

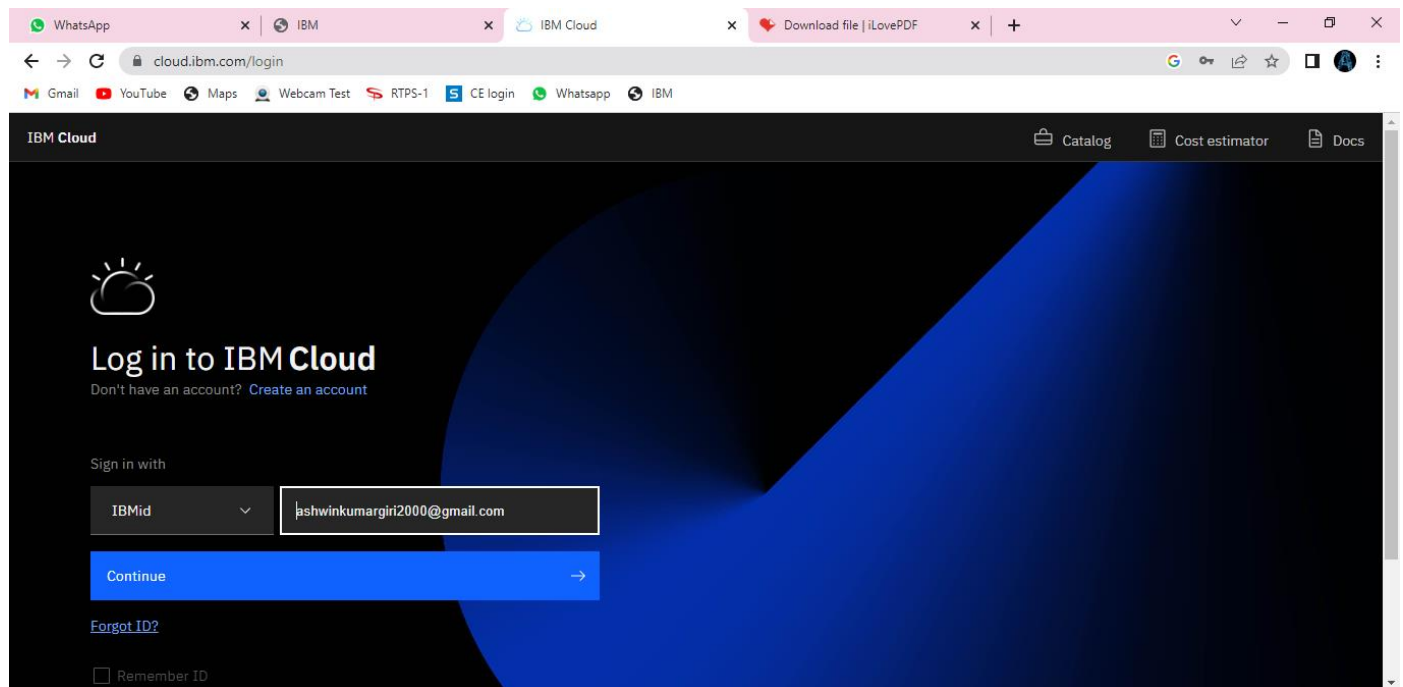
Create And Configure IBM Cloud Service

Create IBM Watson IoT Platform And Device

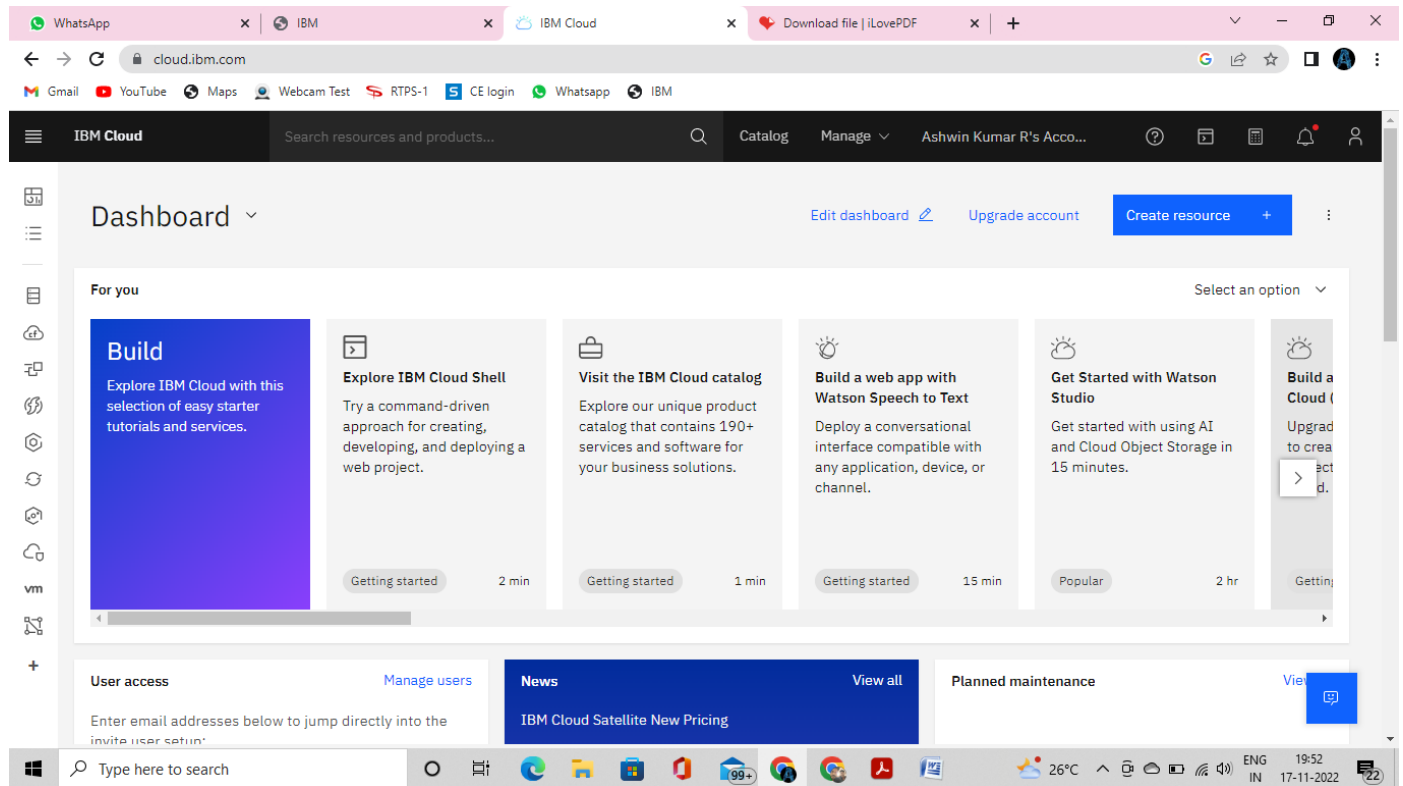
Date	17 November 2022
Team ID	PNT2022TMID11663
Project Name	IoT Based Safety Gadget For Child Safety Monitoring & Notification
Maximum Marks	4 Marks

