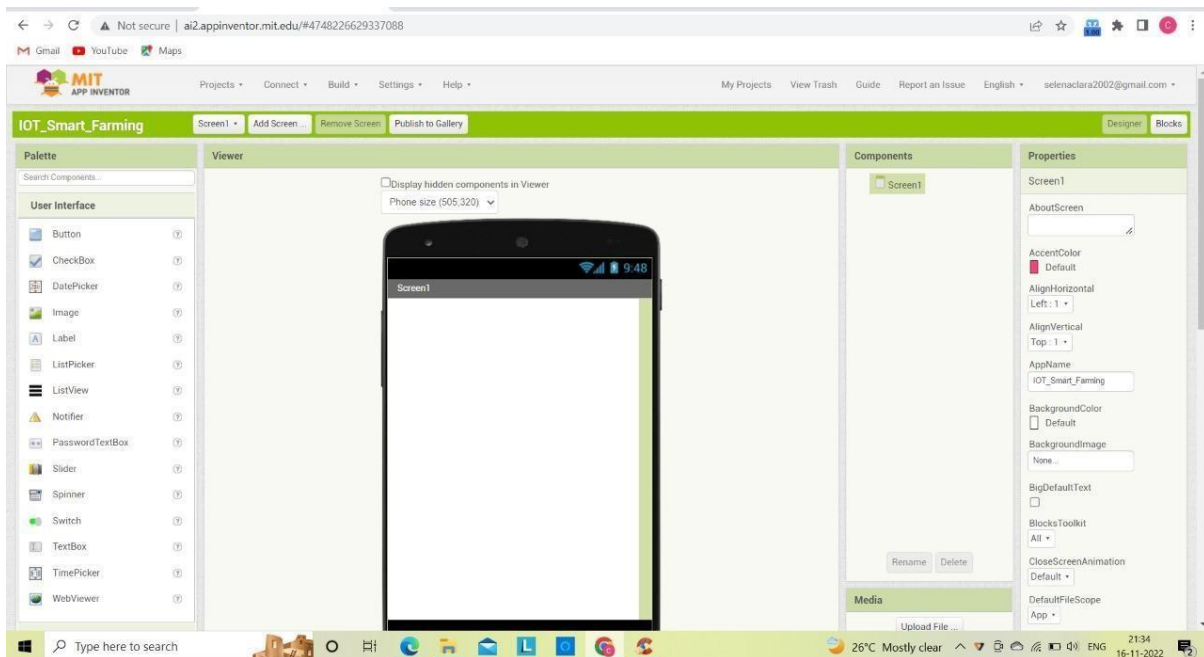
```

Published Temperature = 90 C Humidity = 83 % soilmoisture=76 % to IBM Watson
Published Temperature = 108 C Humidity = 63 % soilmoisture=16 % to IBM Watson
Published Temperature = 110 C Humidity = 61 % soilmoisture=86 % to IBM Watson
Published Temperature = 103 C Humidity = 71 % soilmoisture=83 % to IBM Watson
Command received: motoron
motor is on
Published Temperature = 106 C Humidity = 81 % soilmoisture=101 % to IBM Watson
Published Temperature = 109 C Humidity = 74 % soilmoisture=78 % to IBM Watson
Published Temperature = 90 C Humidity = 89 % soilmoisture=53 % to IBM Watson
Published Temperature = 109 C Humidity = 68 % soilmoisture=115 % to IBM Watson
Published Temperature = 94 C Humidity = 85 % soilmoisture=81 % to IBM Watson
Published Temperature = 100 C Humidity = 82 % soilmoisture=74 % to IBM Watson
Published Temperature = 97 C Humidity = 65 % soilmoisture=41 % to IBM Watson
Published Temperature = 104 C Humidity = 90 % soilmoisture=85 % to IBM Watson
Published Temperature = 108 C Humidity = 86 % soilmoisture=91 % to IBM Watson
Published Temperature = 101 C Humidity = 97 % soilmoisture=100 % to IBM Watson
Published Temperature = 101 C Humidity = 82 % soilmoisture=78 % to IBM Watson
Published Temperature = 100 C Humidity = 76 % soilmoisture=88 % to IBM Watson
