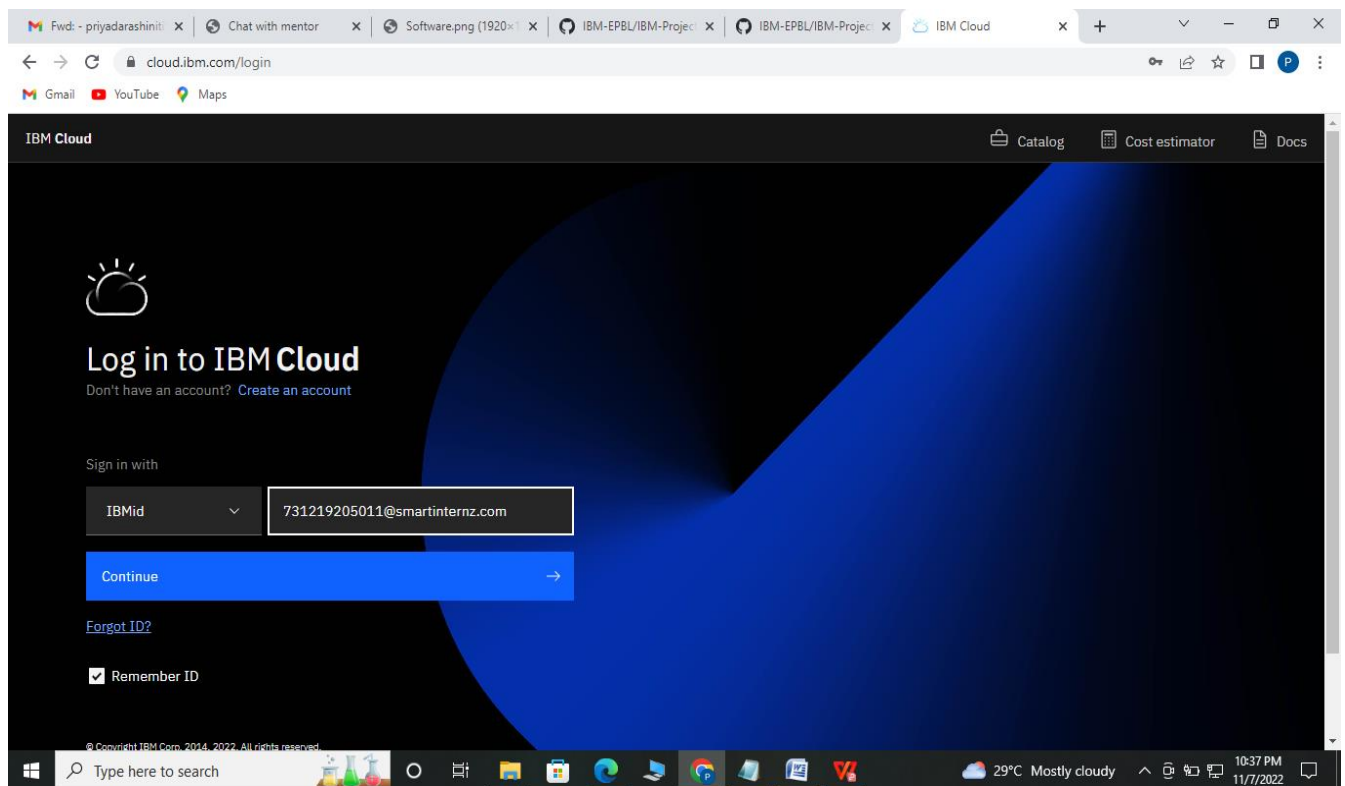


CREATE IBM WATSON IOT PLATFORM AND DEVICE

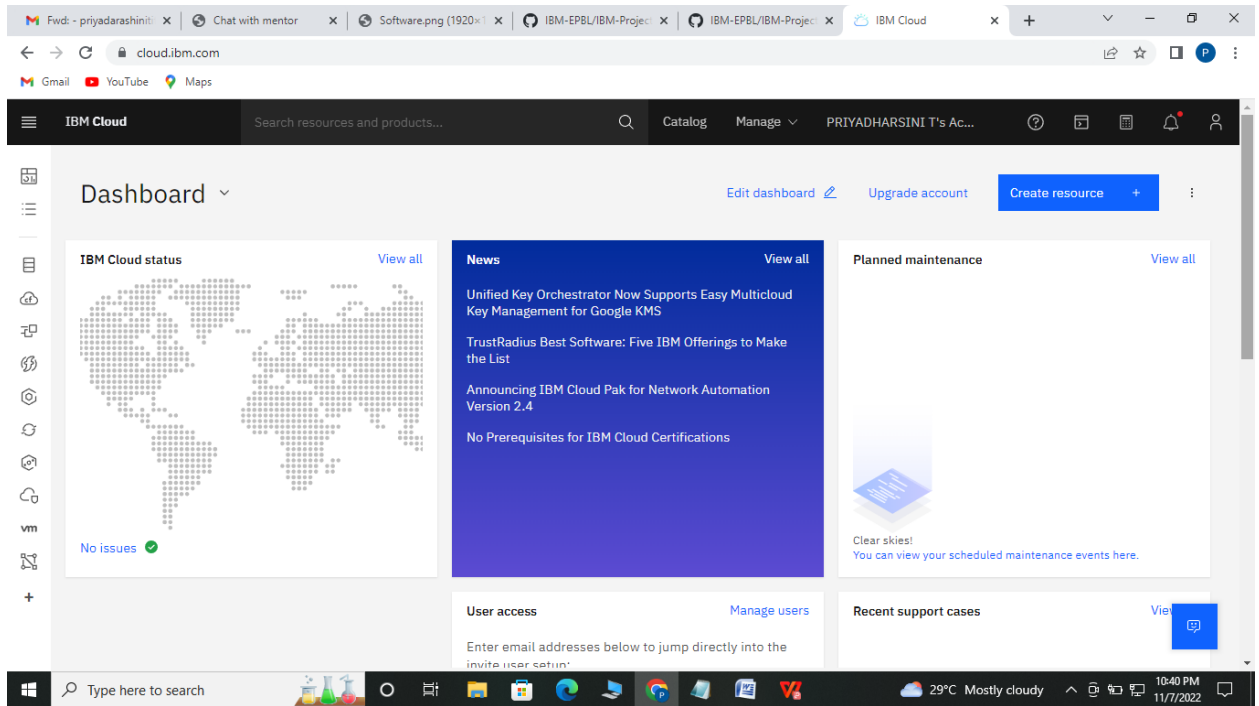
Team ID	PNT2022TMID44448
Project Name	Project - Signs with Smart Connectivity for better Road Safety.
Team Leader	Priyadharsini . T
Team Member 1	Nithya.k
Team Member 2	Nandhini.R
Team Member 3	Vaidevi.M
Team Member 4	Prabhu .M
Mentor	D. Nivethini

STEPS:

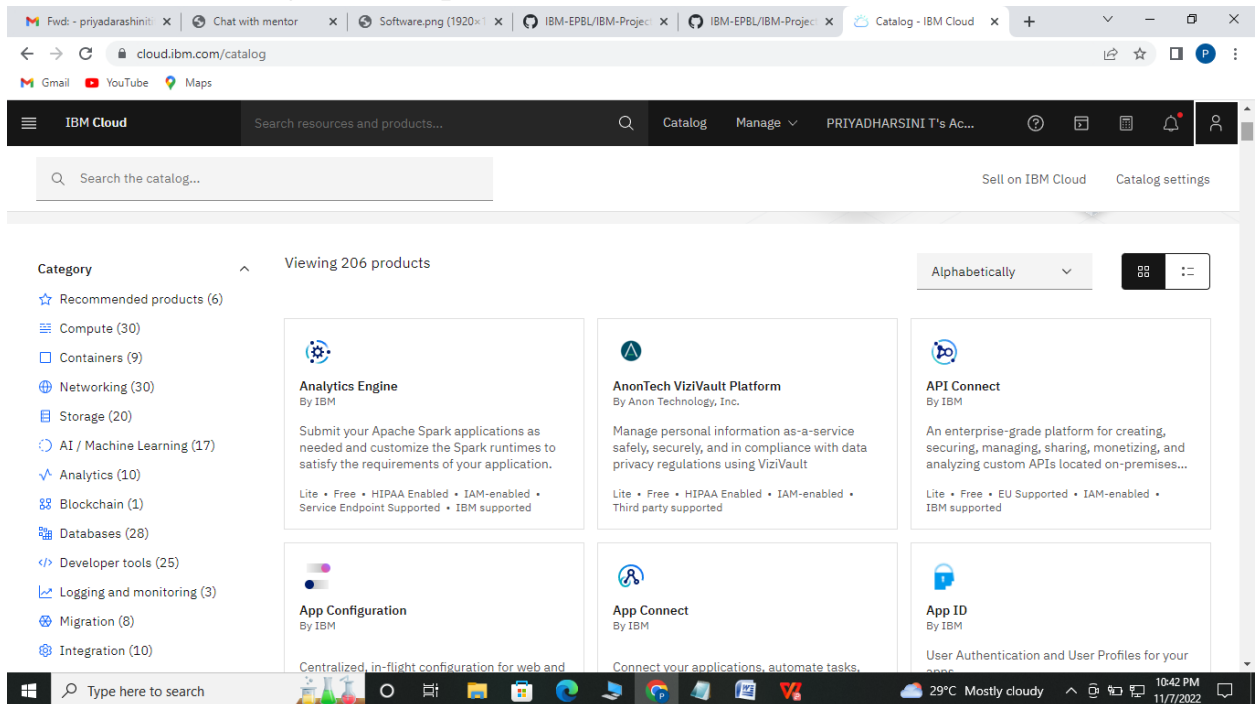
1. Firstly create an IBM cloud account with IBM id and password



2. Home page of IBM cloud



3. Click on the catalog on the top



Click on IoT in the category mentioned

The screenshot shows the IBM Cloud 'Internet of Things Platform' page. The 'Create' tab is active, displaying a 'Select a location' dropdown set to 'London (eu-gb)' and a 'Select a pricing plan' section. A table lists the 'Lite' plan as 'Free'. A summary sidebar on the right shows details for the 'Internet of Things Platform' (Free, Location: London, Plan: Lite). A warning message states: 'Existing Lite plan instance. You can have only 1 Lite plan instance of this service per resource group. Delete your current Lite plan instance in Default resource group to create a new one, or view the existing instance.' Below this is a checkbox for license agreements.

Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings	Free

4. If already a lite is present delete it else u can't create another

This screenshot is identical to the one above, showing the IBM Cloud 'Internet of Things Platform' page. It highlights the warning message: 'Existing Lite plan instance. You can have only 1 Lite plan instance of this service per resource group. Delete your current Lite plan instance in Default resource group to create a new one, or view the existing instance.' The 'Lite' plan is listed as 'Free'.

Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings	Free

5. Enter the location and in the configure your resource type the service name and choose the plan, tick the agree with agreements and then click on create

cloud.ibm.com/catalog/services/internet-of-things-platform

IBM Cloud Search resources and products...

Catalog / Internet of Things Platform

This service is the hub of all things IBM IoT, it is where you can set up and manage your connected devices so that your apps can access their live and historical data.

Create About

Type Service

Provider IBM

Last updated 08/15/2022

Category Internet of Things

Compliance IAM-enabled

Location Frankfurt London

Select a location

London (eu-gb)

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or location: [United States](#)

Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings	Free

Summary

Internet of Things Platform Free

Location: London

Plan: Lite

Service name: Internet of Things Platform-8n

Resource group: Default

Existing Lite plan instance

You can have only 1 Lite plan instance of this service per resource group. [Delete](#) your current Lite plan instance in Default resource group to create a new one, or [view the existing instance](#).

☐ I have read and agree to the following license agreements: [Terms](#)

cloud.ibm.com/catalog/services/internet-of-things-platform

IBM Cloud Search resources and products...

Catalog / Internet of Things Platform

This service is the hub of all things IBM IoT, it is where you can set up and manage your connected devices so that your apps can access their live and historical data.

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Type Service

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Last updated 08/15/2022

Category Internet of Things

Compliance IAM-enabled

Location Frankfurt London

Select a location

London (eu-gb)

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or location: [United States](#)

Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings	Free

Summary

Internet of Things Platform Free

Location: London

Plan: Lite

Service name: Internet of Things Platform-8n

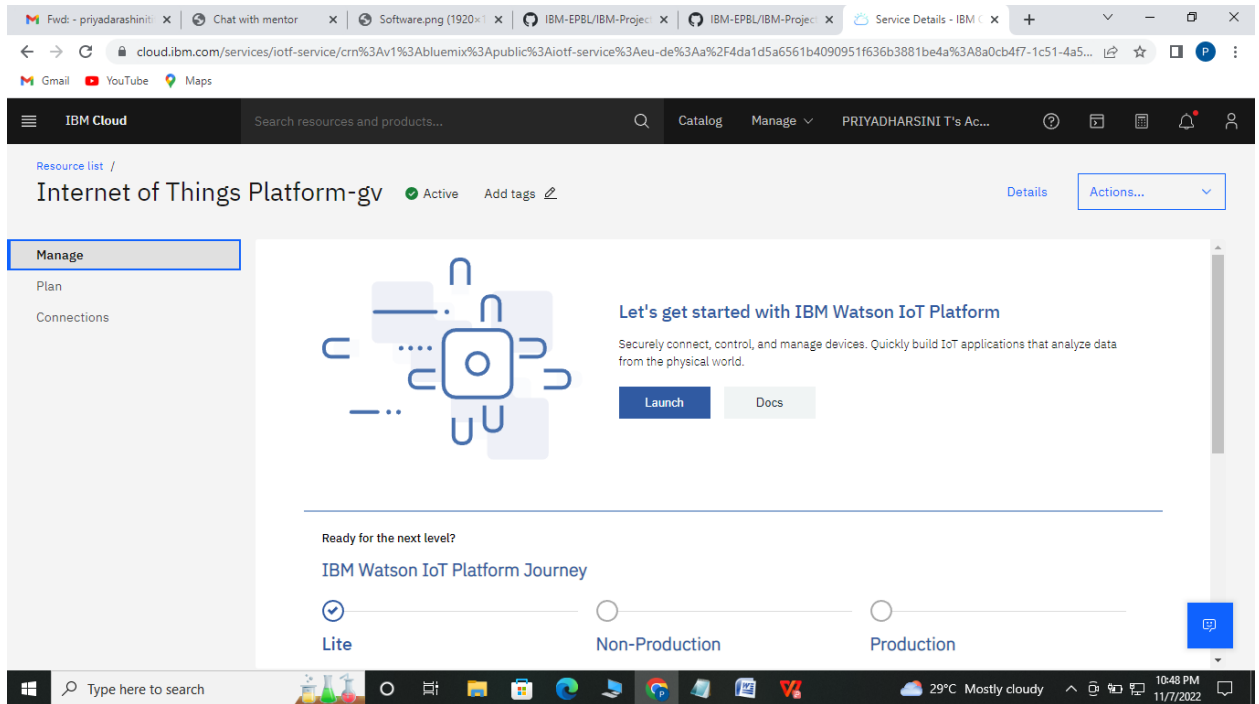
Resource group: Default

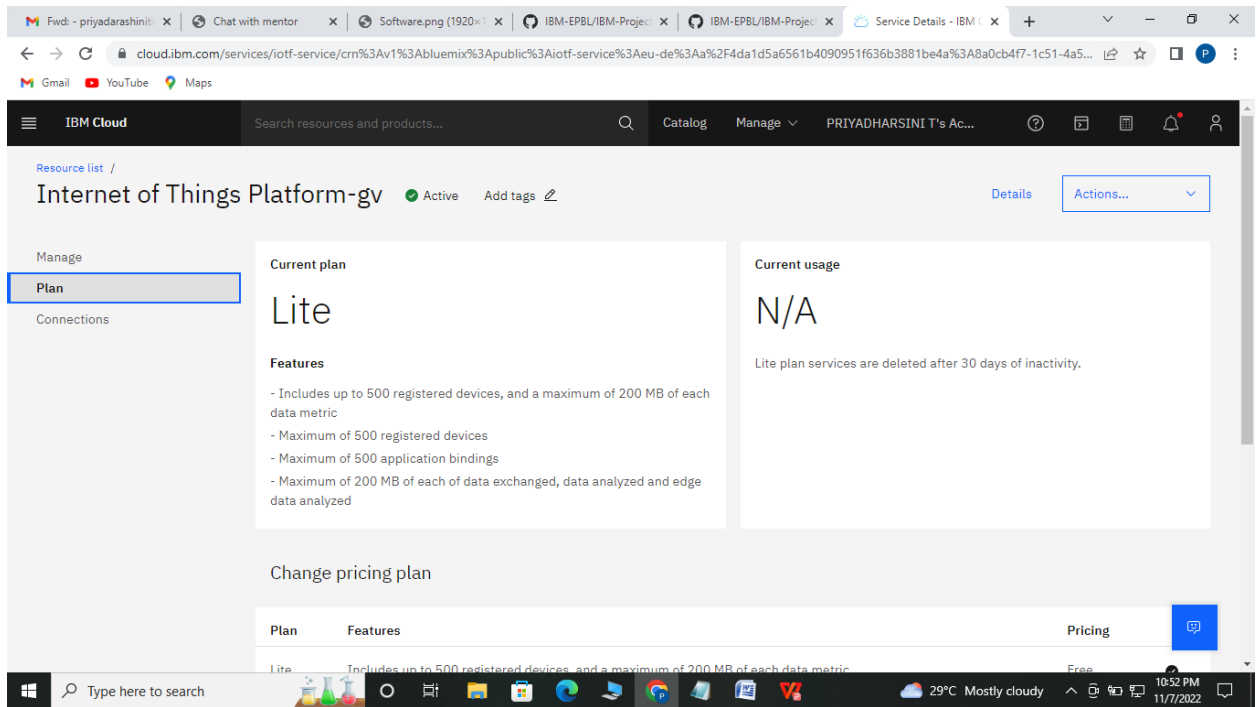
Existing Lite plan instance

You can have only 1 Lite plan instance of this service per resource group. [Delete](#) your current Lite plan instance in Default resource group to create a new one, or [view the existing instance](#).

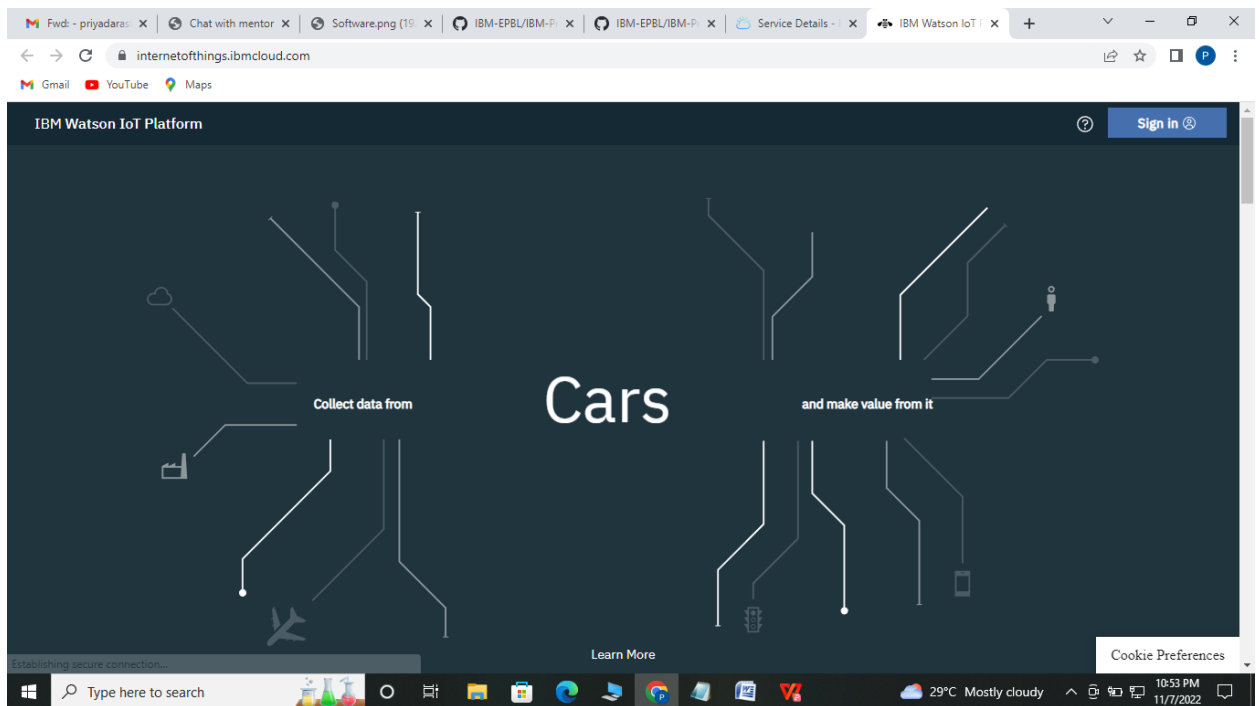
☐ I have read and agree to the following license agreements: [Terms](#)

6. Internet of Things Platform Road safety will be created, where there are different options like manage, plan, and connection (manage is for launch, Plan gives us the idea about the payment package and its upgrades, and lastly the connection is for to connect IoT with other servies)

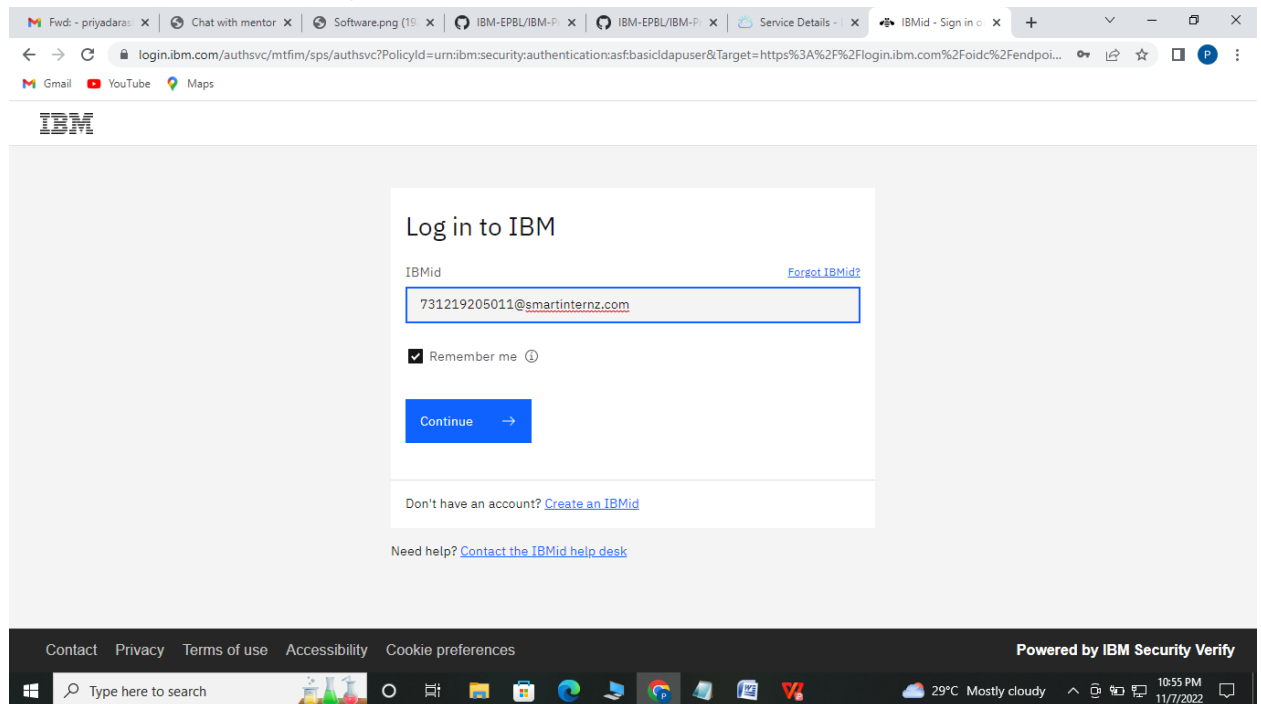




7 . Clicking on the launch button in the manage tab, it will open to this



8. Enter the details to sign in to the Watson Cloud to create a device



The screenshot shows a web browser window with the URL `login.ibm.com/authsvc/mtfm/sps/authsvc?PolicyId=urn:ibm:security:authentication:casf:basicdapuser&Target=https%3A%2F%2Flogin.ibm.com%2Foidc%2Fendpoi...`. The page features the IBM logo at the top left. The main content area is titled "Log in to IBM" and contains a form for IBMid login. The IBMid field is populated with `731219205011@smartinternz.com`. Below the field is a "Remember me" checkbox which is checked. A blue "Continue" button is positioned below the form. At the bottom of the form, there is a link "Don't have an account? Create an IBMid". Below the form, there is a link "Need help? Contact the IBMid help desk". The footer of the page includes links for "Contact", "Privacy", "Terms of use", "Accessibility", and "Cookie preferences", along with the text "Powered by IBM Security Verify". The Windows taskbar at the bottom shows the search bar, task view button, and several application icons, including the Start menu, File Explorer, Edge, and various development tools. The system tray shows the date and time as 10:55 PM on 11/7/2022.

Log in to IBM

IBMid [Forgot IBMid?](#)

`731219205011@smartinternz.com`

☒ Remember me ⓘ

[Continue](#) →

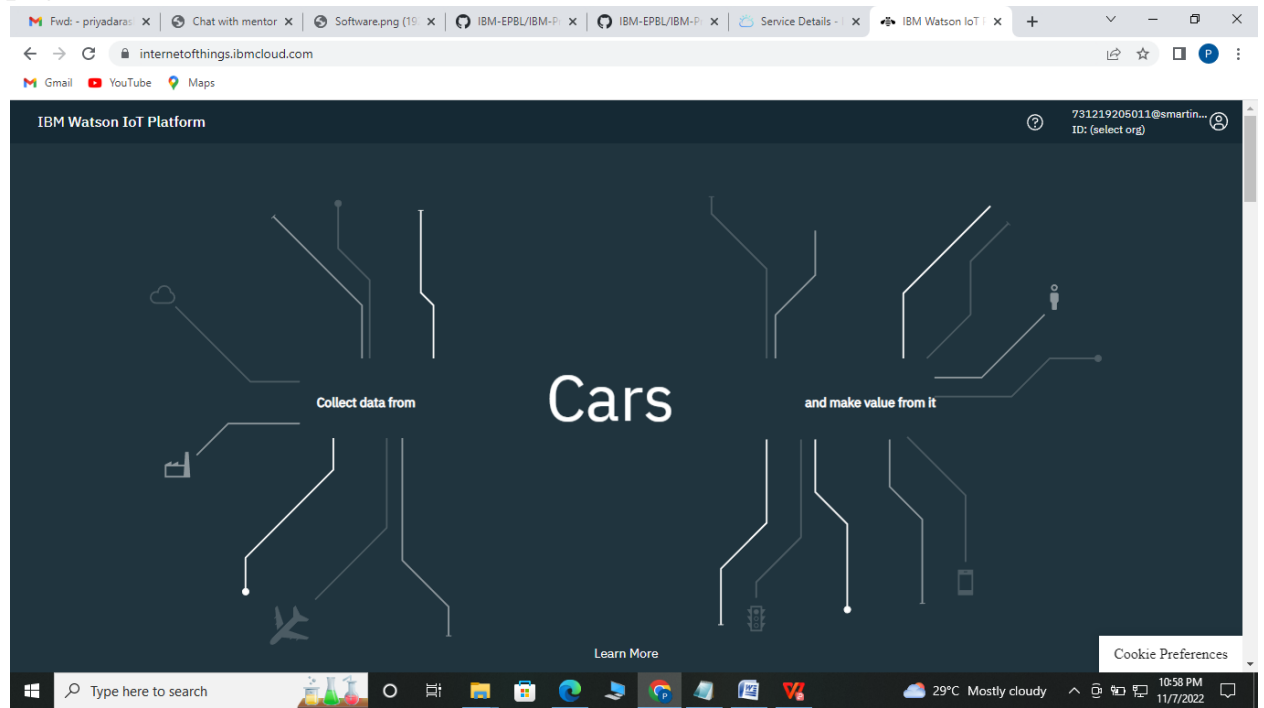
Don't have an account? [Create an IBMid](#)

Need help? [Contact the IBMid help desk](#)

Contact Privacy Terms of use Accessibility Cookie preferences

Powered by IBM Security Verify

9. Once logged in the name will be displayed and it goes back to the first page

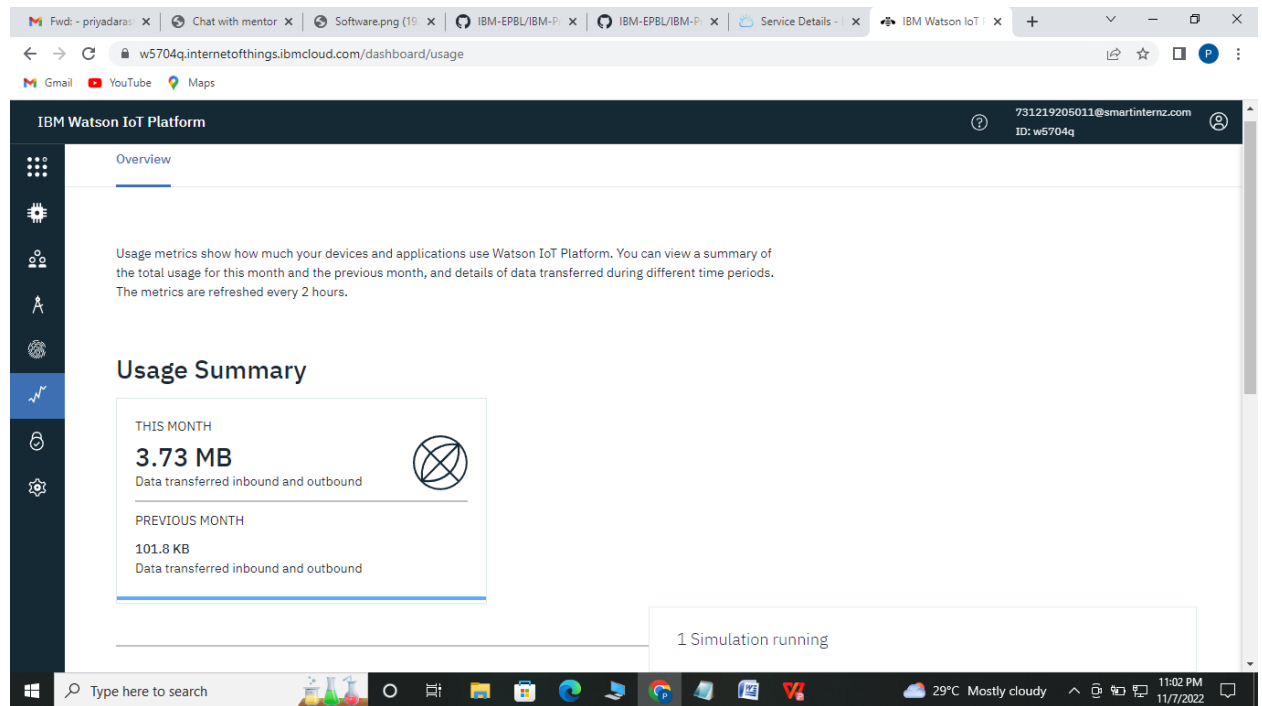


10. And again clicking on the launch button will open this tab, the device will help in the creation of the devices, the addition of devices, and the display of details of the devices

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes the IBM Watson IoT Platform logo and a user profile section with the email 731219205011@smartinternz.com and ID: w5704q. The main content area is titled 'Browse Devices' and features a sidebar with navigation icons. The 'All Devices' tab is selected, and a 'Diagnose' button is visible. A table lists the devices, with one item shown: PNTIBM, Status: Disconnected, Device Type: PNTIBM, Class ID: Device, and Date Added: 31 Oct 2022 07:57. A 'Device Simulator' toggle is set to 'On'. A notification at the bottom right indicates '1 Simulation running'.

Device ID	Status	Device Type	Class ID	Date Added
PNTIBM	Disconnected	PNTIBM	Device	31 Oct 2022 07:57

11.Usage gives the summary of how many bytes are used between the devices and the IBM cloud.



12.The member tab is add the teams members to work in the platform

The screenshot shows the 'Browse Members' page in the IBM Watson IoT Platform. The page has a dark sidebar with navigation icons. The main content area has a 'Browse' tab selected. At the top right, there's a user profile for '731219205011@smartinternz.com' with ID 'w5704q'. Below the header, there's a search bar with the placeholder 'Type the member email to search for'. A table below shows a single member:

<input type="checkbox"/>	Email Address	Name	Role	Added By	Expires	
1 result						
<input type="checkbox"/>	731219205011@smartinternz....	731219205011@smar...	Administrator	-	-	

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

13.This tab is used when you want to connect to some other platform and to integrate with other services.

The screenshot shows the 'Browse API Keys' page in the IBM Watson IoT Platform. The page has a dark sidebar with navigation icons. The main content area has 'Browse' and 'IBM Cloud Apps' tabs, with 'Browse' selected. At the top right, there's a user profile for '731219205011@smartinternz.com' with ID 'w5704q'. Below the header, there's a search bar with the placeholder 'Type the app description to search for'. A table below shows two API keys:

<input type="checkbox"/>	Key	Description	Role	Expires	
2 results					
<input type="checkbox"/>	a-w5704q-emjlo8gvva	API Key for the device simulator	Standard Application	-	
<input type="checkbox"/>	a-w5704q-vb1tmb10tp	-	Standard Application	-	

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

14. Click on the device tab and click on the add device button, then give the device type and device id and click next

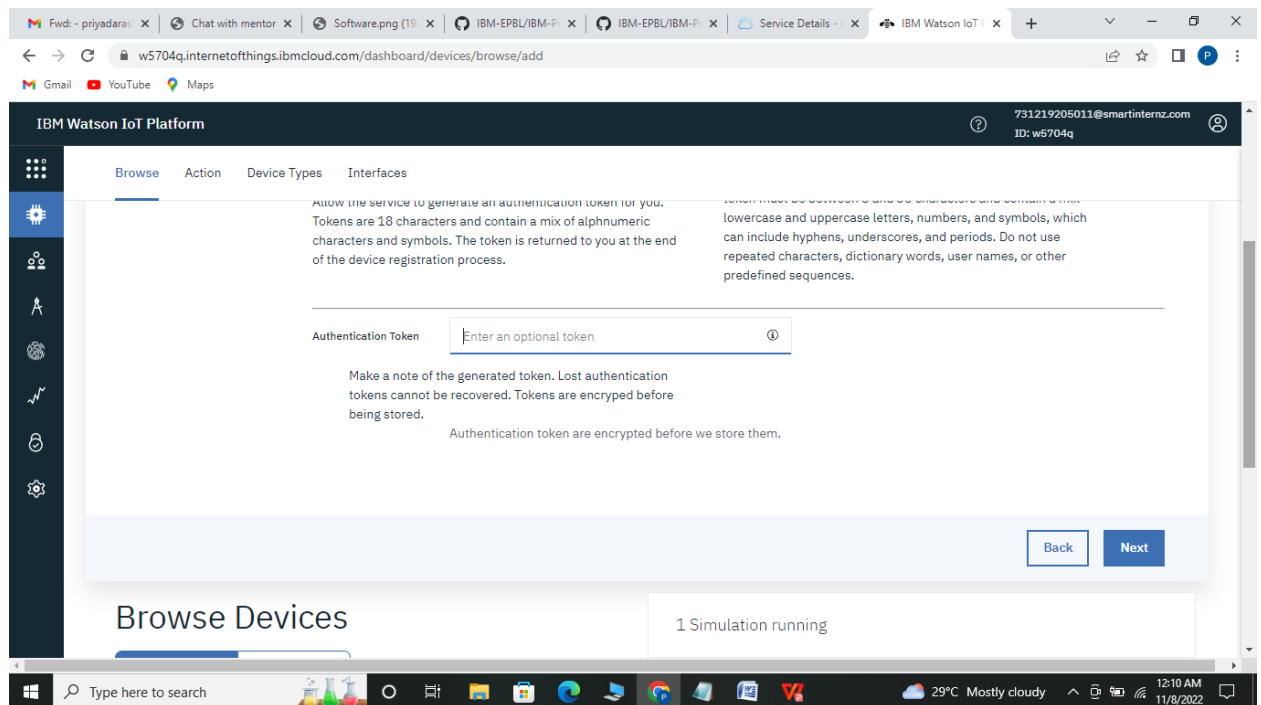
The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation links: Boards, Devices (selected), Members, Apps, Access Management, Usage, Security, and Settings. The main content area is titled 'All Devices' and includes a 'Diagnose' button. Below this, there is a table with columns: Device ID, Status, Device Type, Class ID, and Date Added. The table contains one entry with Device ID 'PNTIBM', Status 'Disconnected', Device Type 'PNTIBM', Class ID 'Device', and Date Added '31 Oct 2022 07:57'. A 'Device Simulator' toggle is set to 'On'. At the bottom, a status bar indicates '1 Simulation running'.

Device ID	Status	Device Type	Class ID	Date Added
PNTIBM	Disconnected	PNTIBM	Device	31 Oct 2022 07:57

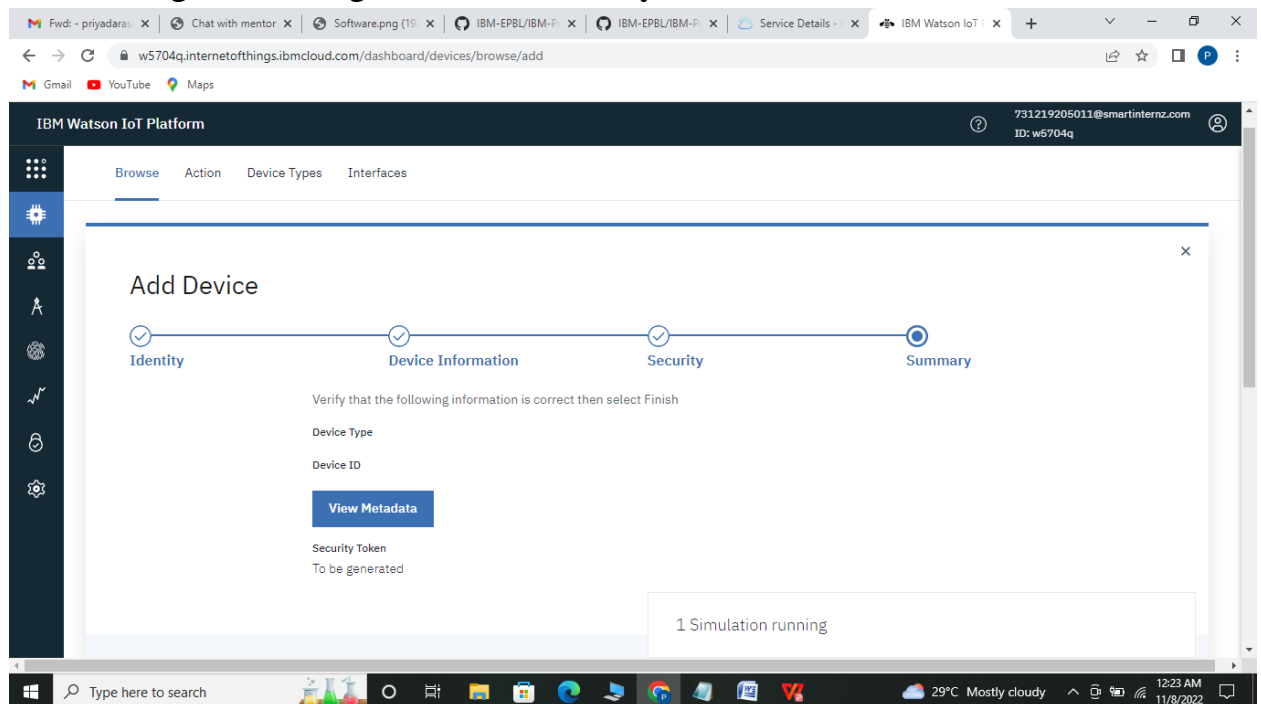
15. This page to enter extra details and of the hardware

The screenshot shows the 'Add Device' page in the IBM Watson IoT Platform. The page has a progress bar with four steps: Identity (checked), Device Information (active), Security, and Summary. Below the progress bar, there is a form with fields for: Serial Number, Model, Description, Hardware Version, Manufacturer, Device Class, Firmware Version, and Descriptive Location. Each field has a corresponding input box. An 'Add Metadata' button is located at the bottom left of the form. A status bar at the bottom indicates '1 Simulation running'.

16. Clicking next it goes to the security where we do authentication token id.



17. Clicking on next it goes to the summary of the device then click finish



18. The device credentials will be displayed with all the details

IBM Watson IoT Platform

General Settings

Here you can see and modify global organization information and locally enable experimental Watson IoT Platform features.

PLATFORM

- About
- Identity**
- Experimental Features
- Last Event Cache
- Client Connection
- State API

DATA AND DEVICES

- Custom Device
- Management Packages

Identity

The organization ID and friendly name are the global identifiers of your organization. Administrators can modify the global name.

Organization ID: w5704q

Friendly Name: w5704q

Experimental Features

Experimental features let you test the latest and greatest Watson IoT Platform features in your local environment before they are available for general consumption. Be aware that experimental features might introduce unexpected behavior.

Activate Experimental Features: ☒

1 Simulation running

19. Save the details of the device as the authentication tokens are nonrecoverable and if misplaced then we have to create a new one.

IBM Watson IoT Platform

General Settings

Here you can see and modify global organization information and locally enable experimental Watson IoT Platform features.

PLATFORM

- About**
- Identity
- Experimental Features
- Last Event Cache
- Client Connection
- State API

DATA AND DEVICES

- Custom Device
- Management Packages

About

The organization type sets the limits for the amount of data that can be stored. You can choose a new plan from the IBM Cloud service page.

Date Created: 30/10/2022

Organization Type: Bluemix Free

Geographic Location: eu-de

Identity

The organization ID and friendly name are the global identifiers of your organization. Administrators can modify the global name.

Organization ID: w5704q

Friendly Name: w5704q

Experimental Features

Experimental features let you test the latest and greatest Watson IoT Platform features in your local environment before they are available for general consumption. Be aware that experimental features might introduce unexpected behavior.

Activate Experimental Features: ☒

1 Simulation running

***FUTURE USE - Notepad**

File Edit Format View Help

Organization ID
w5704q

Device Type
PNTIBM

Device ID
PNTIBM

Authentication Method
use-token-auth

Authentication Token
WZi6IvG7x2rEY1?pc8

20. Clicking on the device tab we can now see the added device. Clicking on it will display the other details. It has different tabs like Identity, Device Information, State and login.

The screenshot shows 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'. The main content area displays a table of devices. The first device is 'PNTIBM' with status 'Disconnected', device type 'PNTIBM', class ID 'Device', and date added '31 Oct 2022 07:57'. Below the table, there are tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is active, showing a table of events. The first event is 'event_1' with value '["Temperature":21,"Humidity":46]', format 'json', and received 'a few seconds ago'. A notification at the bottom right says '1 Simulation running'.

Device ID	Status	Device Type	Class ID	Date Added
PNTIBM	Disconnected	PNTIBM	Device	31 Oct 2022 07:57

Event	Value	Format	Last Received
event_1	["Temperature":21,"Humidity":46]	json	a few seconds ago

The screenshot shows the IBM Watson IoT Platform dashboard with the 'Device Information' tab selected. The device details are as follows:

Property	Value
Device ID	PNTIBM
Device Type	PNTIBM
Date Added	31 Oct 2022 07:57
Added By	731219205011@smartinternz.com
Connection Status	Disconnected

At the bottom right, a notification indicates '1 Simulation running'.

In a similar way, we can create n number of devices with a 50 per page limit as per the requirement of our project

21. The Boards will display card for the project

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM Watson IoT Platform logo and a user profile section with the email 731219205011@smartinternz.com and ID: w5704q. The main content area is titled 'Your boards' and 'Public boards'. It features three cards: 'WEATHER MONITORING' (2 Cards), 'USAGE OVERVIEW' (3 Cards), and 'RISK AND SECURITY OVERVIEW' (4 Cards). Each card has a 'Owned by you' label and icons for delete, heart, and settings. A 'Create New Board' button is located in the top right corner. Below the cards, it says 'Boards shared with you'. A status bar at the bottom indicates '1 Simulation running'.

The second screenshot shows the 'Usage Overview' board. It features a circular gauge showing 'Total 1 device'. To the right, it displays data transfer statistics: '0.1 MB Data transferred today', '3.7 MB This month', and '0.1 MB Previous month'. Below this, there is a 'Data transferred' section with a line graph showing '0.1 MB Data transferred today'. The graph has a y-axis labeled 'MB' with values from 1.5 to 3.5. A status bar at the bottom indicates '1 Simulation running'.

RESULT:

An IBM Watson cloud for IoT and a device is created