STEPS

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

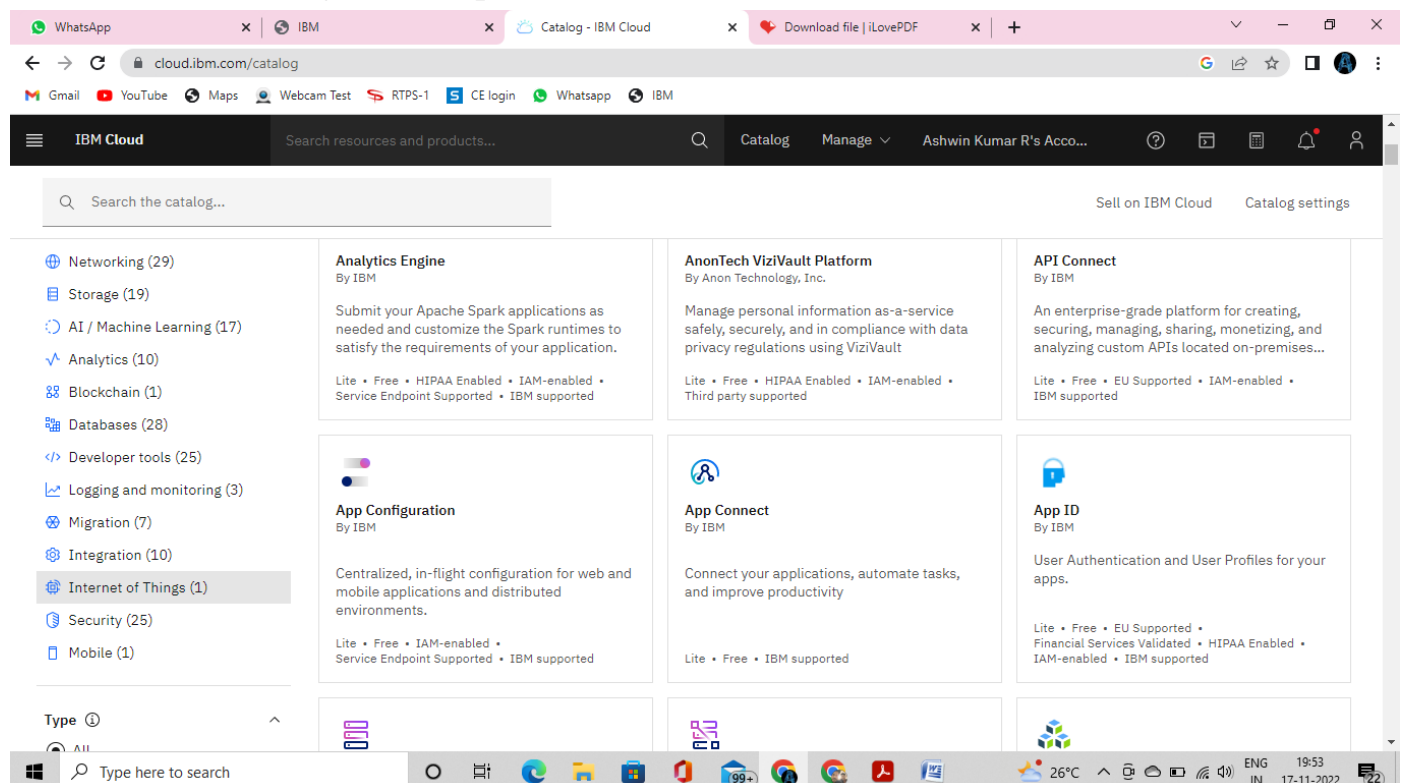


2. Home page of IBM cloud



The screenshot shows the IBM Cloud Dashboard. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and the user's account (Ashwin Kumar R's). The main content area is titled "Dashboard" and features a "For you" section with several cards: "Build" (Explore IBM Cloud with this selection of easy starter tutorials and services), "Explore IBM Cloud Shell" (Try a command-driven approach for creating, developing, and deploying a web project), "Visit the IBM Cloud catalog" (Explore our unique product catalog that contains 190+ services and software for your business solutions), "Build a web app with Watson Speech to Text" (Deploy a conversational interface compatible with any application, device, or channel), "Get Started with Watson Studio" (Get started with using AI and Cloud Object Storage in 15 minutes), and "Build a Cloud" (Upgrade to create a new project). Below these cards are sections for "User access" (Manage users), "News" (IBM Cloud Satellite New Pricing), and "Planned maintenance". The bottom of the dashboard shows a search bar and a list of services.