Published Temperature = 103 C Humidity = 66 % soilmoisture=96 % to IBM Watson
Published Temperature = 98 C Humidity = 97 % soilmoisture=71 % to IBM Watson
Published Temperature = 110 C Humidity = 94 % soilmoisture=81 % to IBM Watson
Published Temperature = 104 C Humidity = 68 % soilmoisture=119 % to IBM Watson
Published Temperature = 97 C Humidity = 88 % soilmoisture=78 % to IBM Watson
Published Temperature = 104 C Humidity = 71 % soilmoisture=116 % to IBM Watson
Published Temperature = 98 C Humidity = 84 % soilmoisture=111 % to IBM Watson
Published Temperature = 99 C Humidity = 98 % soilmoisture=75 % to IBM Watson
Published Temperature = 104 C Humidity = 67 % soilmoisture=57 % to IBM Watson
Published Temperature = 96 C Humidity = 80 % soilmoisture=97 % to IBM Watson
Published Temperature = 92 C Humidity = 70 % soilmoisture=76 % to IBM Watson
Published Temperature = 108 C Humidity = 79 % soilmoisture=88 % to IBM Watson
Published Temperature = 96 C Humidity = 87 % soilmoisture=116 % to IBM Watson
Published Temperature = 103 C Humidity = 74 % soilmoisture=88 % to IBM Watson
Published Temperature = 99 C Humidity = 71 % soilmoisture=192 % to IBM Watson

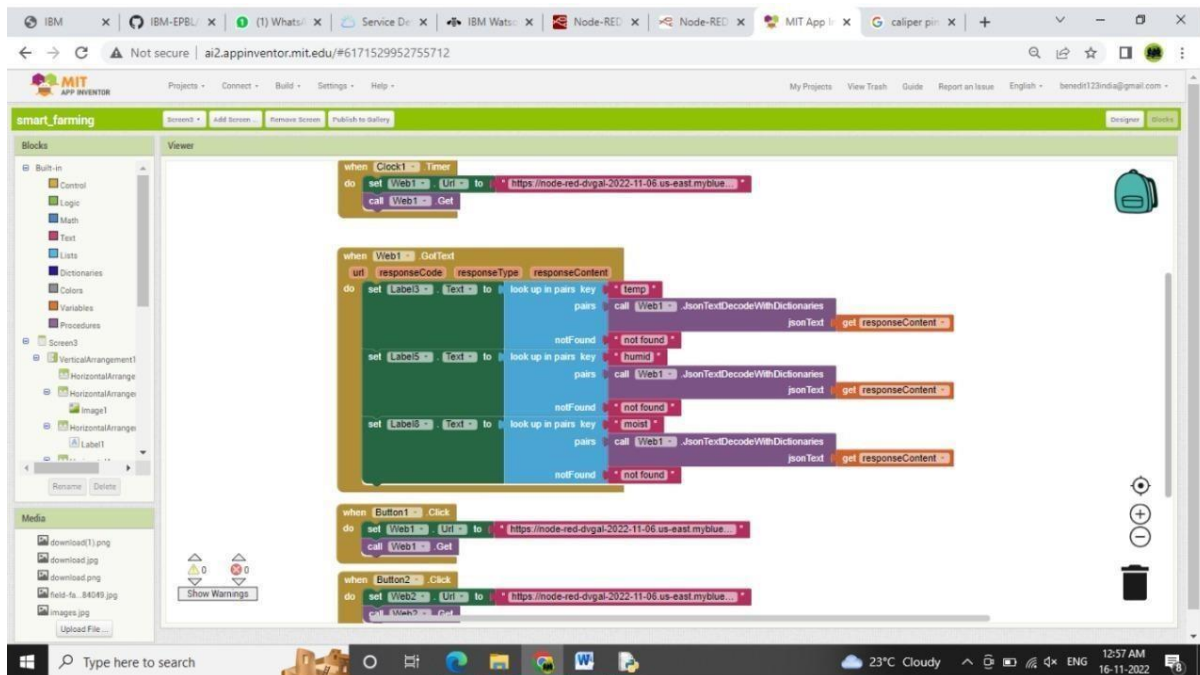
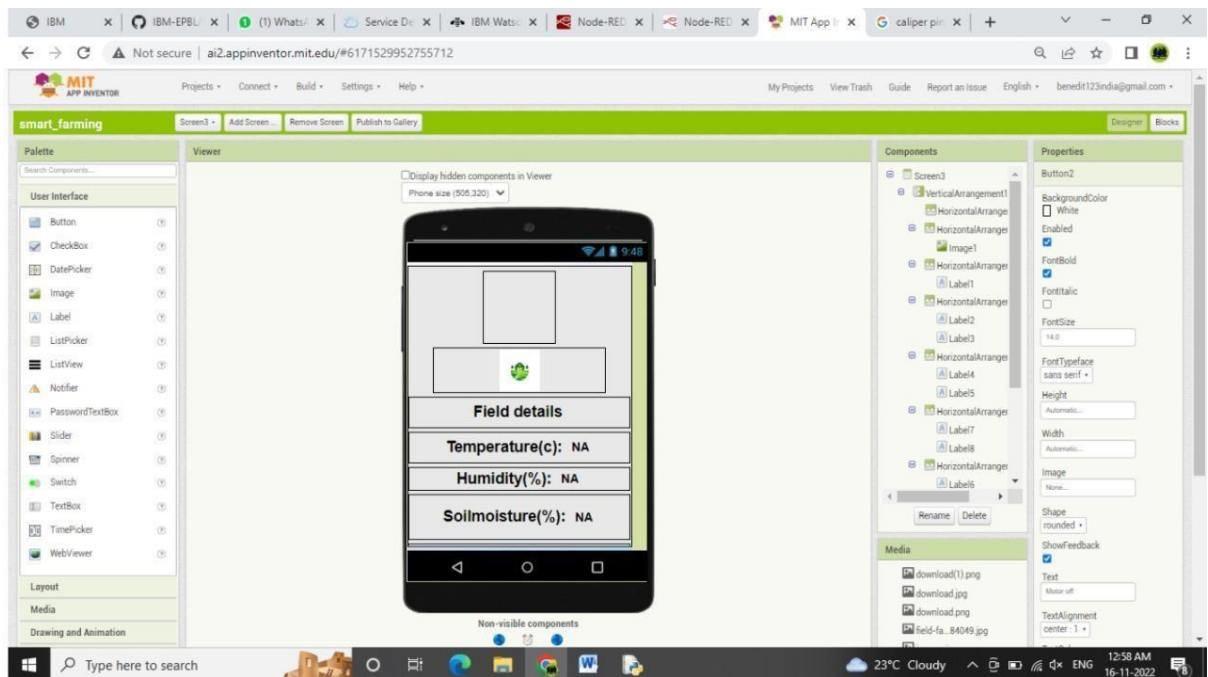
```

Develop an application with MIT APP inventor:

Mobile App opening page:



Mobile App Log in Page:



JIRA Software Sprint Planning:

