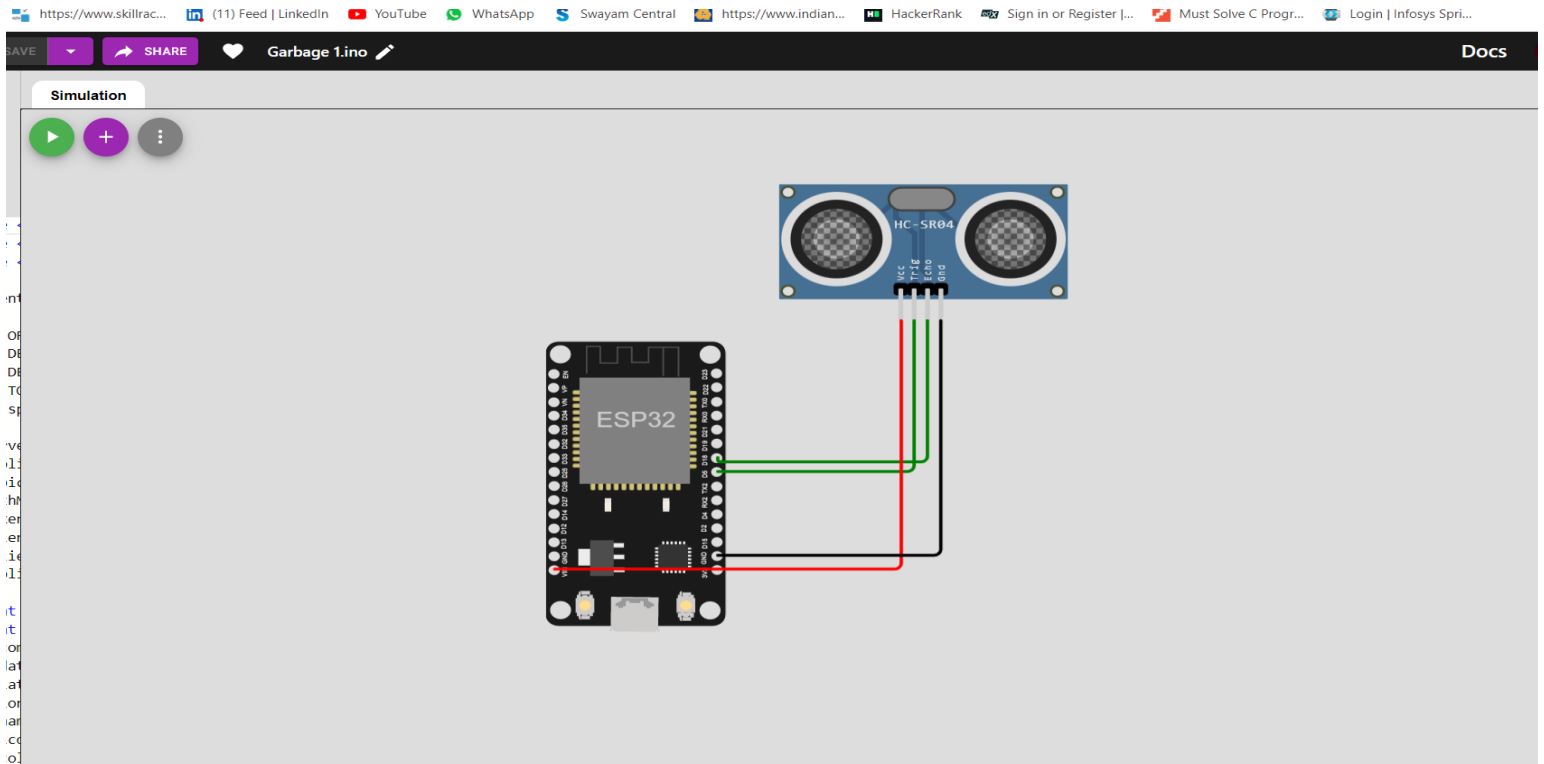


SPRINT 3:

In this Phase, I will explain about the flow of our project.

- As we mentioned in the Data flow graph, we are first using an online simulation tool to send the level of the dustbin with the help of an ultrasonic sensor using the WOKWI platform and we also send the required data such as location, bin name etc...
- This data is being sent to the IBM Watson IOT platform and with the help of IBM Watson IOT node we can get the data in node red.
- We designed few flows to make the data to be in a required format like maps, tables, gauge
- Here we store the Admin, Co admin details in the database (Cloudant DB)
- We have also created a python script to generate random BIN values which can also be used instead of WOKWI to send data to the IBM Watson IOT platform.
- I've also added a few Screenshots of the things we have done.
- We used a world map node for displaying the latitude and longitude in the Map.

SCREENSHOTS: WOKWI Platform



Python Code:

Here we can see the Python Code which is used to connect with IBM Watson IOT platform.

ibm dustbin.py - C:\Users\Praveen\Desktop\ibm dustbin.py (3.7.4)

File Edit Format Run Options Window Help

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk
import time
import random
myConfig = {
    "identity": {
        "orgId": "k6spbs",
        "typeId": "MSD",
        "deviceId": "12345"
    },
    "auth": {
        "token": "123456789"
    }
}
lat="13.167589"
lon="80.248510"
name="point1"
icon="fa-trash-o"
color="green"
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    temp=random.randint(0,100)
    if temp>60:
        icon="fa-trash"
        color = "red"
    else:
        icon = "fa-trash-o"
        color = "green"
    myData={"Name":name,"Latitude":lat,"Longitude":lon,"Icon":icon,"FillPercent":temp,"Color":color}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(10)
client.disconnect()
```

IBM Watson IoT Platform:

The information about the devices are being displayed here

IBM Watson IoT Platform

prav19326.ec@rmkec.ac.in
ID: k6spbs

Browse Action Device Types Interfaces

Add Device +

Browse Devices

All Devices Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device Simulator

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
>	12345	Disconnected	Iotsensors	Device	Nov 15, 2022 10:07 PM	
>	12345	Disconnected	MSD	Device	Nov 16, 2022 3:56 PM	
>	6789	Disconnected	CSK	Device	Nov 16, 2022 4:25 PM	

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- Here we can see the output which has been passed from WOKWI Platform or Python Script to IBM Watson IOT platform.
- It will provide the necessary information by the means of API Key. By placing this API Keys to the simulation devices source code, It will acts as an mediator between the simulator tool and the Node-Red platform



Browse Action Device Types Interfaces

Add Device +

> ☐ 12345 Disconnected Iotsensors Device Nov 15, 2022 10:07 PMv ☒ 12345 Disconnected MSD Device Nov 16, 2022 3:56 PM → ...

Identity

Device Information

Recent Events

State

Logs

X

Device ID 12345

Device Type MSD

Date Added Nov 16, 2022 3:56 PM

Added By prav19326.ec@rmkec.ac.in

Connection Status **Disconnected**
Last Connected: Nov 18, 2022 9:25 AM
Client Address: 182.71.23.75 SecureToken
Duration: 6 minutes
Data Transferred: 6.4 KB

> ☐ 6789 Disconnected CSK Device Nov 16, 2022 4:25 PM

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