PROJECT ID :SPS_PRO_101
STUDENT ID : SB45404

Intern Title -> Smart Agriculture System based on IOT -SB45404

Project Summary :

Agricultural system based on IOT platform. The project includes making an app that get various aspect of our required data through APIs (like temperature , Humidity and Soil moisture) required in farm. So , API used would be open weather API. This is an Individual person handled project which would be handled by me(kaushal batra) via Smartbridge resourses.This can be a ground-breaking invention for people still using ancient agricultural techniques.

Project Requirements:

IBM cloud account,IOT Application Development ,IOT cloud platform , Basic python requirements,Node-Red.

Functional Requirements:

Open Weather API that could deleiver real time weather forecastion and Online Iot Simulator to get external factors like temperature , humidity and soil moisture

Technical Requirements:

The program is to be written in python and we will be using IBM cloud account too along with Iot simulator to Iot watson platform, Nodes to get data and make a web page.

Software Requirements:

IBM cloud , Python ,Open weather API, Nodered

Project Deliverables:

An App that can control watering in crops and other functions.

Project Team:

i. Kaushal batra

Project Schedule:

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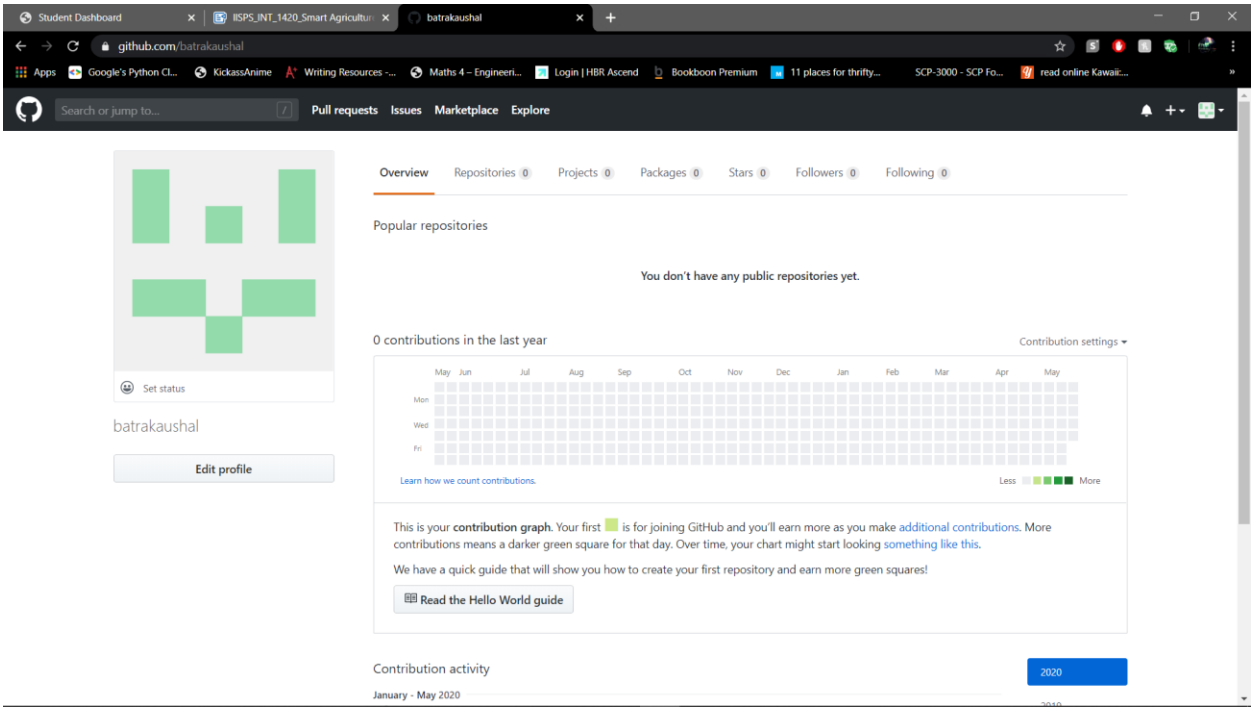
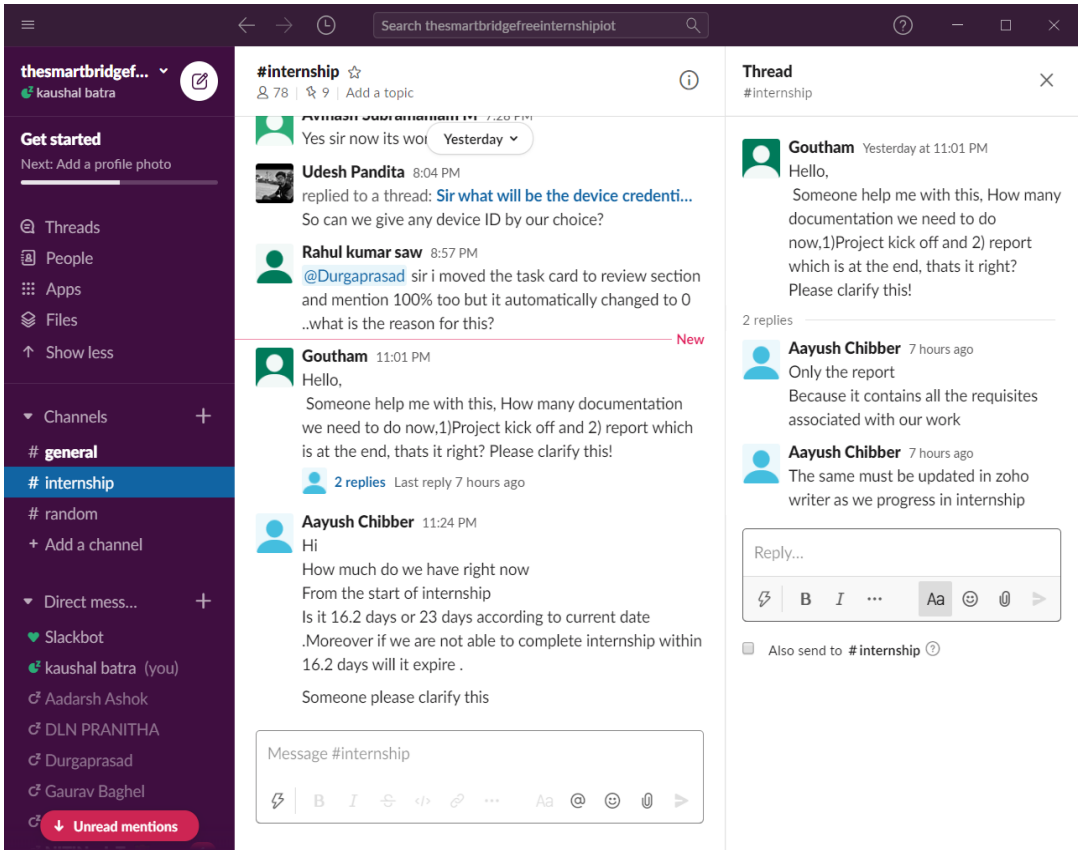
The project will be finished By 20 June 2020.

Setting up the Enviornment -:

1. ## Github:



2. ## Slack:



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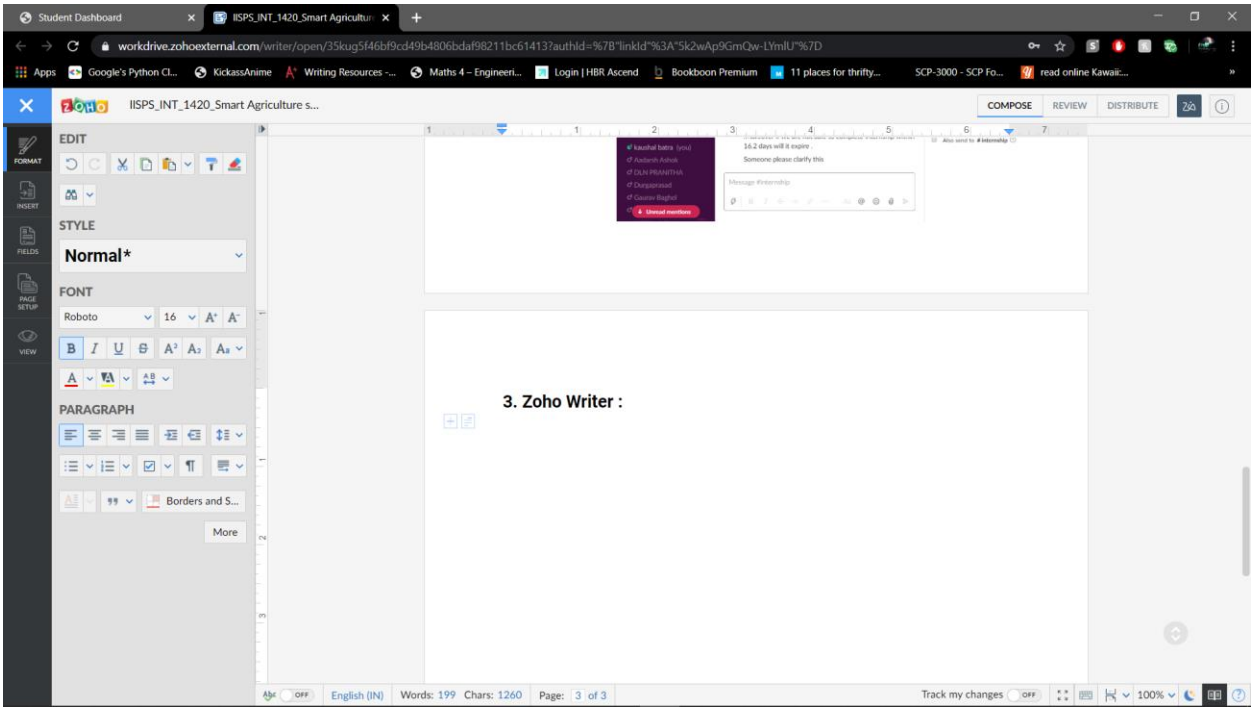
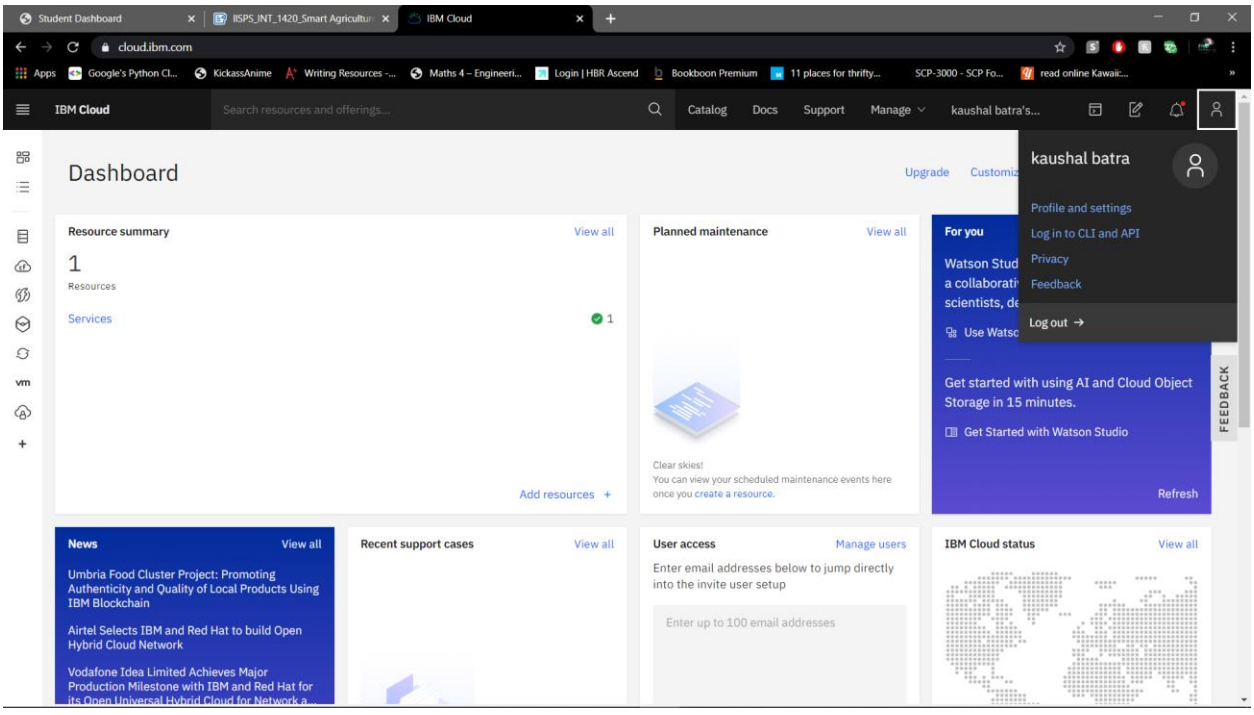
3. Zoho Writer :



IBM CLOUD :



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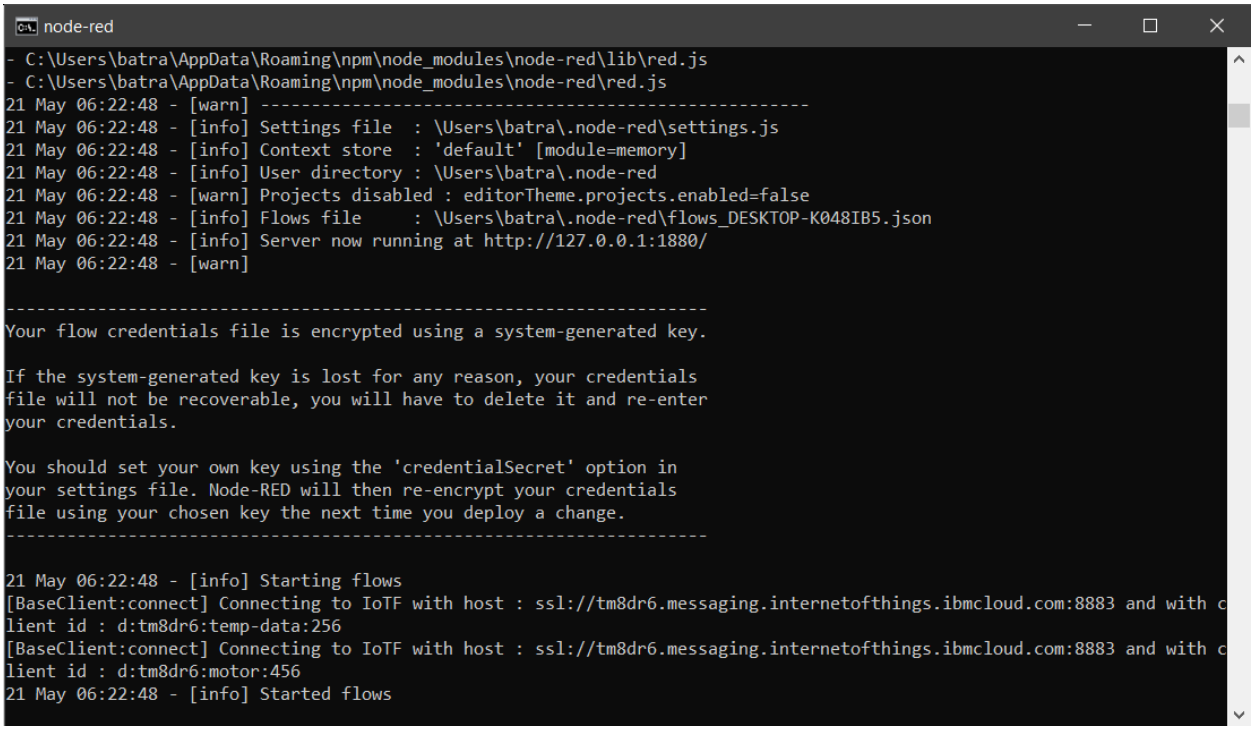
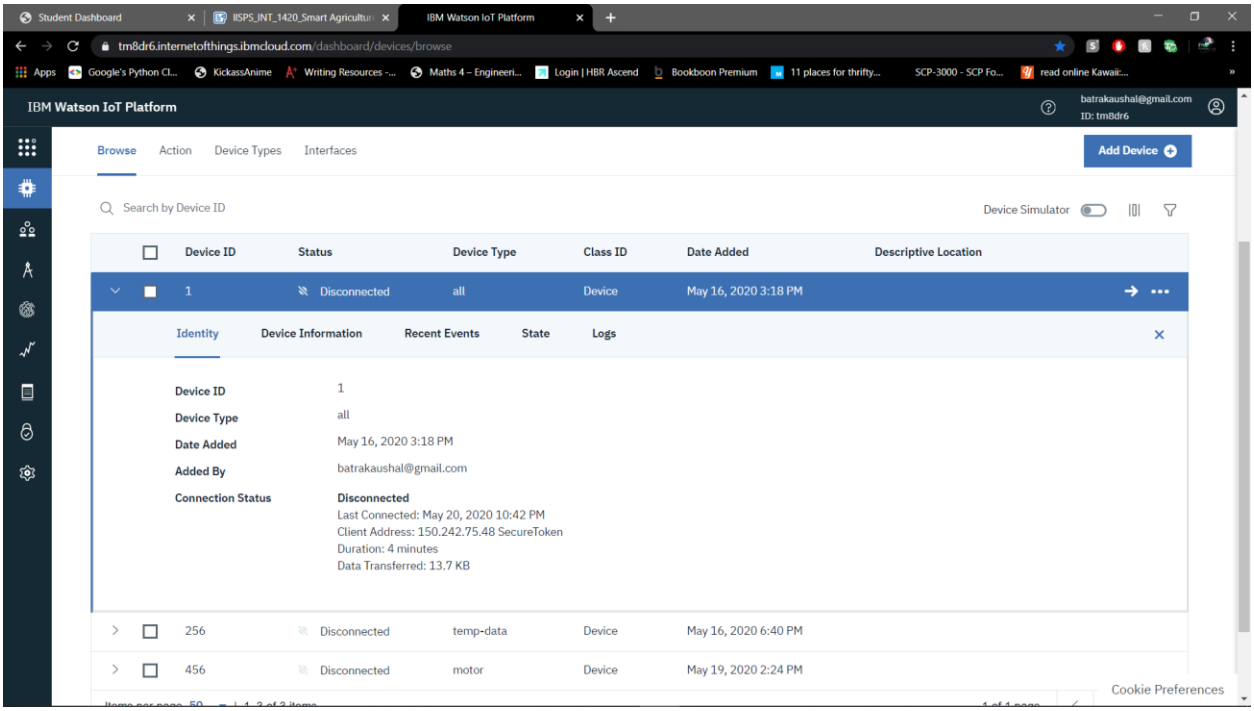
Node-red Installation :



IBM WATSON PLATFORM DEVICE CREATION :



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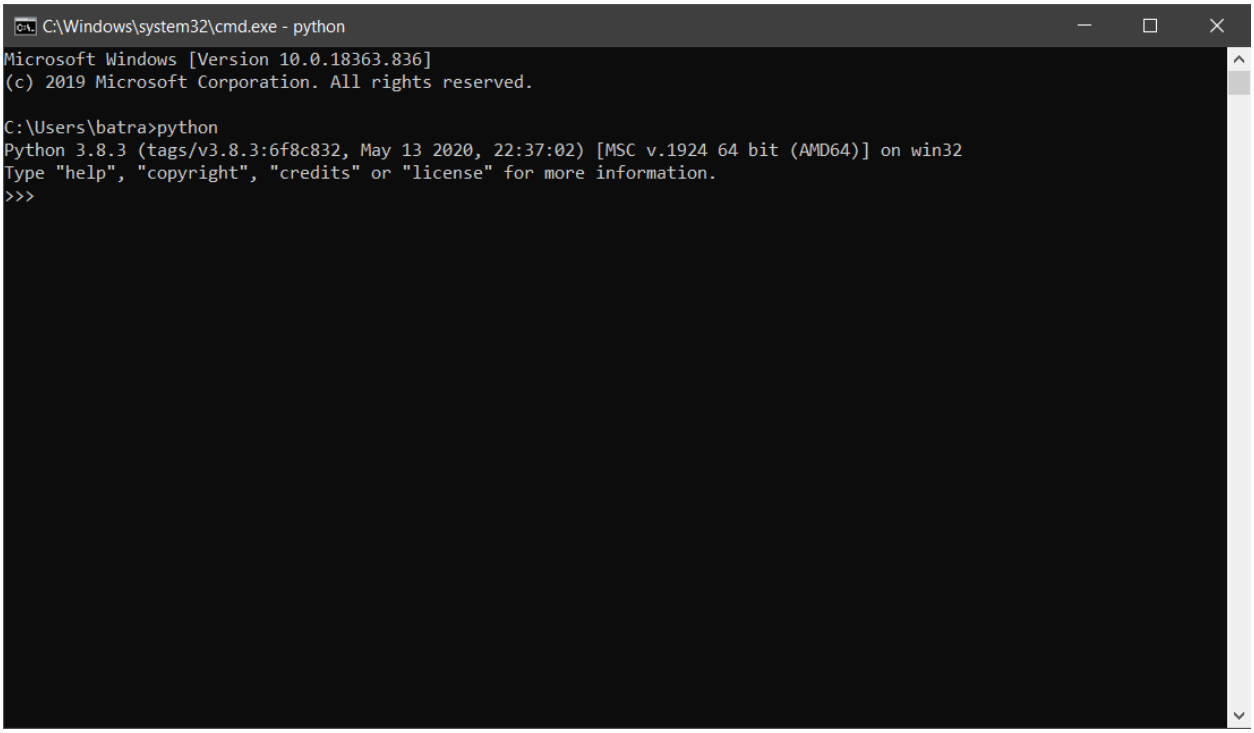
PYTHON 3 IDE :