3. Click on the catalog on the top



The screenshot shows the IBM Cloud Catalog. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and the user's account (Ashwin Kumar R's). The main content area is titled "Catalog" and features a search bar and a list of services. The services are categorized into several groups: Networking (29), Storage (19), AI / Machine Learning (17), Analytics (10), Blockchain (1), Databases (28), Developer tools (25), Logging and monitoring (3), Migration (7), Integration (10), Internet of Things (1), Security (25), and Mobile (1). The "Internet of Things" category is highlighted. Below the categories, there are several service cards: "Analytics Engine" (By IBM), "AnonTech ViziVault Platform" (By Anon Technology, Inc.), "API Connect" (By IBM), "App Configuration" (By IBM), "App Connect" (By IBM), and "App ID" (By IBM). Each card provides a brief description of the service and its features.

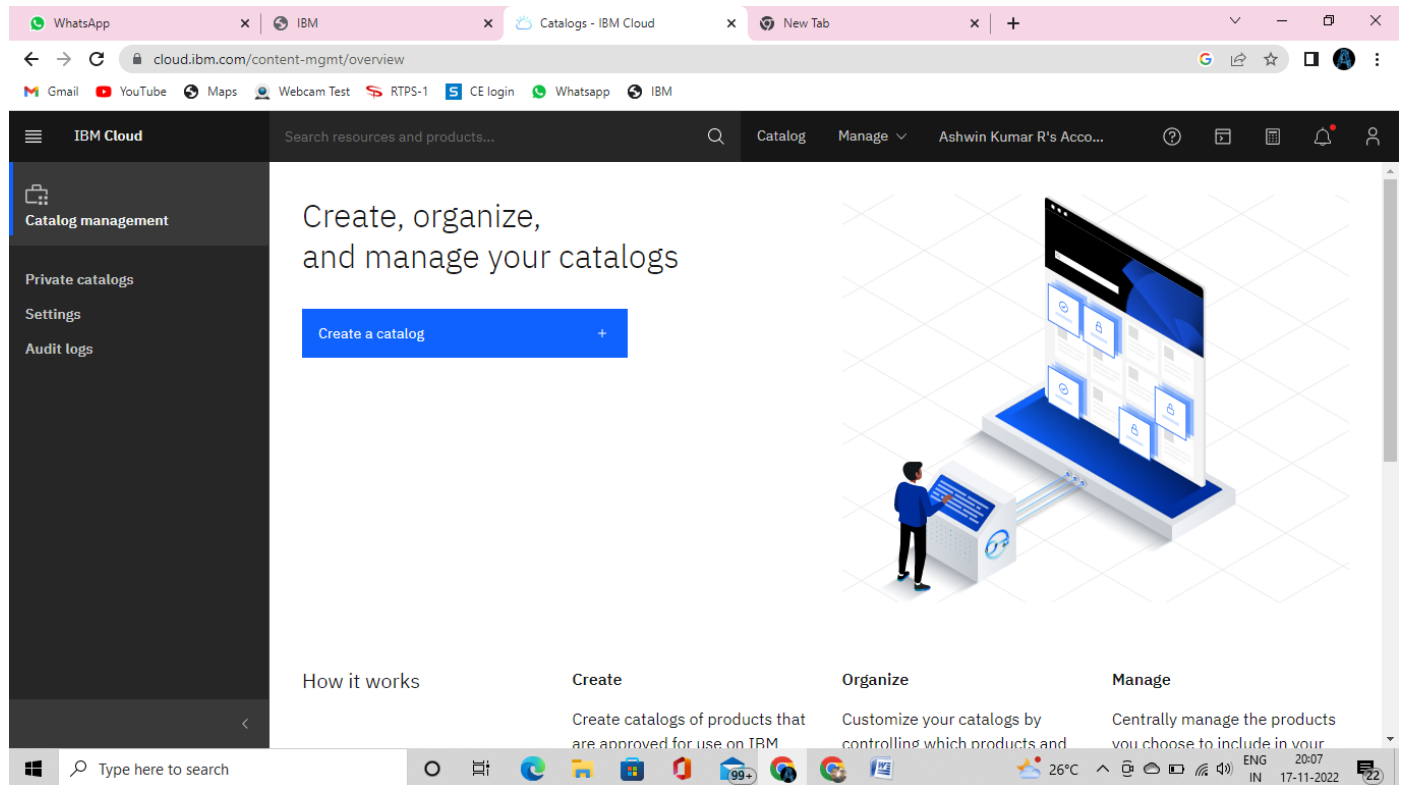
4. Click on IoT in the category mentioned

The screenshot shows the IBM Cloud console for creating a bare metal server. The browser tabs include WhatsApp, IBM, Bare metal server provision - IBM, and Download file | iLovePDF. The URL is cloud.ibm.com/vpc-ext/provision/bm. The page title is 'Bare metal server for VPC'. The 'Create' tab is active, showing the 'Location' section with Geography (Europe), Region (Frankfurt), and Zone (Frankfurt 2). The 'Details' section has a 'Name' field with the placeholder 'Enter a unique name' and a 'Resource group' dropdown set to 'Default'. On the right, the 'Summary' panel shows the server configuration: 96 vCPUs, 384 GiB RAM, 100 Gbps, Image (Debian GNU/Linux), and Network interface (provided). The pricing section shows a Subtotal of \$3,701.10, a Sustained usage discount of -\$362.50, and a Total estimated cost of \$3,338.60/mo. There is an 'Upgrade account' button and a 'Get sample API call' button.

