

PROJECT SCREENSHOTS

Team ID : PNT2022TMID38943

Project Name: Smart waste management for metropolitan cities.

The screenshot displays the IBM Watson IoT Platform interface and a Python script for waste bin detection.

IBM Watson IoT Platform Dashboard:

- Device List:**

Device ID	Status	Device Type
02468	Disconnected	Bin1
54321	Connected	BIN1

- Recent Events:**

Event	Value
IoTSensor	{"distance":85}
IoTSensor	{"distance":58}
IoTSensor	{"distance":57}
IoTSensor	{"distance":96}
IoTSensor	{"distance":52}

Python Script (waste bin detect program.py):

```
import random

#Provide your IBM Watson Device Credentials
organization = "yal2ec"
deviceType = "BIN1"
deviceId = "54321"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId}
    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 e
deviceCli.connect()

while True:
    #Get Sensor Data from ultrasonic
    distance= random.randint(5,110)
    data= {'distance':distance}
    if distance >5 and distance<=35:
        print("alert: 'waste bin level high is 90%, Time to collect")
    elif distance>35 and distance<=50:
        print("Risk warning: 'waste Bin is above 60%")
    elif distance >35 and distance <=70:
        print("waste Bin level is above 40%")
    elif distance >70 and distance <=90:
        print("waste Bin level is above 25%")
    elif distance>90 and distance<=110:
```

IBM Watson IoT Platform

yal2ec.internetofthings.ibmcloud.com/dashboard/devices/browse

Device ID Status Device Type

02468	Disconnected	Bin1
54321	Connected	BIN1

Identity Device Information Recent Events State

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

Event	Value
IoT Sensor	{"distance":85}
IoT Sensor	{"distance":58}
IoT Sensor	{"distance":57}
IoT Sensor	{"distance":96}
IoT Sensor	{"distance":52}

```
#!/usr/bin/env python3
# waste bin detect program.py - C:/Users/MR.DEVIL/Downloads/waste bin detect program.py (...)
import random

#Provide your IBM Watson Device Credentials
organization = "yal2ec"
deviceType = "BIN1"
deviceId = "54321"
authMethod = "token"
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    deviceCli = ibmiotf.Device.Client(deviceOptions)
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while True:
    #Get Sensor Data from ultrasonic
    distance= random.randint(5,110)
    data= {"distance":distance}
    if distance >5 and distance<=35:
        print("Alert: 'waste bin level high is 90%, Time to collect'")
    elif distance>35 and distance<=50:
        print("Risk warning: 'waste Bin is above 60%'")
    elif distance >55 and distance <=70:
        print("waste Bin level is above 40%")
    elif distance >70 and distance <=90:
        print("waste Bin level is above 25%")
    elif distance >90 and distance <=110:
        print("waste Bin level is above 10%")
```