PART 3

CONNECTION OF IOT SIMULATOR TO WATSON PLATFORM

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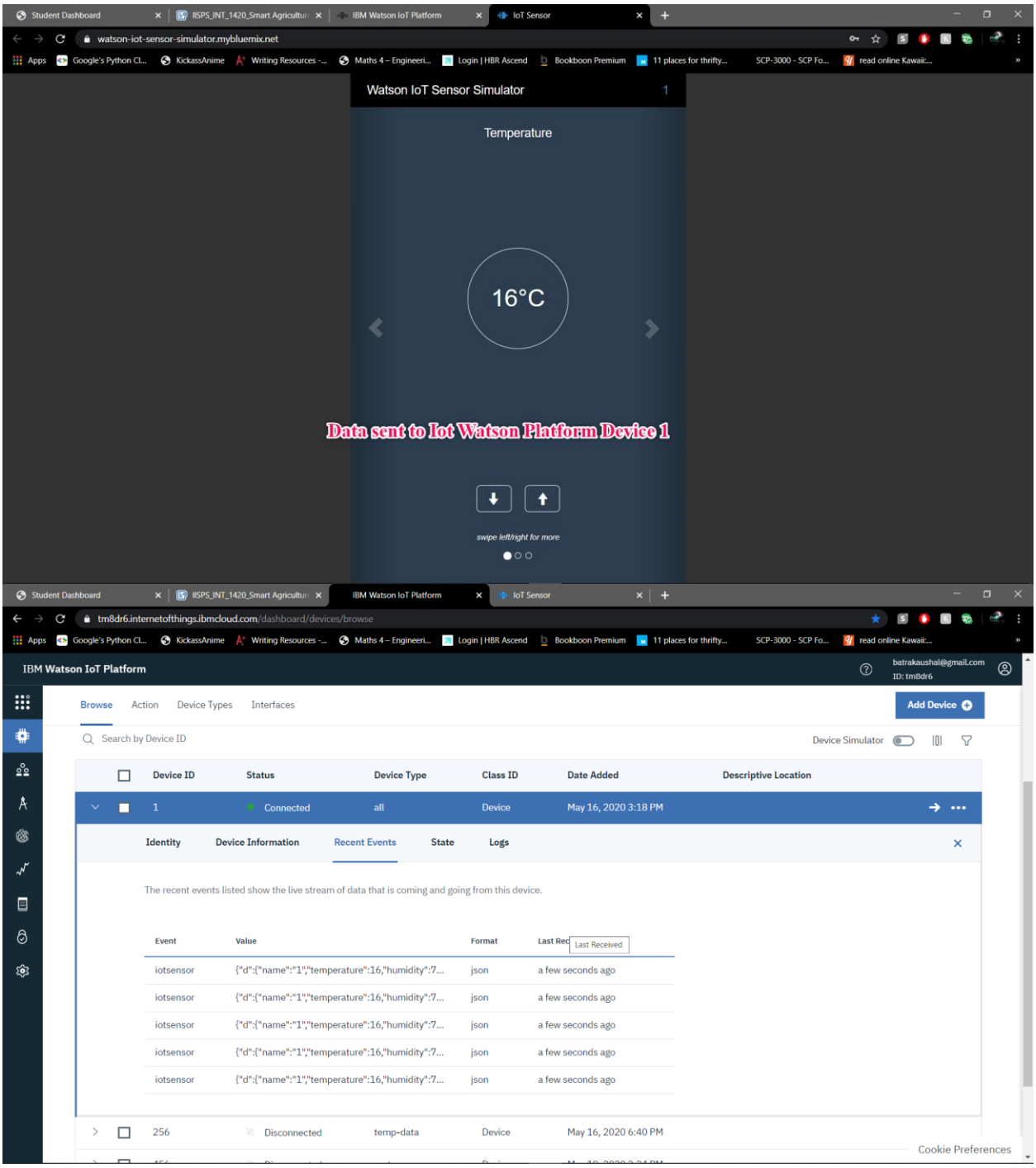

Data recieved from Iot Simulator

PART 4

INSTALLING REQUIRED NODE-RED NODES

Required nodes were IOT node to send and receive data and http nodes as well as UI nodes

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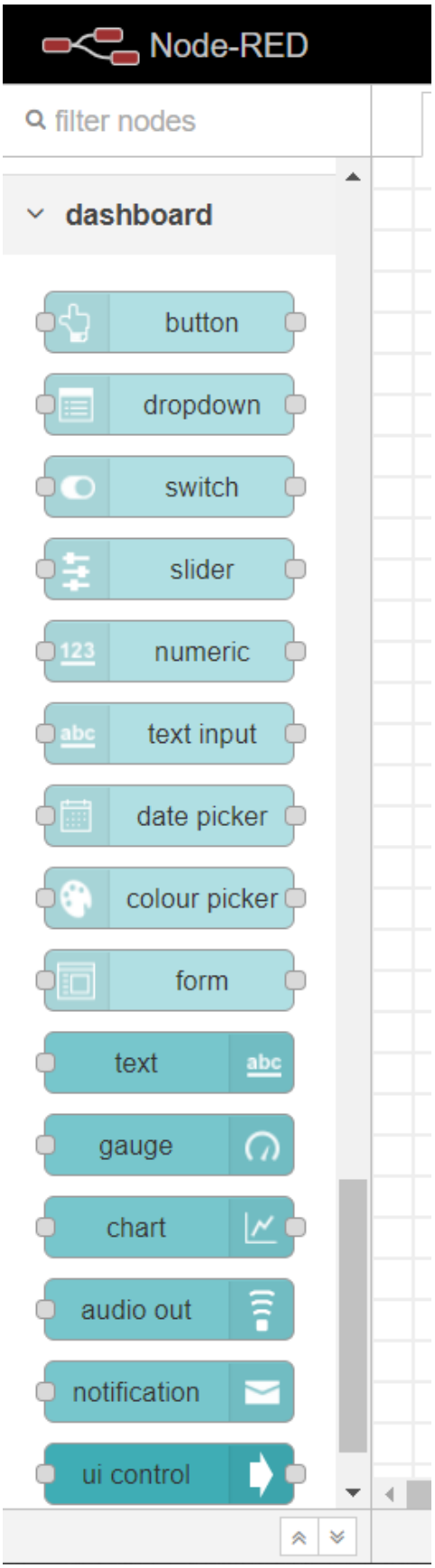

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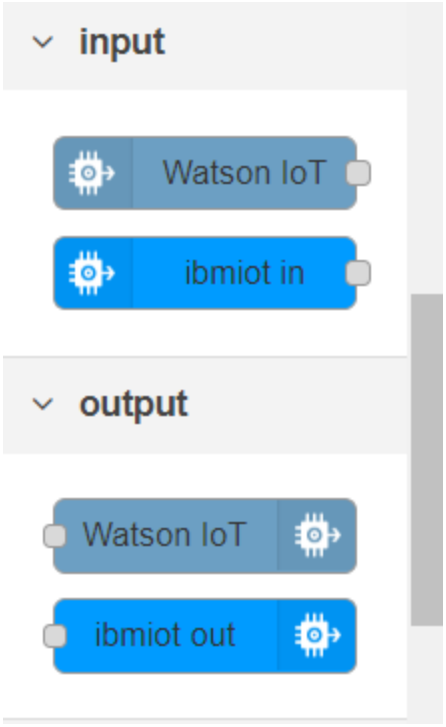

Making a Nodered Chart to get Data from Iot platform and send it to device , also recieve data from Open Weather API using Http request :

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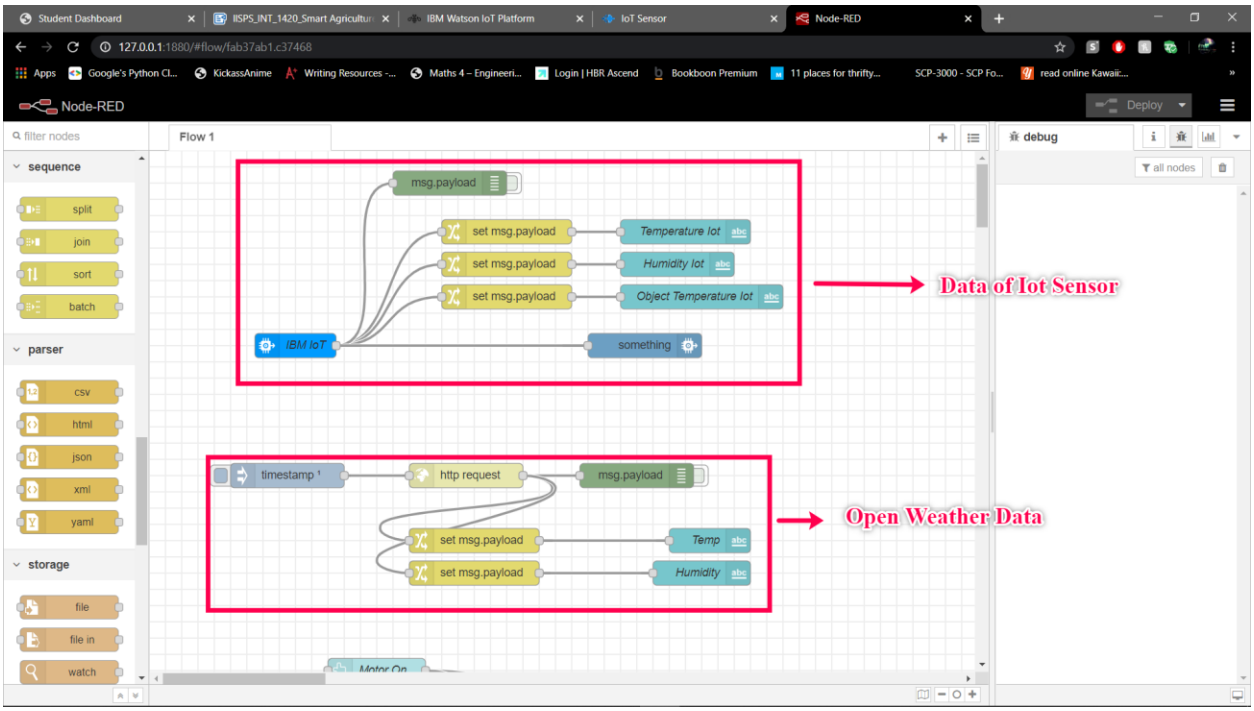
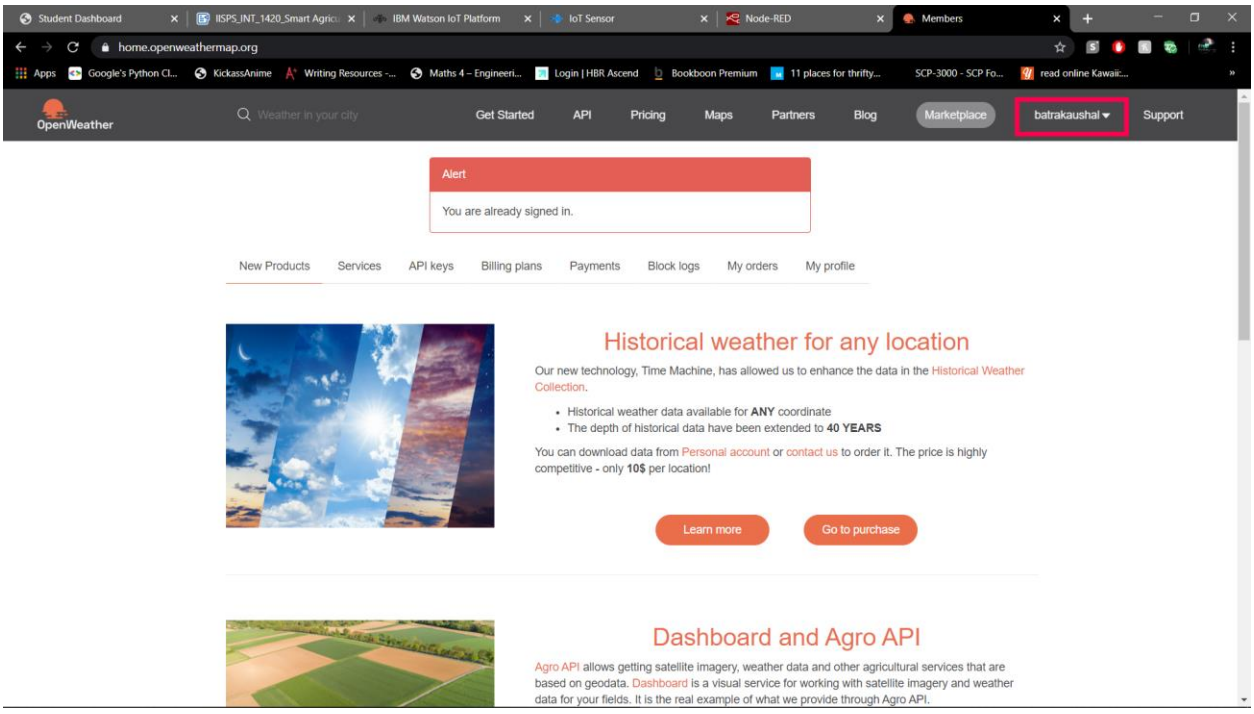


OPEN WEATHER API :



Part 5

MAKING AN WEB APP USING NODE-RED UI

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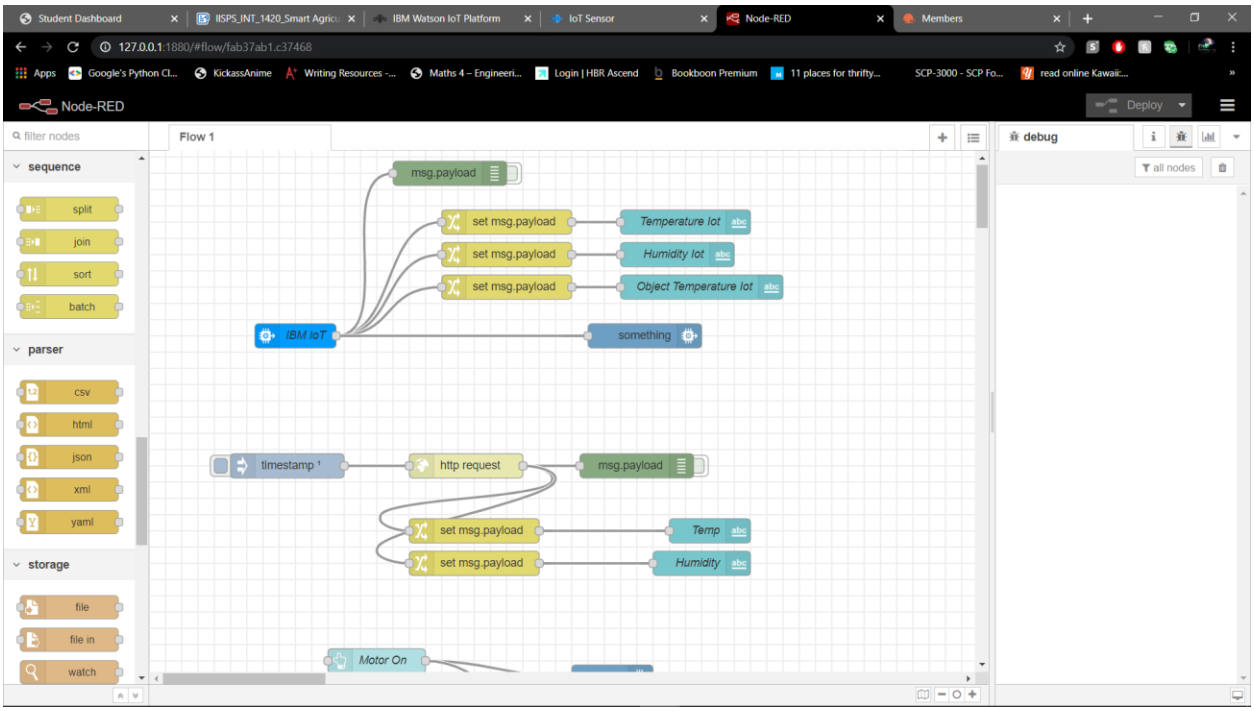

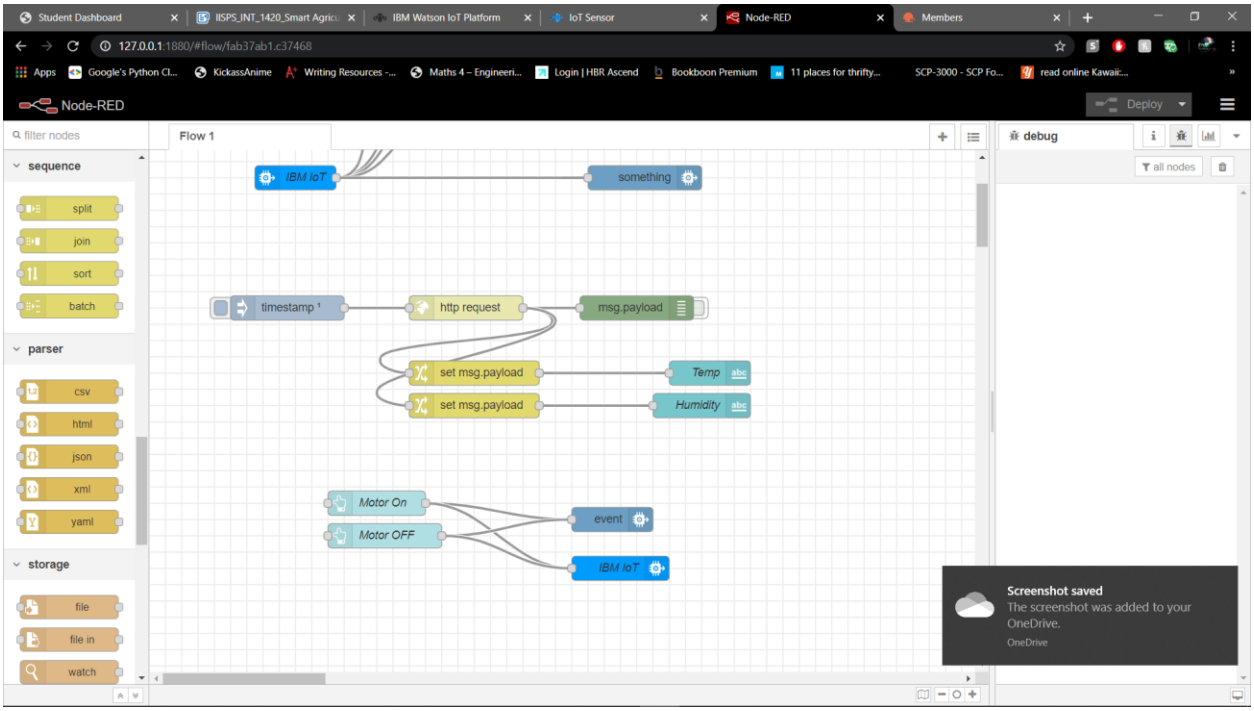

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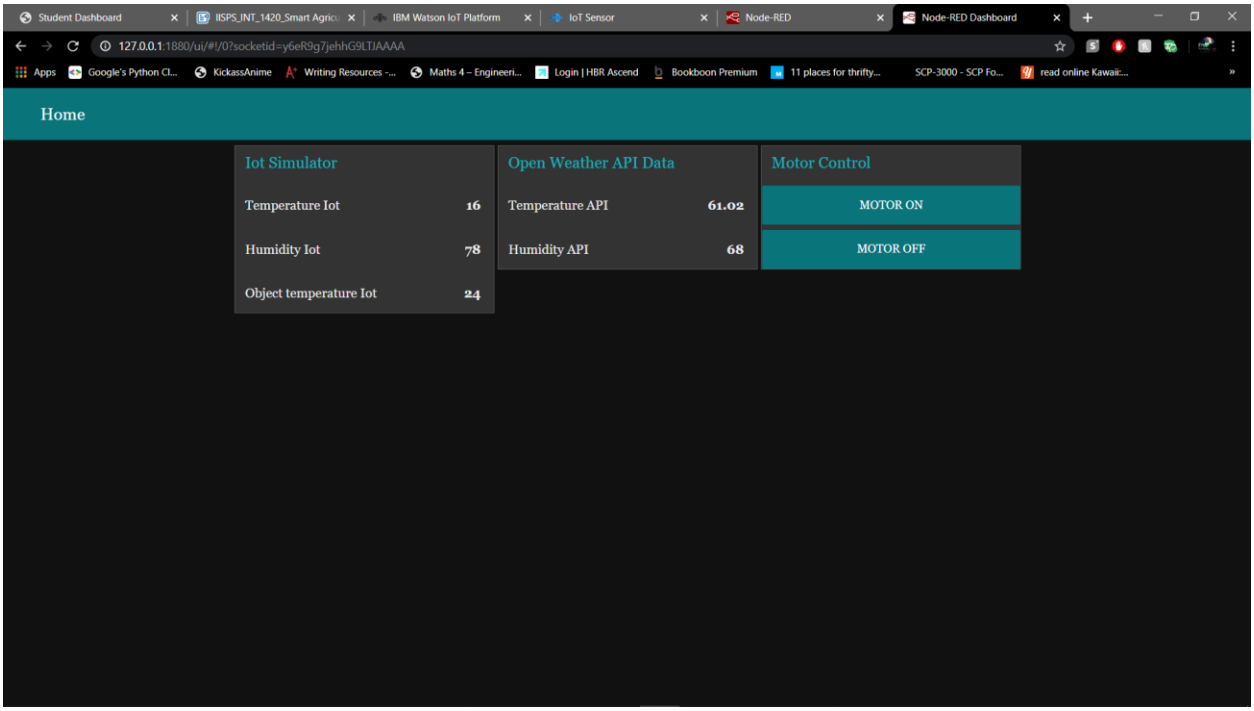
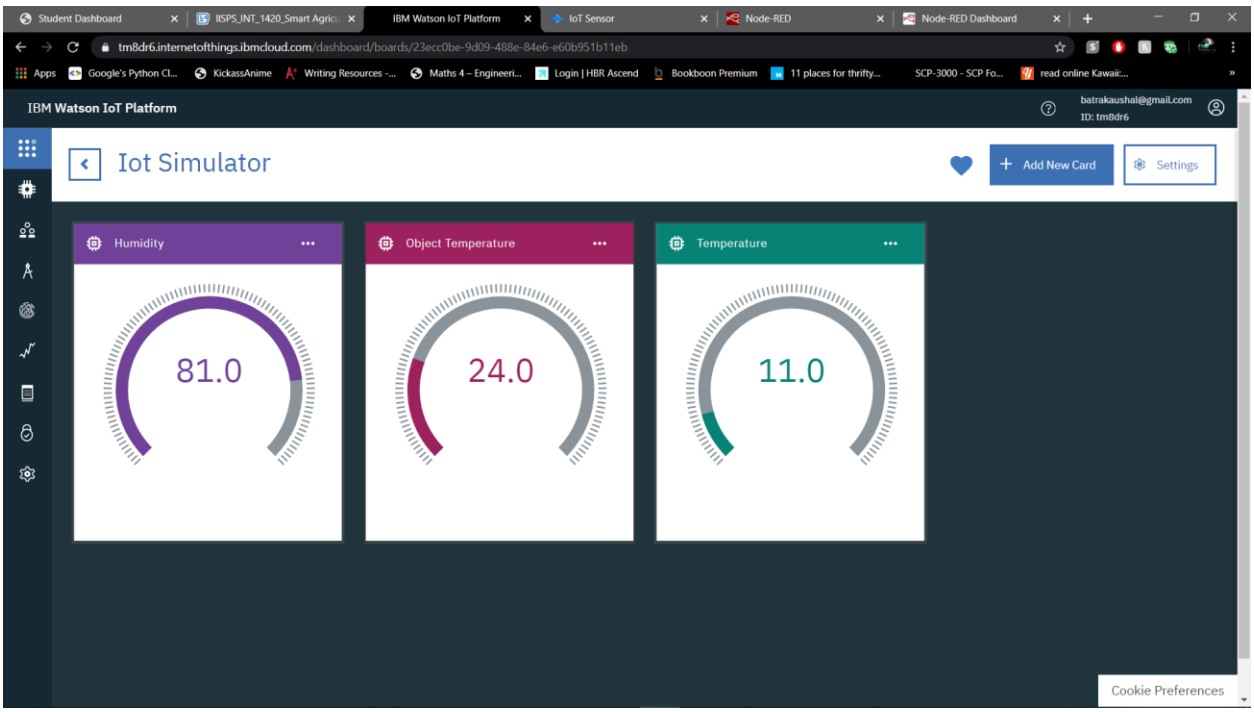


Here all data Required is recieved and shown in Web App.



PART 5

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Configure your Device to recieve data from web application and control your motors :

Using the program written in python and making a few changes. we have now control over motors and now we can vontrol motor from a UI made in Node-red.The program in uploaded in Github repository.