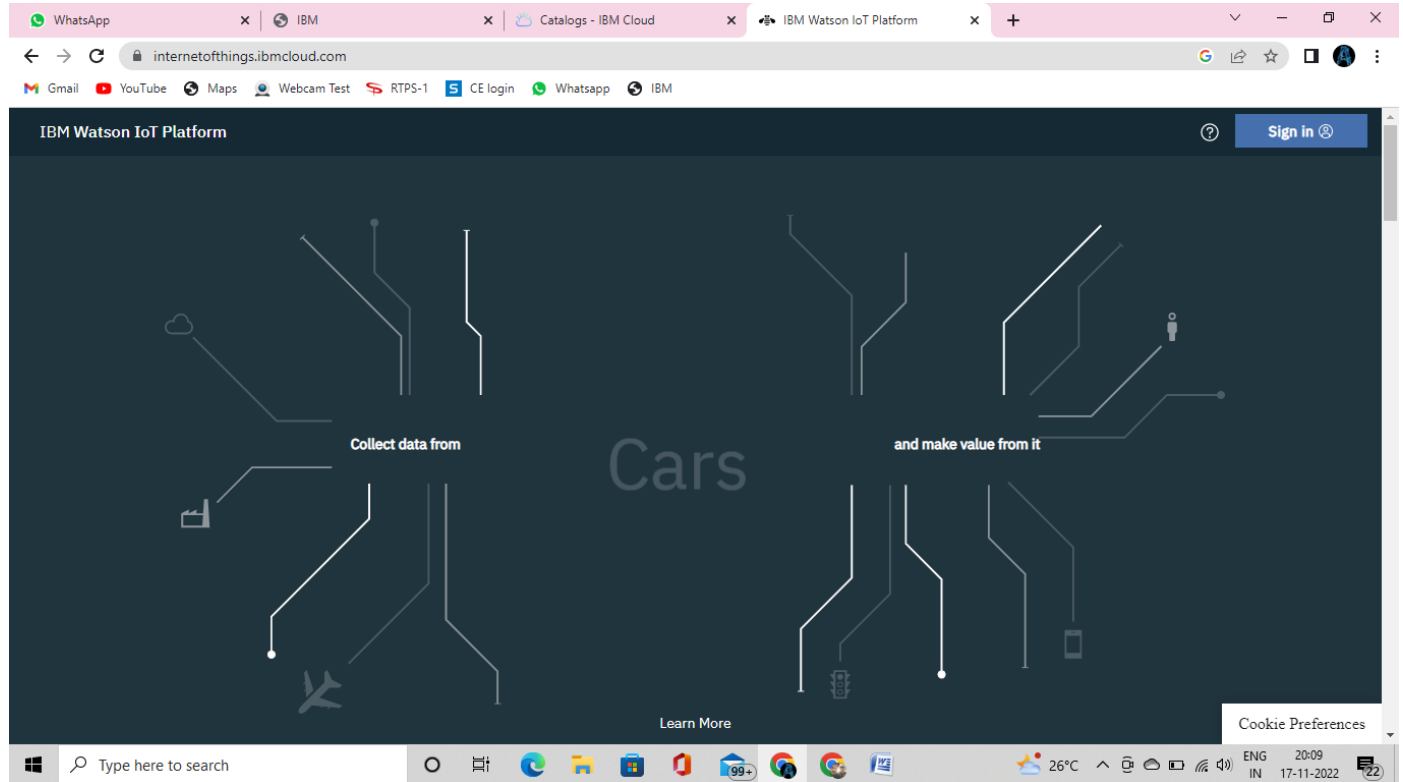
5. If already a lite is present delete it else u can't create another. Enter the location and in the configure your resource type the service name and choose the plan, tick the agree with it agreements and then click on create

This screenshot is identical to the one above, showing the IBM Cloud console for creating a bare metal server. The browser tabs include WhatsApp, IBM, Bare metal server provision - IBM, and Download file | iLovePDF. The URL is cloud.ibm.com/vpc-ext/provision/bm. The page title is 'Bare metal server for VPC'. The 'Create' tab is active, showing the 'Location' section with Geography (Europe), Region (Frankfurt), and Zone (Frankfurt 2). The 'Details' section has a 'Name' field with the placeholder 'Enter a unique name' and a 'Resource group' dropdown set to 'Default'. On the right, the 'Summary' panel shows the server configuration: 96 vCPUs, 384 GiB RAM, 100 Gbps, Image (Debian GNU/Linux), and Network interface (provided). The pricing section shows a Subtotal of \$3,701.10, a Sustained usage discount of -\$362.50, and a Total estimated cost of \$3,338.60/mo. There is an 'Upgrade account' button and a 'Get sample API call' button.

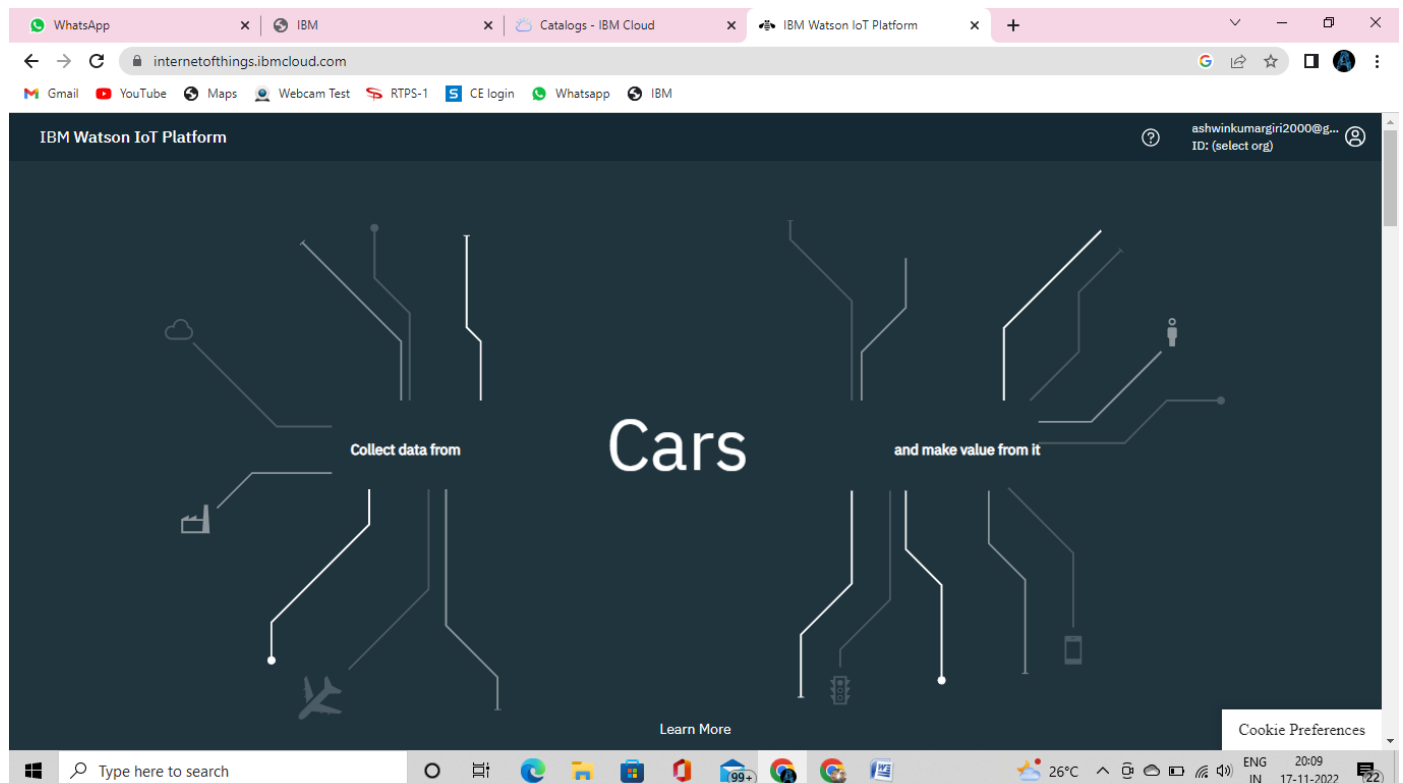
6. Internet of Things Platform Child_safety will be created, where there are different options like manage, plan, and connection (manage is for launch, Plan gives us the idea about the payment package and its upgrades, and lastly the connection is for to connect IoT with other services)



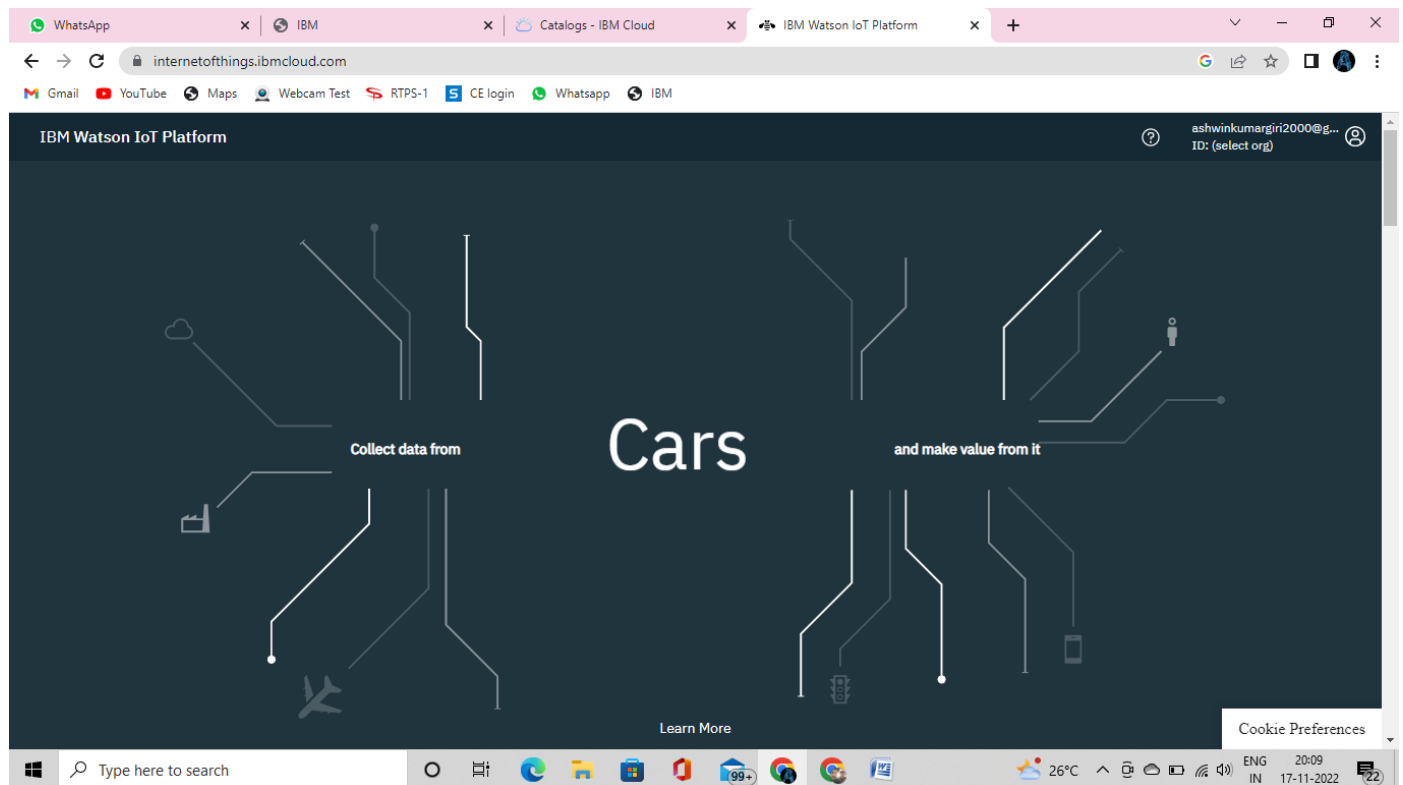
7. Clicking on the launch button in the manage tab, it will open to this



