

# SPRINT - 1

Date	29 October 2022
Project Name	Smart Waste Management System for Metropolitan Cities.
TEAM ID	PNT2022TMID15126

## AIM OF THE PROJECT:

For the increasing population growth and for the demanding food supply needs, the normal provisioning systems with existing methodologies seems to be unworthy and requires and advanced facilitations with optimal usage of water resources (irrigational resources). Hence a smart monitoring system of the farmland conditions and other subsidies may help us for a better productivity.

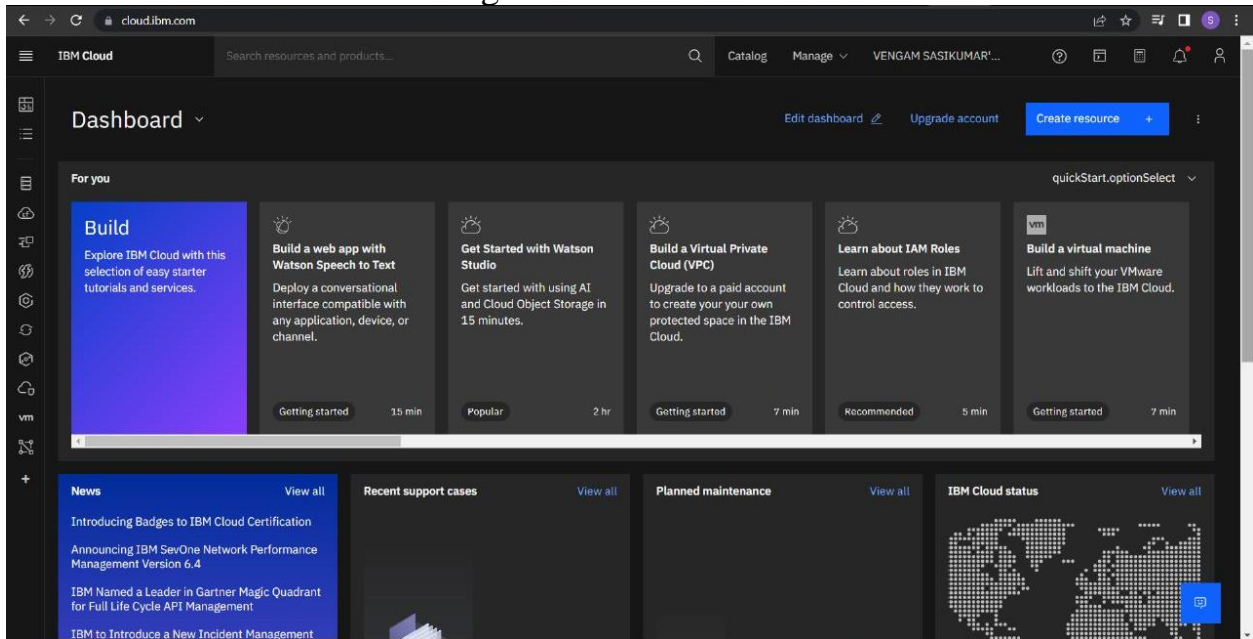
This could be made possible by sensing the physical parameters such as temperature, moisture and other soil parameters periodically and transferring over a user interface application could helps us to analyse the better situations of crop conditions.

## SEQUENCE OF PROCESS:

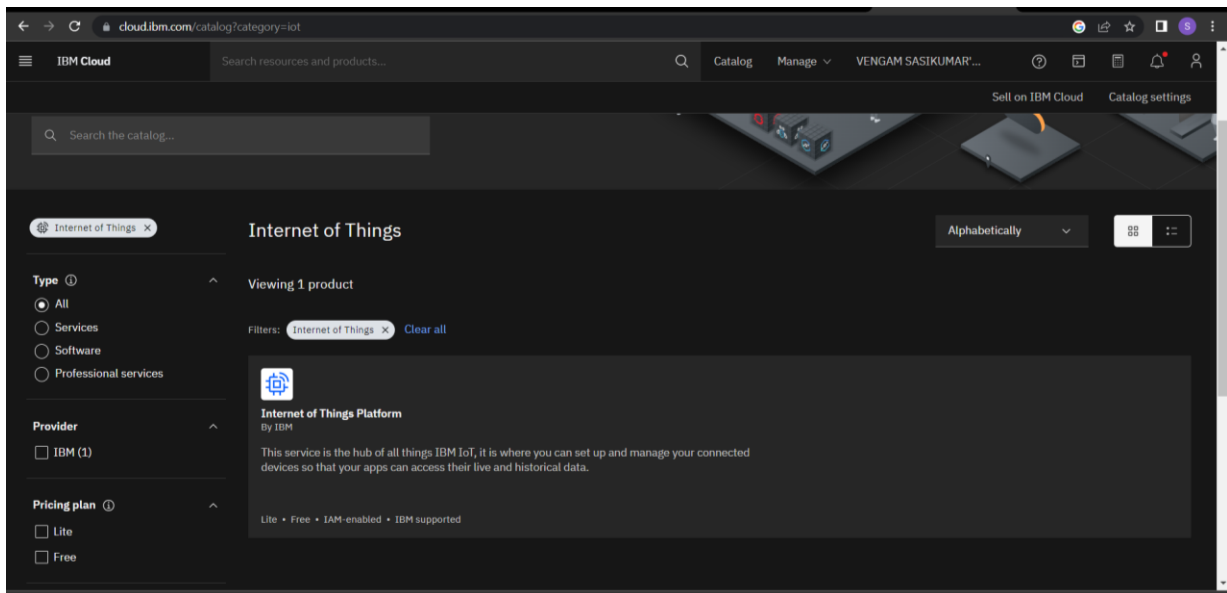
Creating IBM Watson in IoT Platform:

- Go to IBM Cloud
- Click Catalog on top of the IBM Cloud and search IoT
- To create device, in the home page of IBM cloud click on the catalog on the top and click on IoT platform
- Click on launch button, then the IBM Watson platform will be displayed and Click on create device to create.
- After activating device simulator and check whether the code is running.
- Go to board and create a new board by filling the details
- Fill the detail to get temperature graph, select the color from the option and repeat the same process to get the humidity graph, we get the final graph.
- Finally an IBM Watson cloud for IoT and a device is created successfully.

## Creating an account in IBM Cloud



## Creation of IoT Platform



## Launching of IoT Platform

The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. A table lists devices, with one device (ID 123) selected. The device details panel shows the following information:

Identity	Device Information
Device ID	123
Device Type	Smart_bin-01
Date Added	Nov 19, 2022 3:50 PM
Added By	uec19437@rmd.ac.in
Connection Status	Disconnected

At the bottom, a status bar indicates '1 Simulation running'.

## Creating Simulation for Smartbin

The screenshot displays the IBM Watson IoT Platform dashboard with an 'Event Payload' modal window open. The modal shows the following details:

- Event Name: event\_1
- Time Received: Nov 19, 2022 6:51 PM
- Event Payload (JSON):

```
{  "Bin Weight": 5,  "Garbage level": 63,  "Latitude": "13.0827° N",  "Longitude": "80.2707° E"}
```

The background dashboard shows a table of recent events for the selected device (ID 123):

Event	Value
event_1	{"Bin Weight":5,
event_1	{"Bin Weight":62
event_1	{"Bin Weight":36
event_1	{"Bin Weight":64
event_1	{"Bin Weight":66

At the bottom, a status bar indicates '1 Simulation running'.

## Security settings

The screenshot shows the 'Connection Security' settings in the IBM Watson IoT Platform. The page has a dark blue header with the platform name and user information. A left sidebar contains navigation icons. The main content area is titled 'Connection Security' and includes a 'Default Rule' section where the 'Scope' is set to 'Default' and the 'Security Level' is 'TLS Optional'. Below this is a 'Custom Rules' section. At the bottom right, a status box indicates '0 Simulations running'.

IBM Watson IoT Platform

uec19437@bmd.ac.in  
ID: 2a9m6v

← Back Close Save

### Connection Security

Use the Connection Security policy to set the default security level that is applied to all devices. You can then add custom rules for specific devices.

#### Default Rule

Define the default connection security level to use for all device types that do not have custom rules defined.

Scope	Security Level	# of Devices
Default	TLS Optional	0 devices

#### Custom Rules

You can define custom connection rules for specific device types. Custom rules overwrite the default rule for the specified device types.

0 Simulations running

## Device Configuration

The screenshot shows the 'Device Configuration' page for a specific device in the IBM Watson IoT Platform. The page has a dark blue header and a left sidebar. The main content area shows the device's 'Recent Events' in a table. The table has columns for 'Event', 'Value', 'Format', and 'Last Received'. The events listed include 'status' and 'event\_1' with various JSON payloads. At the bottom right, a status box indicates '1 Simulation running'.

IBM Watson IoT Platform

uec19437@bmd.ac.in  
ID: 2a9m6v

Browse Action Device Types Interfaces Add Device

123 Disconnected Smart\_bin-01. Device Nov 19, 2022 3:50 PM

#### Identity Device Information Recent Events State Logs

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

Event	Value	Format	Last Received
status	{"latitude":13.635348424735064,"longitude":7...	json	19 minutes ago
event_1	{"Bin Weight":93,"Garbage level":35,"Latitude":...	json	19 minutes ago
event_1	{"Bin Weight":99,"Garbage level":70,"Latitude":...	json	19 minutes ago
event_1	{"Bin Weight":44,"Garbage level":29,"Latitude":...	json	19 minutes ago
status	{"latitude":13.655230555182262,"longitude":7...	json	19 minutes ago

Items per page 50 | 1-1 of 1 item

1 Simulation running

## Monitoring Location of the bin and Garbage level