IBM Watson IoT Platform

yal2ec.internetofthings.ibmcloud.com/dashboard/devices/browse

421319106007@smartinternz.com ID: yal2ec

Device ID Status Device Type Class ID Date Added

02468	Disconnected	Bin1	Device	Nov 18, 2022 1:05 PM
54321	Connected	BIN1	Device	Nov 18, 2022 2:13 PM

Identity Device Information Recent Events State Logs

Device ID 54321

Device Type BIN1

Date Added Nov 18, 2022 2:13 PM

Added By 421319106007@smartinternz.com

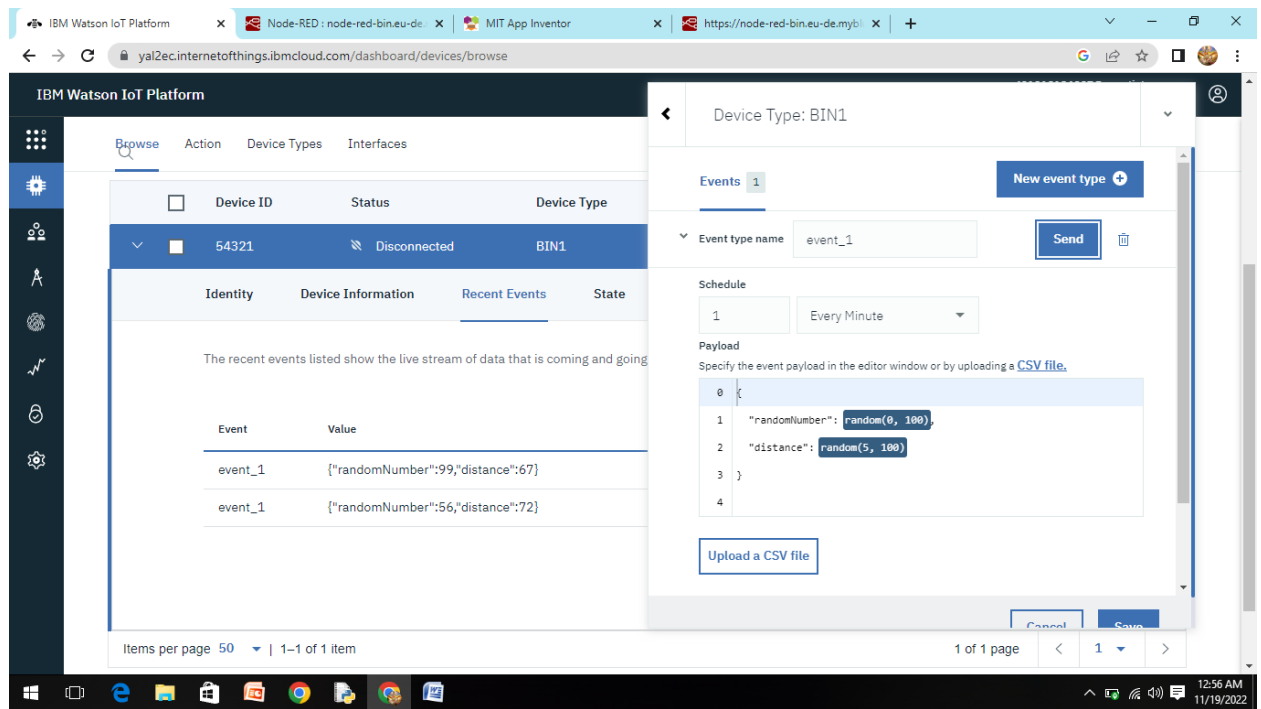
Connection Status Connected

Connection Time: Nov 18, 2022 2:20 PM

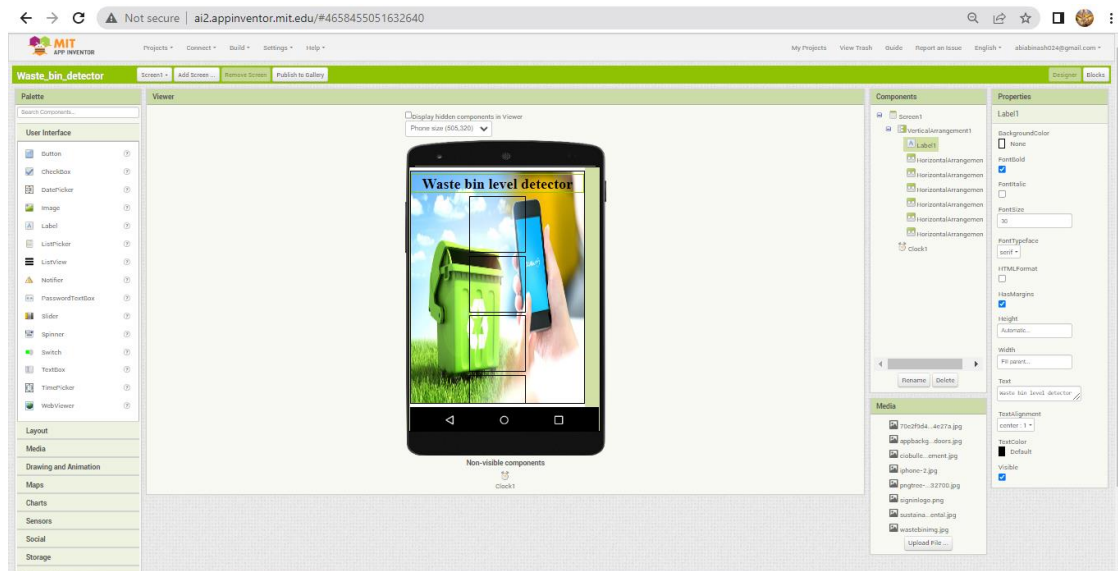
Client Address: 117.246.221.178 SecureToken