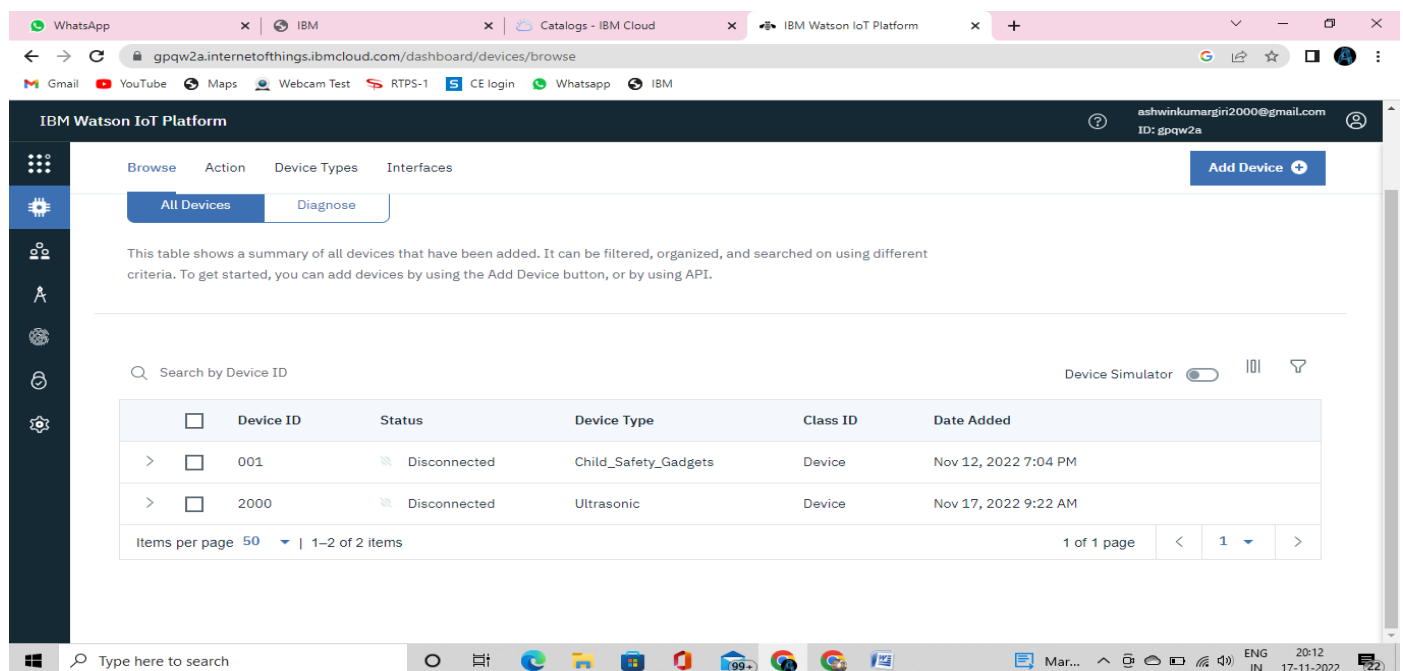
8. Enter the details to sign in to the Watson Cloud to create a device



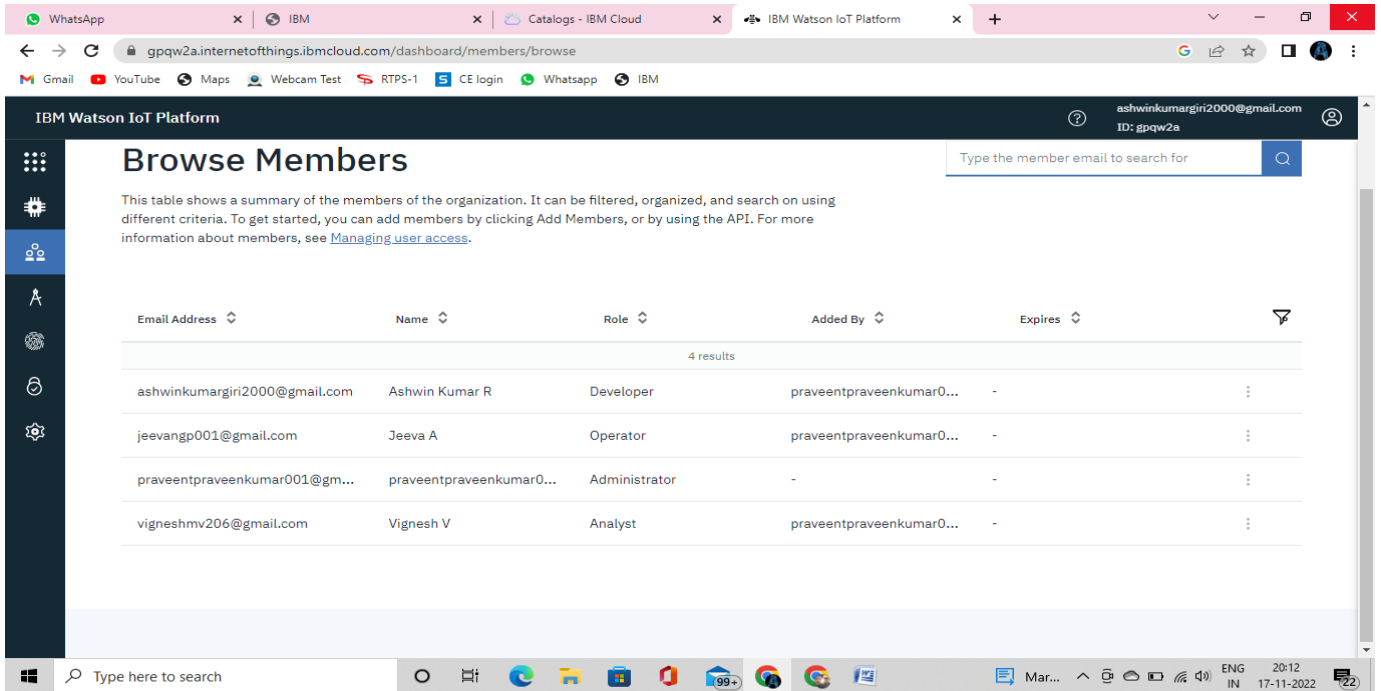
9. Once logged in the name will be displayed and it goes back to the first page



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



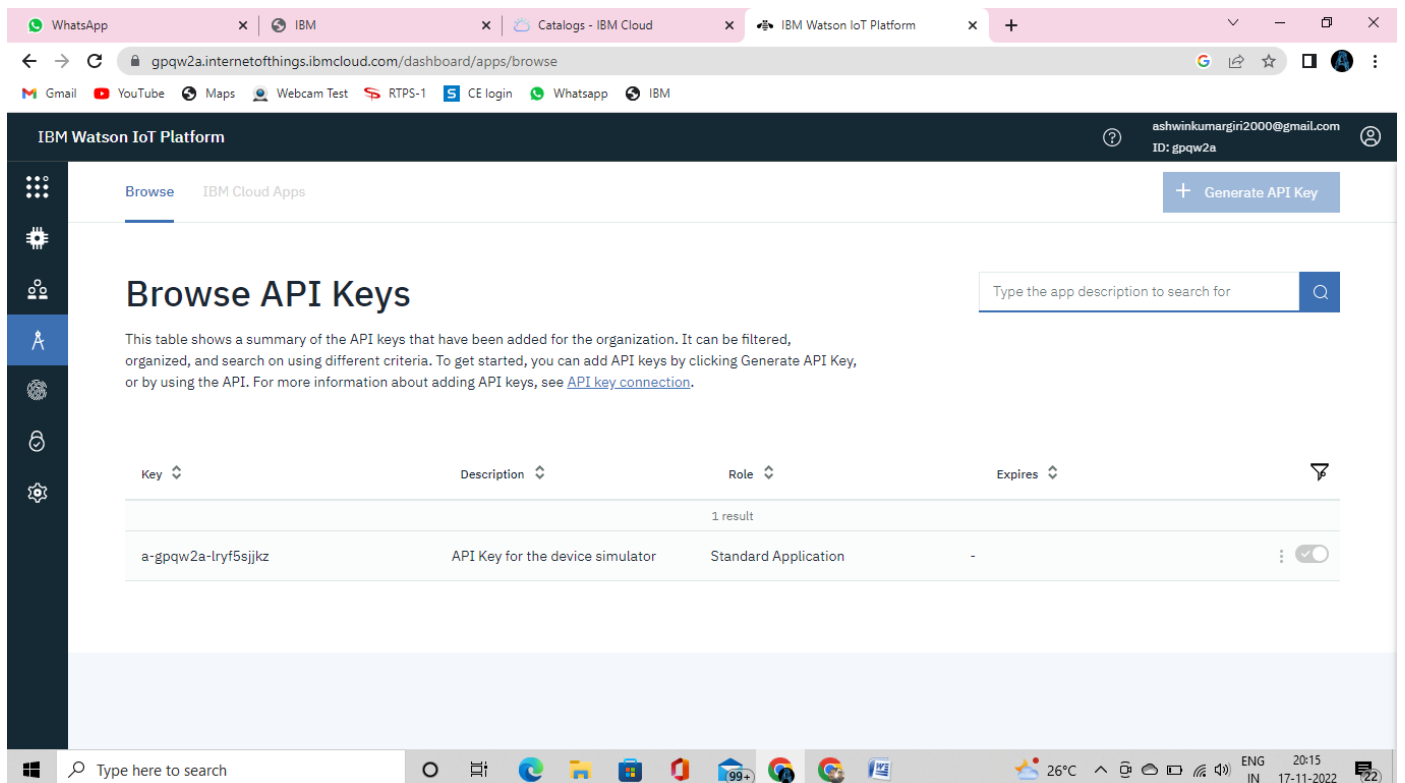
11. The member tab is add the teams members to work in the platform



The screenshot shows the 'Browse Members' page in the IBM Watson IoT Platform. The page header includes the user's email (ashwinkumargiri2000@gmail.com) and ID (gpqw2a). The main content area features a table with 4 results of organization members. The table columns are Email Address, Name, Role, Added By, and Expires. The table data is as follows:

Email Address	Name	Role	Added By	Expires
ashwinkumargiri2000@gmail.com	Ashwin Kumar R	Developer	praveentpraveenkumar0...	-
jeevangp001@gmail.com	Jeeva A	Operator	praveentpraveenkumar0...	-
praveentpraveenkumar001@gm...	praveentpraveenkumar0...	Administrator	-	-
vigneshmv206@gmail.com	Vignesh V	Analyst	praveentpraveenkumar0...	-

12. 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 header includes the user's email (ashwinkumargiri2000@gmail.com) and ID (gpqw2a). The main content area features a table with 1 result of API keys. The table columns are Key, Description, Role, and Expires. The table data is as follows:

Key	Description	Role	Expires
a-gpqw2a-lryf5sjkz	API Key for the device simulator	Standard Application	-

13. 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 top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Add Device' modal is open, displaying a progress bar with four steps: Identity (selected), Device Information, Security, and Summary. Below the progress bar, a message states: 'Select a device type for the device that you are adding and give the device a unique ID.' There are two input fields: 'Device Type' with a dropdown menu labeled 'Select or create a device type...' and 'Device ID' with a text input labeled 'Enter Device ID'. At the bottom right of the modal are 'Cancel' and 'Next' buttons. The browser's address bar shows the URL 'gpqw2a.internetofthings.ibmcloud.com/dashboard/devices/browse/add'.

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

The screenshot shows the IBM Watson IoT Platform interface, now at the 'Device Information' step of the 'Add Device' process. The progress bar shows 'Identity' as completed and 'Device Information' as the current step. A message states: 'You can modify the default device information and enter more information about the device for identification purposes.' The form is divided into two columns of input fields. The left column includes 'Serial Number' (labeled 'Enter Serial Number'), 'Model' (labeled 'Enter Model'), 'Description' (labeled 'Enter Description'), and 'Hardware Version' (labeled 'Enter Hardware Version'). The right column includes 'Manufacturer' (labeled 'Enter Manufacturer'), 'Device Class' (labeled 'Enter Device Class'), 'Firmware Version' (labeled 'Enter Firmware Version'), and 'Descriptive Location' (labeled 'Enter Descriptive Location'). At the bottom left of the form is an 'Add Metadata' button with a plus icon. The browser's address bar shows the same URL as the previous screenshot.

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

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

The screenshot shows the 'Add Device' page in the IBM Watson IoT Platform. The progress bar indicates four steps: Identity (completed), Device Information (current), Security, and Summary. The 'Device Information' section contains several input fields for device details:

Field	Value
Serial Number	Enter Serial Number
Model	Enter Model
Description	Enter Description
Hardware Version	Enter Hardware Version
Manufacturer	Enter Manufacturer
Device Class	Enter Device Class
Firmware Version	Enter Firmware Version
Descriptive Location	Enter Descriptive Location

Below the input fields is a button labeled 'Add Metadata +'. The top navigation bar shows the user's email 'ashwinkumargini2000@gmail.com' and ID 'gpqw2a'.

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

The screenshot shows the 'Add Device' page in the IBM Watson IoT Platform, now at the 'Summary' step. The progress bar shows all four steps (Identity, Device Information, Security, Summary) as completed. The 'Summary' section displays the following information:

Verify that the following information is correct then select Finish

Field	Value
Device Type	Ultrasonic_ESP32
Device ID	2000
Security Token	Ashwin2000

Below the summary information is a button labeled 'View Metadata'. At the bottom right of the page are two buttons: 'Back' and 'Finish'. The top navigation bar shows the user's email 'ashwinkumargini2000@gmail.com' and ID 'gpqw2a'.

18. 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 tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'All Devices' tab is selected, and a 'Diagnose' button is visible. A blue 'Add Device' button is in the top right corner. Below the navigation bar, a message states: '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.'

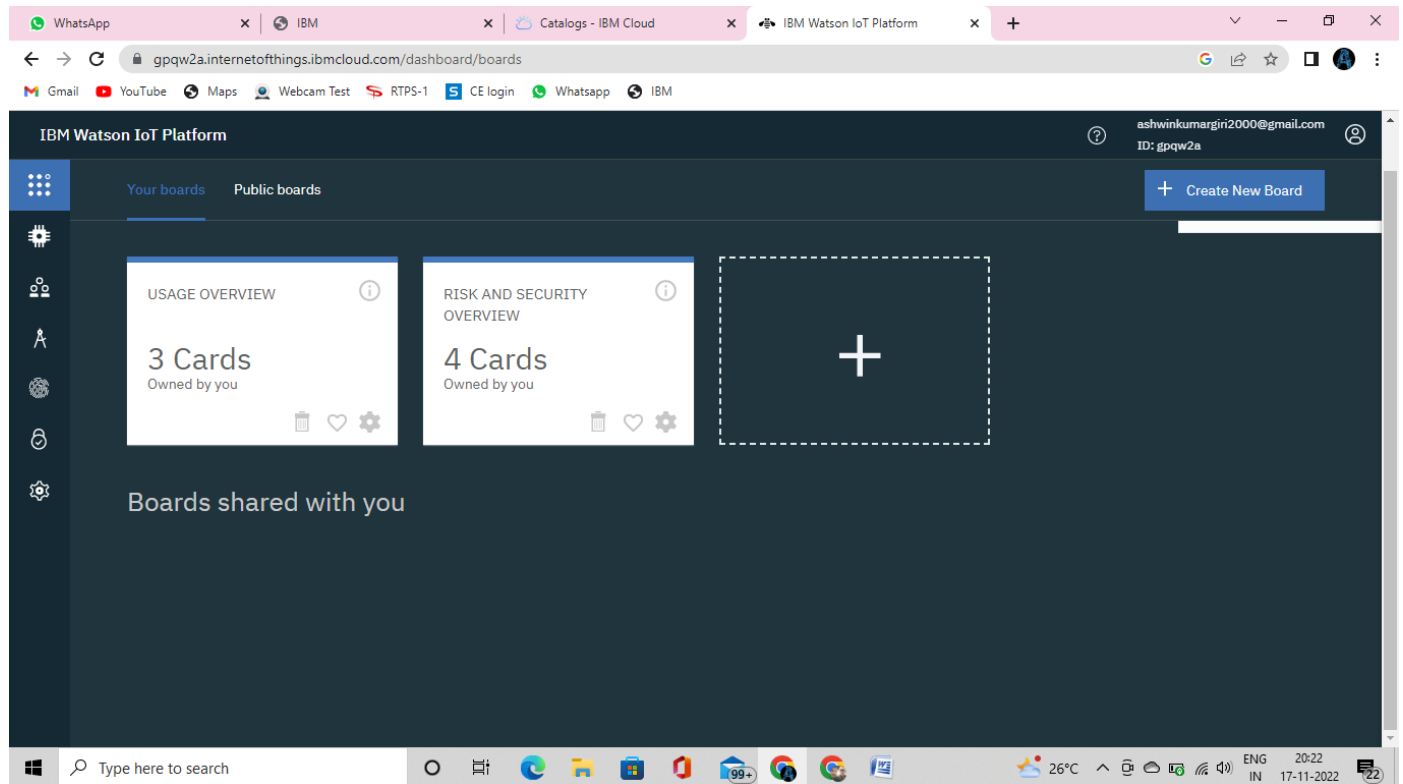
A search bar labeled 'Search by Device ID' is present. To the right of the search bar is a 'Device Simulator' toggle switch and icons for list and filter views. Below the search bar is a table with the following data:

	Device ID	Status	Device Type	Class ID	Date Added
>	001	Disconnected	Child_Safety_Gadgets	Device	Nov 12, 2022 7:04 PM
>	2000	Disconnected	Ultrasonic	Device	Nov 17, 2022 9:22 AM

At the bottom of the table, it says 'Items per page 50' and '1-2 of 2 items'. On the right side of the table, it says '1 of 1 page' with navigation arrows.

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

19. The Boards will display card for the project.



RESULT:

An IBM Watson cloud for IoT and a device is created.

TEAM ID : PNT2022TMID11663
TEAM LEADER : PRAVEEN KUMAR T
TEAM MEMBER 1 : ASHWIN KUMAR R
TEAM MEMBER 2 : JEEVA A
TEAM MEMBER 3 : VIGNESH V
TEAM SIZE : 4

MENTOR : Mythili J