Items per page 50 | 1-2 of 2 items

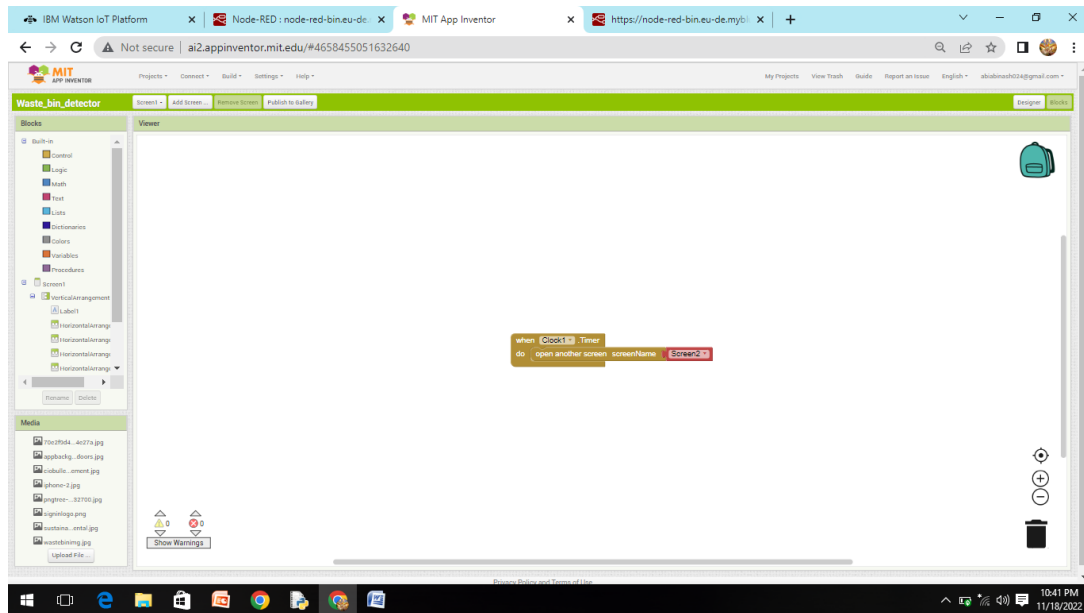
1 of 1 page



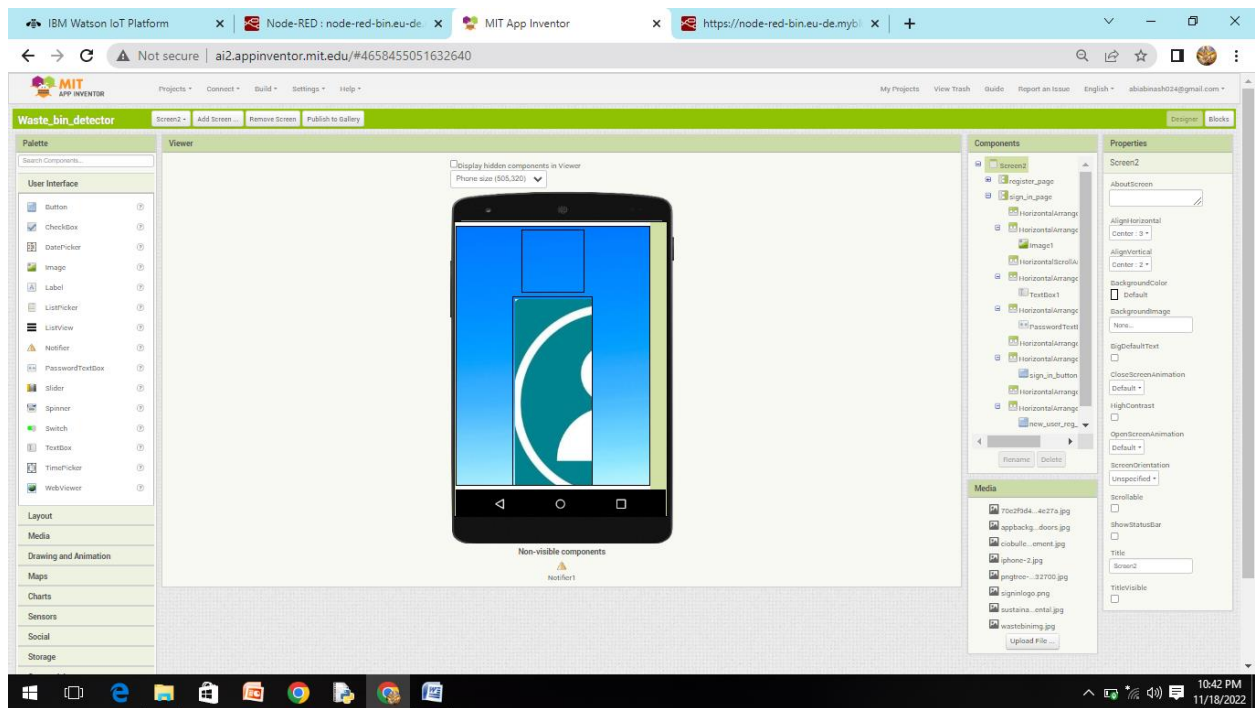
App front page



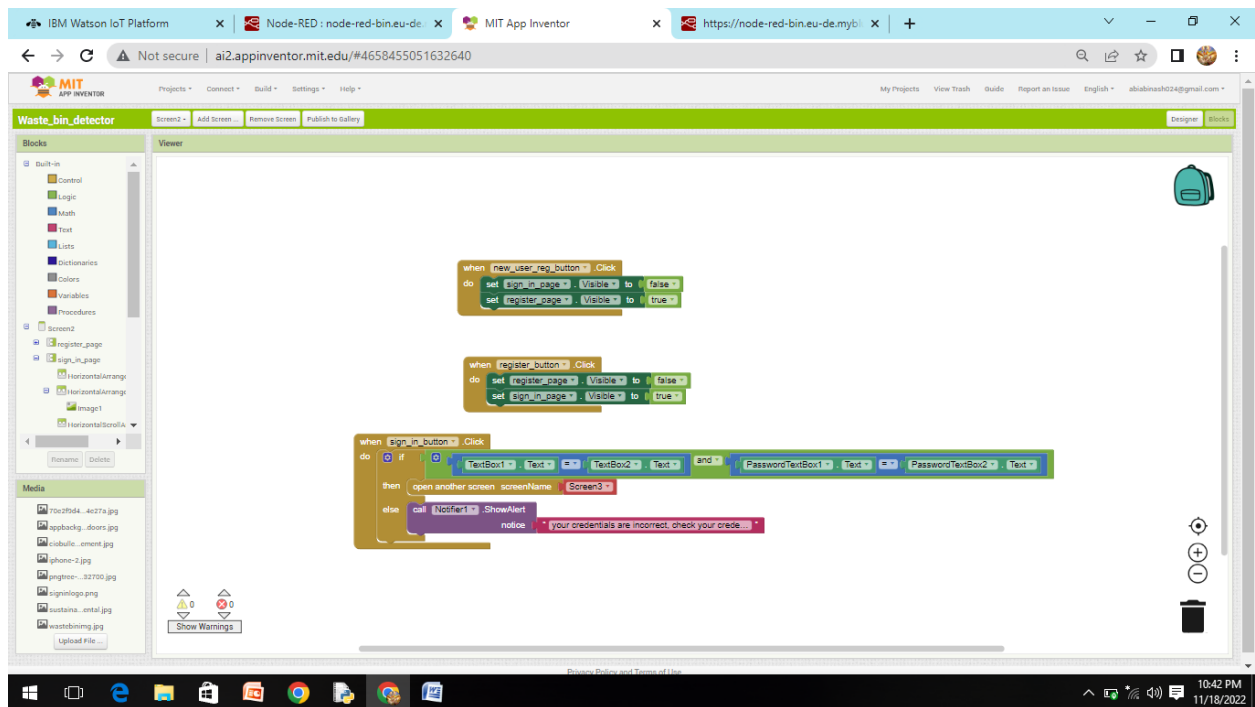
Front page Block code:



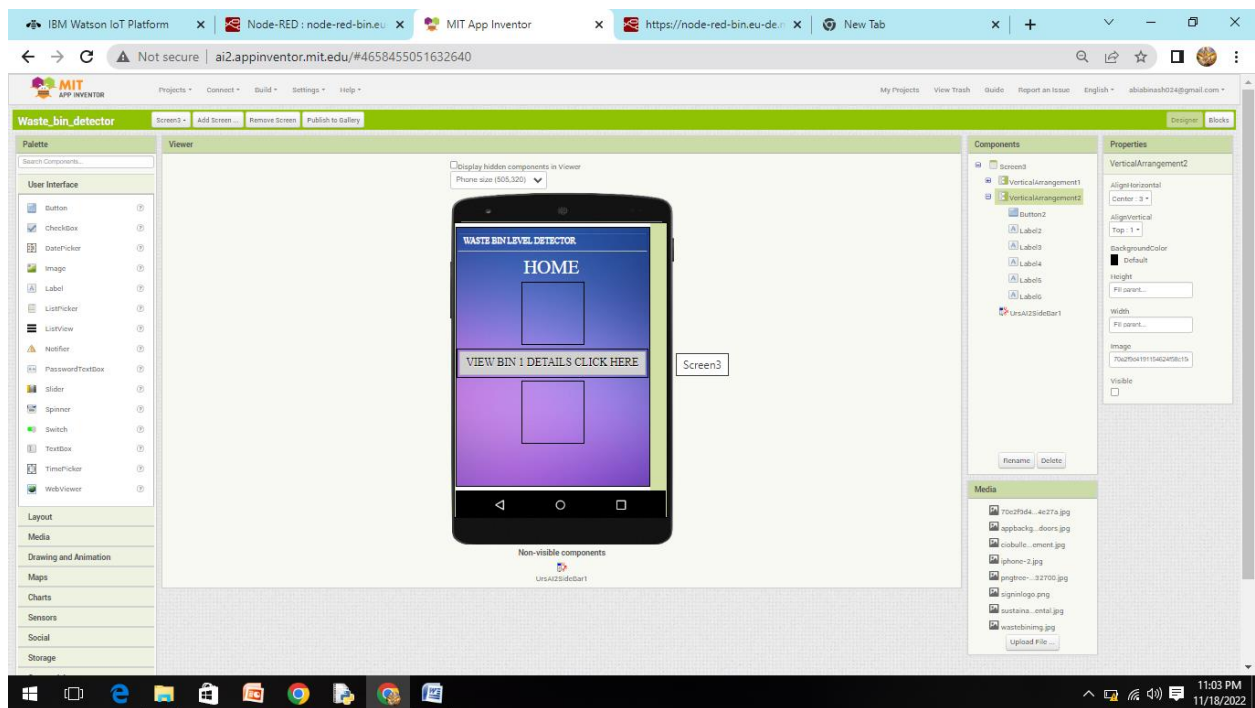
Login Page:



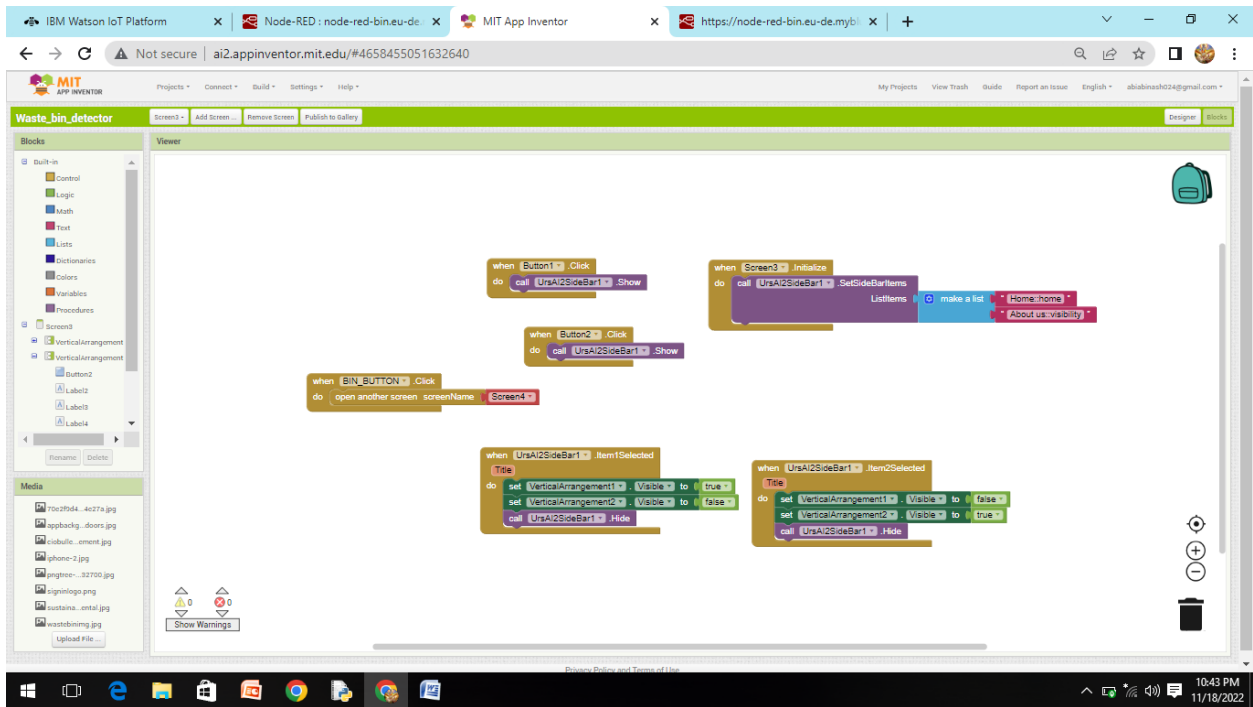
Login page Block code:



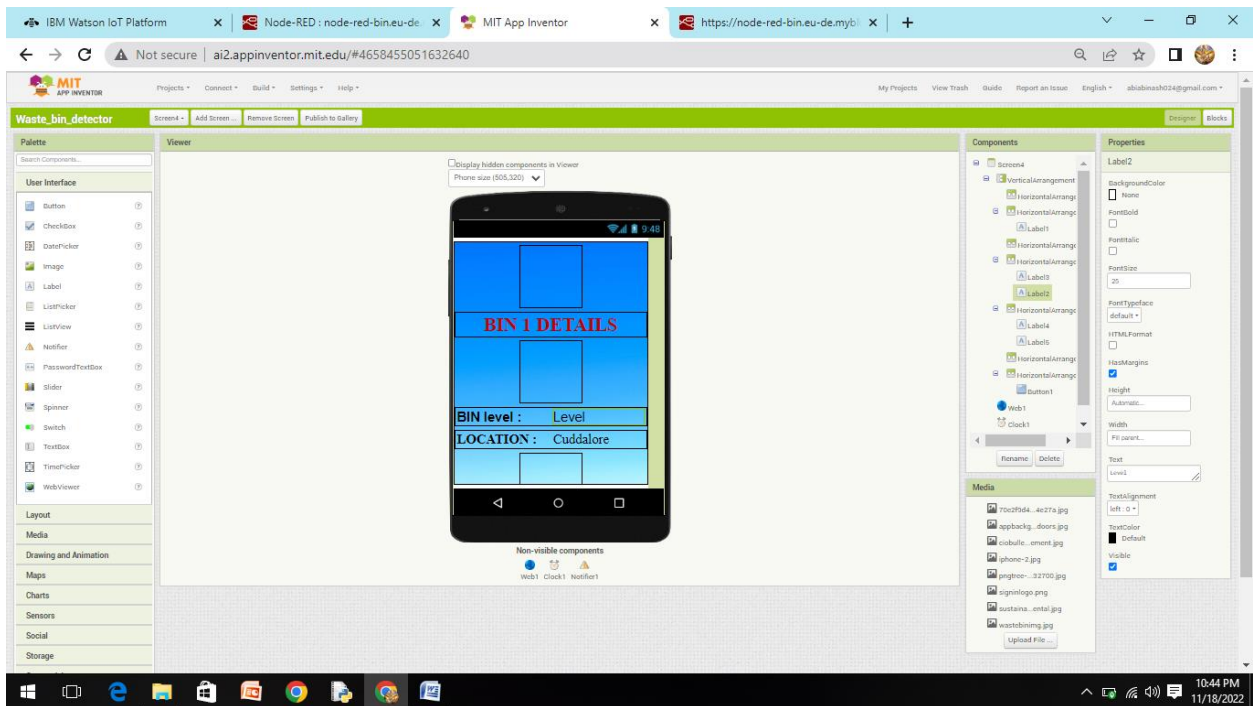
Main page:



Home page block code:



Main page :



Main page Block code:

