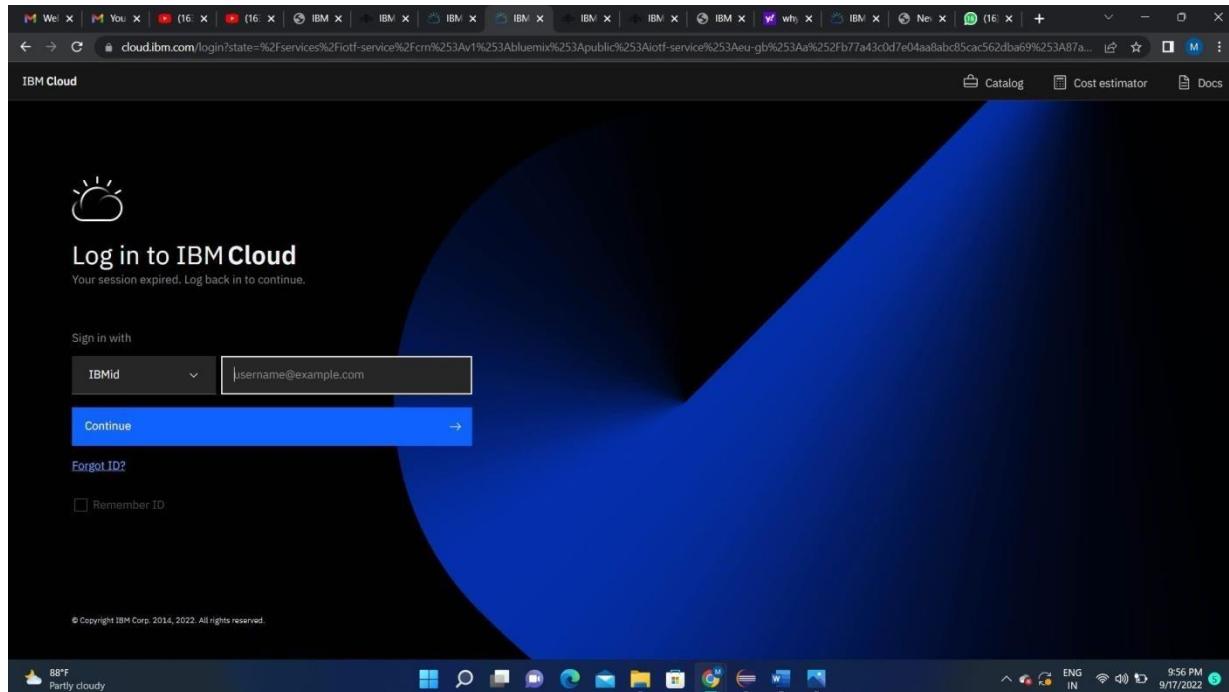


CREATE IBM WATSON IOT PLATFORM AND DEVICE

Date	03-11-2022
Team ID	PNT2022TMID01082
Project Name	Project - IOT based safety gadget for child safety monitoring and notification
Maximum Marks	4 Marks
Submitted By	A.S. MANOJ KUMAR

STEPS:

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



2. Home page of IBM cloud

The screenshot shows the IBM Cloud Dashboard. At the top, there's a search bar and navigation links for Catalog, Docs, Support, Manage, and Meow Man's Account. Below the header, a "For you" section features several cards: "Build" (Explore IBM Cloud with this selection of easy starter tutorials and services), "An essential guide to Kubernetes" (Deploy, scale, and manage your containerized applications with Kubernetes), "Create a Kubernetes cluster" (Automate deployments and manage your containerized apps in a native Kubernetes experience), "Create an OpenShift cluster" (Deploy apps on highly available clusters with Red Hat OpenShift on IBM Cloud), "Deploy on Kubernetes" (With Kubernetes clusters, you can run, update, and scale containerized applications), and "Get started with Containers & Kubernetes" (Containers are a standard way to package apps, and their dependencies, to allow seamless movement between environments). The "Resource summary" section shows 7 resources, including Cloud Foundry apps, Services and software, and Apps. The "Planned maintenance" and "IBM Cloud status" sections are also visible.

3. Click on the catalog on the top

The screenshot shows the IBM Cloud Catalog page. The top navigation bar includes a search bar and links for Catalog, Docs, Support, Manage, and Meow Man's Account. A sidebar on the left lists categories like Recommended products, Compute, Containers, Networking, Storage, AI / Machine Learning, Analytics, Blockchain, Databases, Developer tools, Logging and monitoring, Migration, Integration, Internet of Things, and Security. A filter bar allows users to search by category (Services) or clear all filters. The main area displays a grid of service cards. The first card is "Analytics Engine" by IBM, which allows users to submit Apache Spark applications. The second card is "AnonTech ViziVault Platform" by Anon Technology, Inc., which manages personal information. The third card is "API Connect" by IBM, an enterprise-grade platform for API management. The fourth card is "App Configuration" by IBM, for centralized configuration. The fifth card is "App Connect" by IBM, for connecting applications. The sixth card is "App ID" by IBM, for user authentication. Each card includes a brief description, supported regions, and compliance details.

Click on IoT in the category mentioned

The screenshot shows the IBM Cloud Catalog interface. On the left, there's a sidebar with filters for Type (Service), Provider (IBM), Updated on (08/15/2022), Category (Internet of Things), Compliance (IAM-enabled), and Location (Frankfurt, London, Dallas, Washington DC). The main content area is titled "Internet of Things Platform" and describes it as the hub for managing connected devices. It shows a "Create" button and a "Select a location" dropdown set to "Dallas (us-south)". Below this is a "Select a pricing plan" section with a "Plan" table. The "Lite" plan is listed, showing features like up to 500 registered devices and a maximum of 200 MB of data metric. The "Pricing" column indicates it's "Free". To the right, a "Summary" panel shows details: Location: Dallas, Plan: Lite, Service name: Internet of Things Platform-bb, Resource group: Default. A modal window titled "Existing Lite plan instance" informs the user they can have only one Lite plan instance per resource group and provides options to delete or view the existing instance. At the bottom, there are checkboxes for accepting license agreements and buttons for "Create" and "Add to estimate". The system status bar at the bottom right shows "6:46 PM 9/17/2022".

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

This screenshot is similar to the previous one but shows the result of deleting a Lite plan instance. The "Summary" panel now lists the service as having a "Location: London, Plan: Lite, Service name: Internet of Things Platform-bb, Resource group: Default". The modal window about the existing Lite plan instance is still present. The "Create" button is now disabled, indicating that a new instance cannot be created because one already exists. The rest of the interface remains the same, including the sidebar filters and the "Configure your resource" section at the bottom.

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

The screenshot shows the IBM Cloud Catalog interface. On the left, there's a sidebar with service details: Type: Service, Provider: IBM, updated on 08/15/2022, Category: Internet of Things, Compliance: IAM-enabled, Location: Frankfurt, London, Dallas, Washington DC, and Related links: Docs, Terms. The main area displays the 'Internet of Things Platform' service. It has tabs for 'Create' (which is active) and 'About'. A dropdown menu 'Select a location' shows 'Dallas (us-south)' selected. Below it, 'Select a pricing plan' is shown with 'Displayed prices do not include tax. Monthly prices shown are for country or location: United States'. A table lists the 'Plan', 'Features', and 'Pricing' for the 'Lite' plan. The features include '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', and 'Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed'. The pricing is 'Free'. To the right, a 'Summary' panel shows the service name, location (Dallas), plan (Lite), and resource group (Default). A modal window titled 'Existing Lite plan instance' informs the user they can have only 1 Lite plan instance per resource group and provides options to delete the current instance or view the existing one. At the bottom, there's a checkbox for 'I have read and agree to the following license agreements:' followed by a 'Terms' link, a 'Create' button, and an 'Add to estimate' button. The system status bar at the bottom shows weather (89°F, Partly cloudy), battery level, signal strength, and the date/time (9/17/2022, 7:23 PM).

This screenshot shows the configuration step for creating a new instance. The sidebar and service details are identical to the previous screenshot. The main area now shows the 'Configure your resource' section. It includes fields for 'Service name' (set to 'Internet of Things Platform-child_safety'), 'Select a resource group' (set to 'Default'), 'Tags' (with examples 'env:dev, version-1'), and 'Access management tags' (with examples 'access:dev, proj:version-1'). To the right, the 'Summary' panel shows the service name, location (London), plan (Lite), and resource group (Default). A checkbox for 'I have read and agree to the following license agreements:' is checked, with a 'Terms' link below it. There are 'Create' and 'Add to estimate' buttons. The system status bar at the bottom is identical to the previous screenshot.

6.

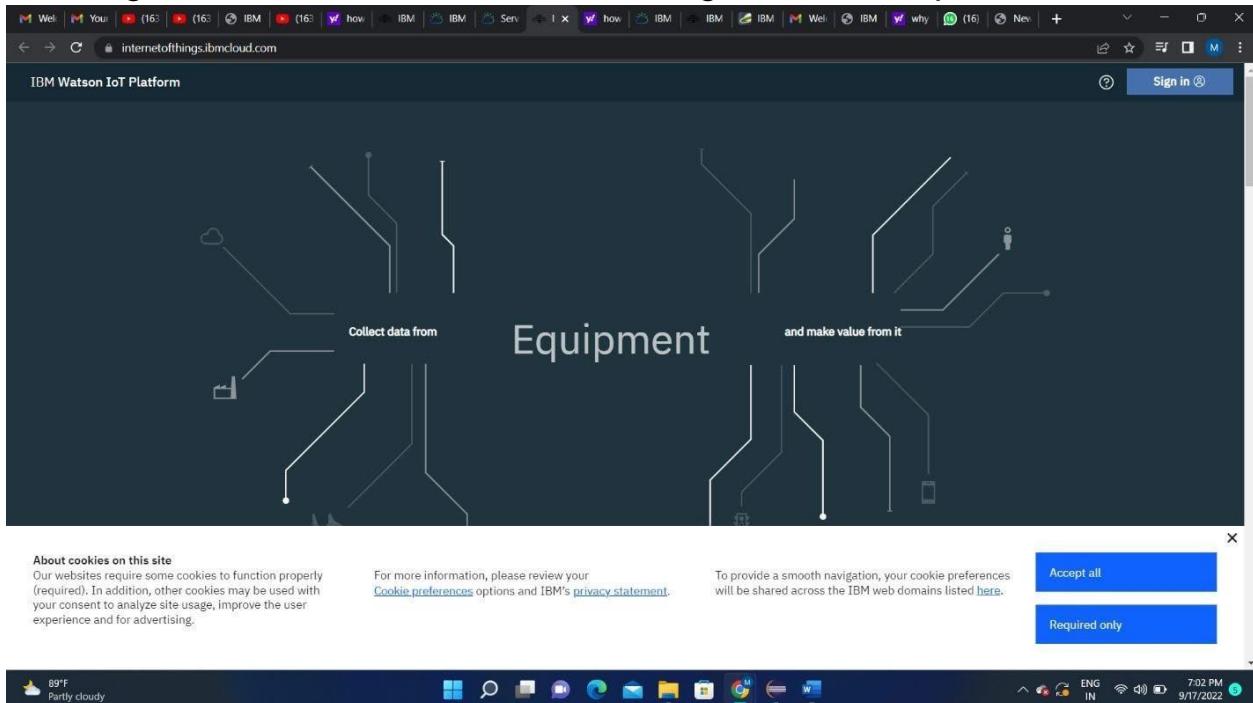
Internet of Things Platform Child safety will be created, where there are different options like manage, plan, and connection (manage is for launch, Plan gives us the idea about the payment package and its upgrades, and lastly the connection is for to connect IoT with other services)

The screenshot shows the IBM Cloud interface with the URL <https://cloud.ibm.com/services/iotf-service/crn%3Av1%3Abluemix%3Apublic%3Aiots-service%3Aeu-gb%3Aa%2Fb77a43cd7e04aa8abc05cac562dba69%3A87a72bdb-1bf7-44a2-b735-4cd2b61b240...>. The page title is "Internet of Things Platform-child_safety". The left sidebar has "Manage" selected. The main content area features a "Let's get started with IBM Watson IoT Platform" section with a "Launch" button and a "Docs" button. Below this is a "Ready for the next level?" section titled "IBM Watson IoT Platform Journey" with three stages: "Lite" (selected), "Non-Production", and "Production". The "Lite" stage is described as a free, lightweight development environment. The "Non-Production" stage starts at \$500 per month and includes IBM Service & Support. The "Production" stage is a fully managed SaaS offering. At the bottom of the page, there is a "Change pricing plan" section with a table comparing the "Lite" plan (free) against other plans.

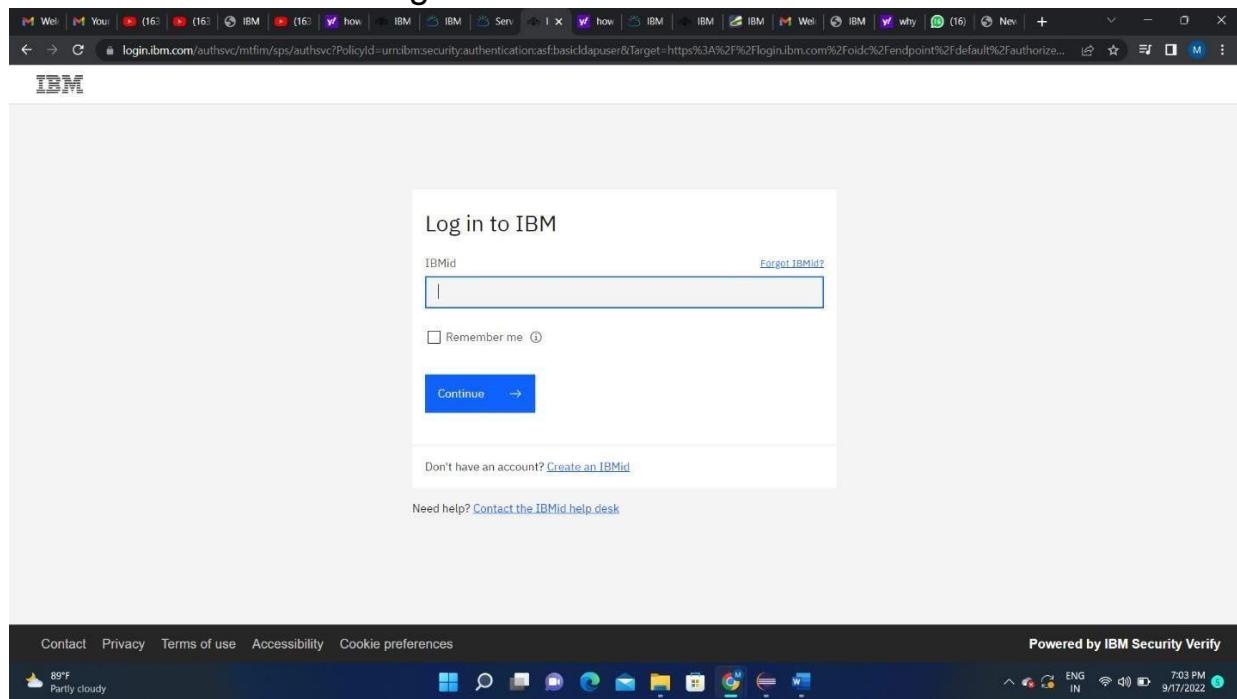
The screenshot shows the IBM Cloud interface with the URL <https://cloud.ibm.com/services/iotf-service/crn%3Av1%3Abluemix%3Apublic%3Aiots-service%3Aeu-gb%3Aa%2Fb77a43cd7e04aa8abc05cac562dba69%3A87a72bdb-1bf7-44a2-b735-4cd2b61b240...>. The page title is "Internet of Things Platform-child_safety". The left sidebar has "Plan" selected. The main content area shows the "Current plan" as "Lite" and the "Current usage" as "N/A". A note states "Lite plan services are deleted after 30 days of inactivity." Below this is a "Change pricing plan" section with a table comparing the "Lite" plan (free) against other plans.

7.

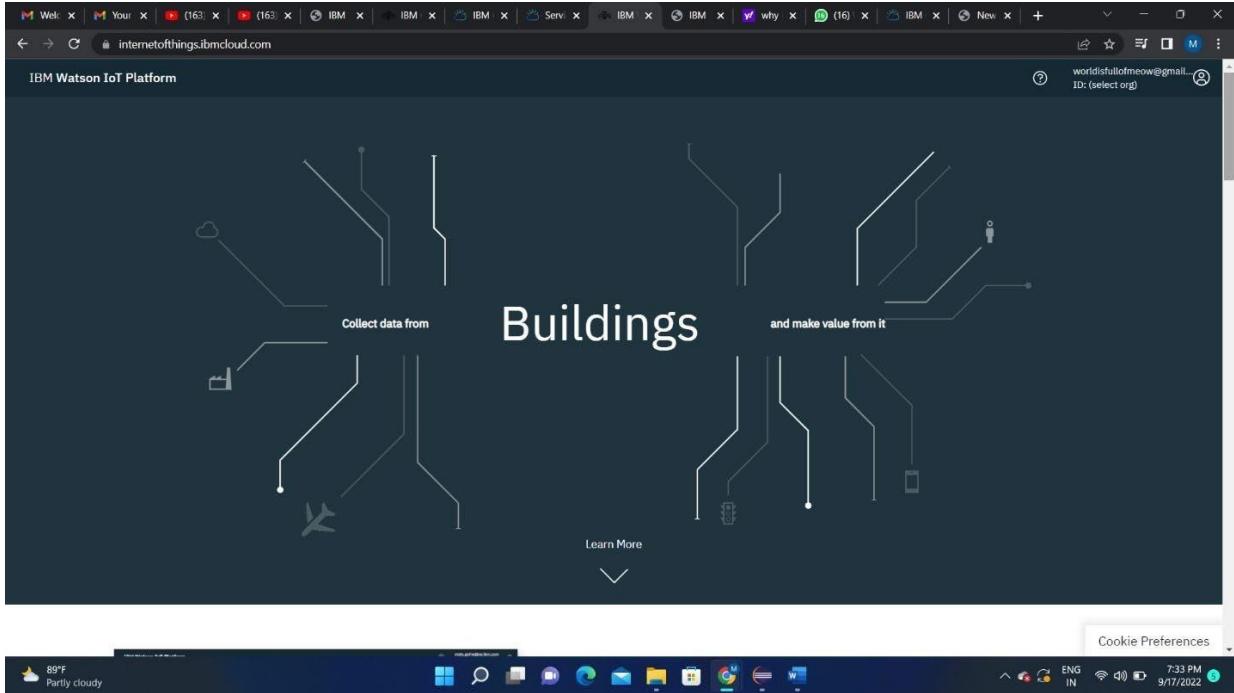
Clicking on the launch button in the manage tab, it will open to this



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

This screenshot shows the 'Browse Devices' section of the IBM Watson IoT Platform. The table header includes columns for Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. Below the table, a message states 'You don't have any devices.' and a 'Create a device.' button is present.

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

The 'Usage' section of the IBM Watson IoT Platform dashboard. It shows usage metrics for the current month (0 bytes) and previous month (0 bytes), both labeled as 'Data transferred inbound and outbound'. Below this, a 'Data Transferred' section shows a date range from 16/09/2022 to 17/09/2022.

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

The screenshot shows the 'Members' section of the IBM Watson IoT Platform. The top navigation bar includes tabs like 'Dashboard', 'Devices', 'Cloud', 'Analytics', 'Rules', 'Logs', 'Metrics', 'Cloud Functions', 'Cloud Events', and 'Cloud Functions API'. The main title is 'IBM Watson IoT Platform' with a user ID 'qe3ow0'. A sidebar on the left has icons for 'Browse', 'Cloud', 'Metrics', 'Logs', 'Cloud Functions', and 'Cloud Events'. The main content area is titled 'Browse Members' with a search bar. It displays a table with columns: Email Address, Name, Role, Added By, and Expires. There is one result listed: 'worldisfullofmeow@gmail.com' with the role 'Administrator'. The bottom status bar shows the date and time as '9/17/2022 7:38 PM'.

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

The screenshot shows the 'API Keys' section of the IBM Watson IoT Platform. The top navigation bar includes tabs like 'Dashboard', 'Devices', 'Cloud', 'Analytics', 'Rules', 'Logs', 'Metrics', 'Cloud Functions', 'Cloud Events', and 'Cloud Functions API'. The main title is 'IBM Watson IoT Platform' with a user ID 'qe3ow0'. A sidebar on the left has icons for 'Browse', 'Cloud Apps', 'Metrics', 'Logs', 'Cloud Functions', and 'Cloud Events'. The main content area is titled 'Browse API Keys' with a search bar. It displays a table with columns: Key, Description, Role, and Expires. The message '0 results' is shown. Below the table, there is a 'Generate API Key' button and a small icon of a bee. The bottom status bar shows the date and time as '9/17/2022 7:38 PM'.

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

IBM Watson IoT Platform

Devices

Add Device

You don't have any devices.

Create a device.

Device Simulator

89°F Partly cloudy

7:36 PM 9/17/2022

This screenshot shows the 'Devices' section of the IBM Watson IoT Platform. The left sidebar includes options like Boards, Members, Apps, Access Management, Usage, Security, and Settings. The main area displays a table with columns for Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. A message indicates there are no devices. A prominent blue button at the bottom says 'Create a device.' The status bar at the bottom shows the weather as 89°F and partly cloudy, along with the date and time.

IBM Watson IoT Platform

Add Device

Identity

Select or create a device type...

Device ID

Enter Device ID

Cancel Next

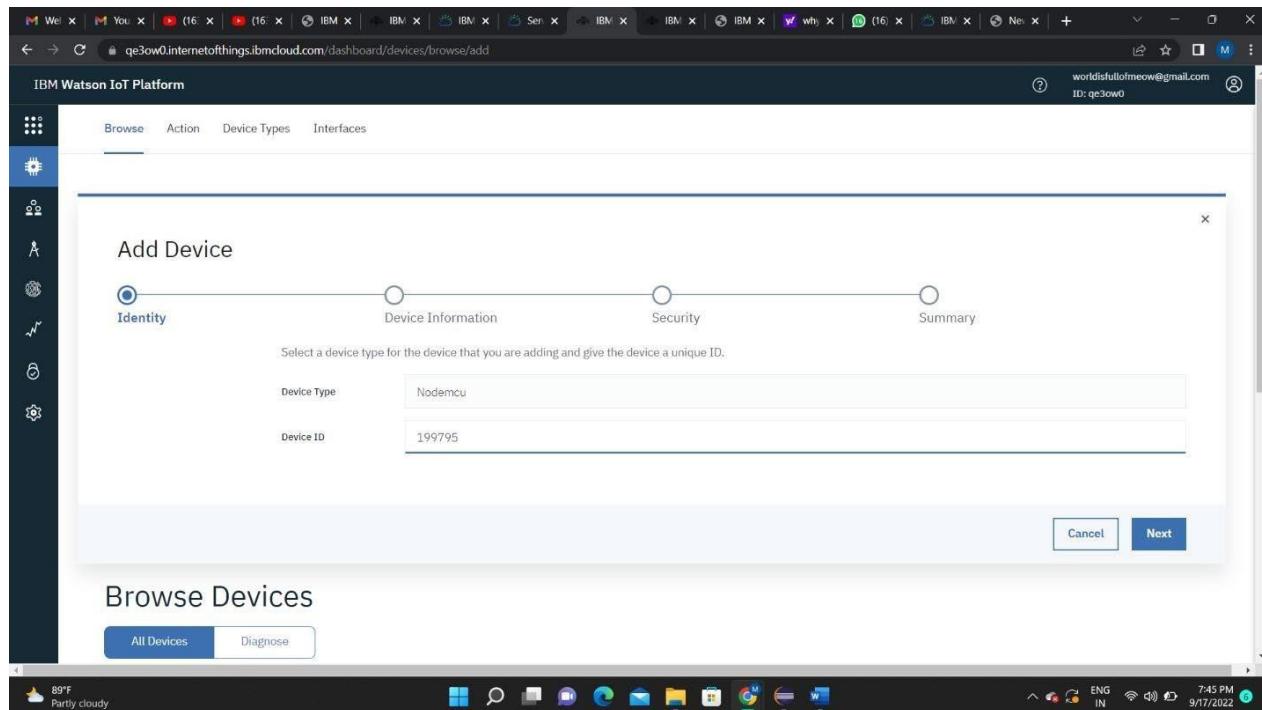
Browse Devices

All Devices Diagnose

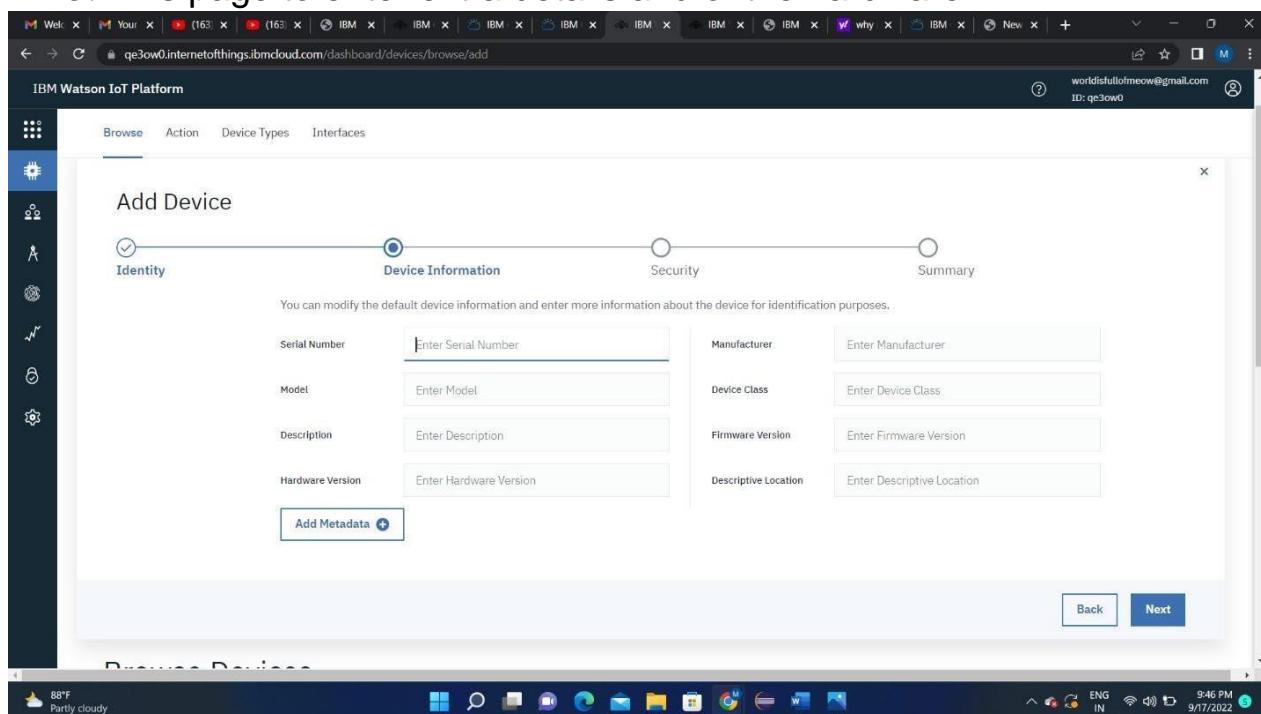
89°F Partly cloudy

7:44 PM 9/17/2022

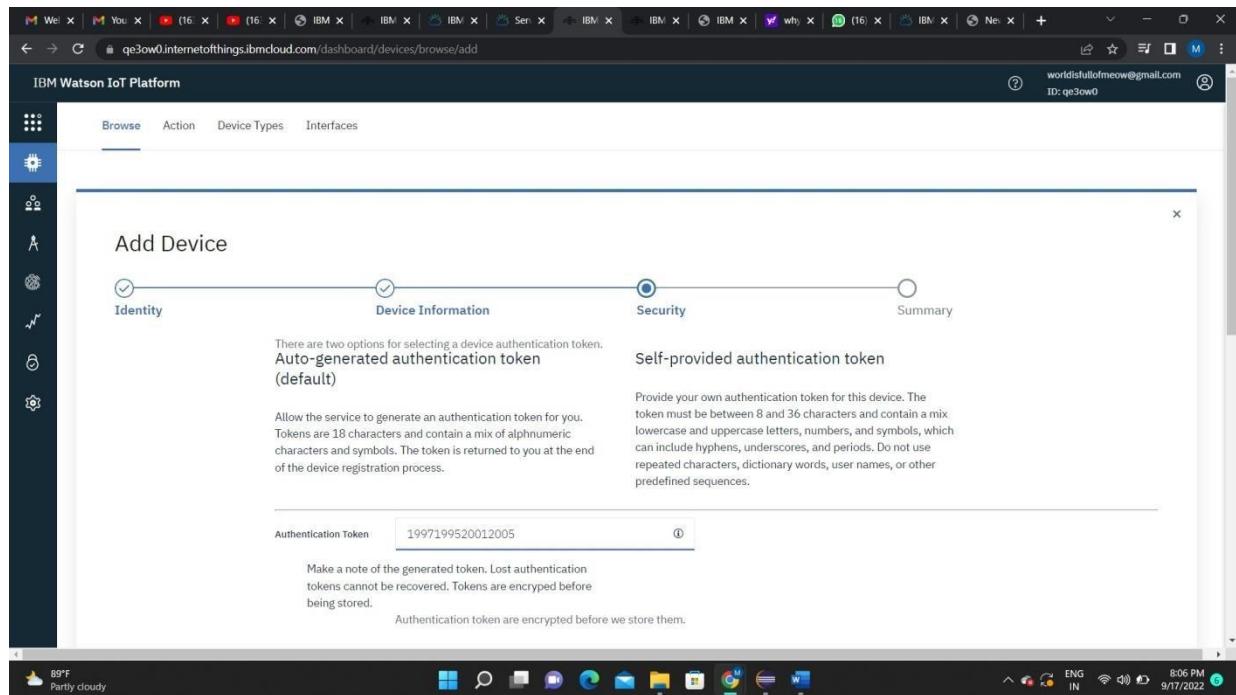
This screenshot shows the 'Add Device' wizard in progress. It's currently on the 'Identity' step, which requires selecting a device type and providing a unique device ID. The next steps in the process are 'Device Information' and 'Security'. Below the wizard, there's a 'Browse Devices' section with 'All Devices' and 'Diagnose' buttons. The status bar at the bottom shows the weather and date/time.



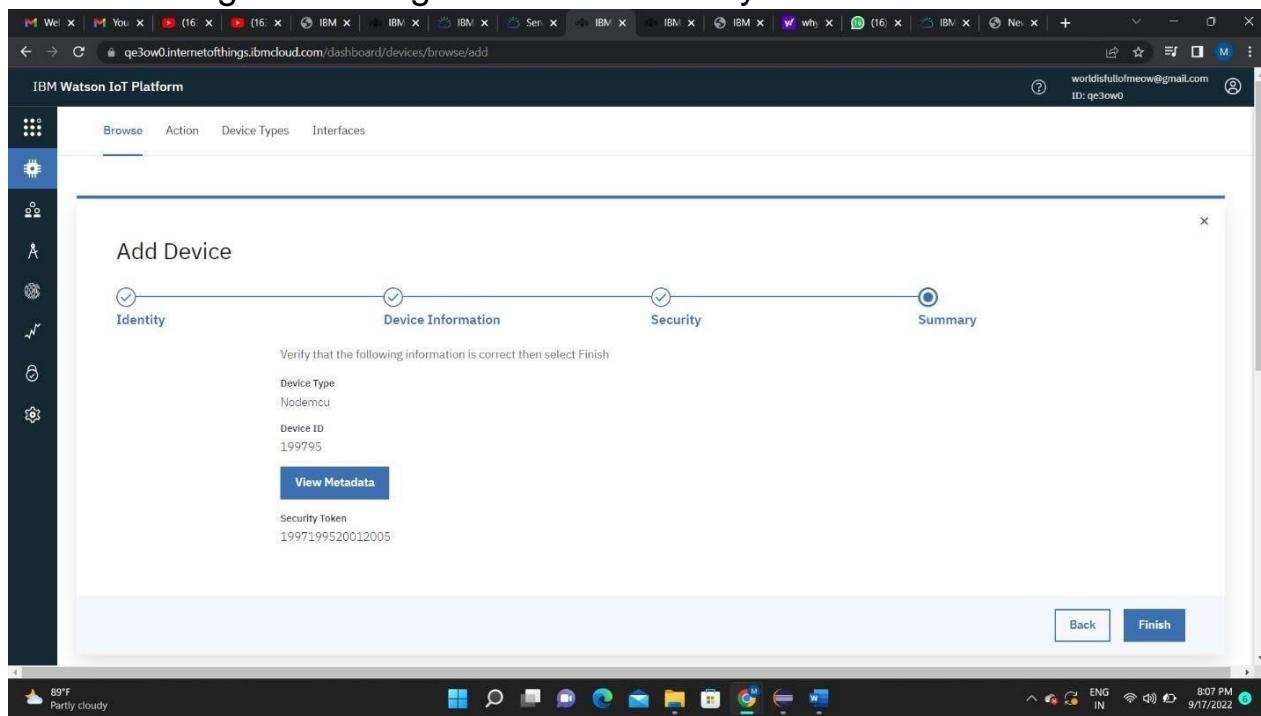
15. This page to enter extra details and of the hardware



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

Device Drilldown - 199795

Device Credentials

You registered your device to the organization. Add these credentials to the device to connect it to the platform. After the device is connected, you can navigate to view connection and event details.

Organization ID	qe3ow0
Device Type	Nodemcu
Device ID	199795
Authentication Method	use-token-auth
Authentication Token	1997199520012005

⚠️ Authentication tokens are non-recoverable. If you misplaced this token, you will need to re-register the device to generate a new authentication token.

Find out how to add these credentials to your device [↗](#)

19. Safe the details of the device as the authentication tokens are non-recoverable and if misplaced then we have to create a new one.

ibmdet - Notepad

File Edit View

Organization ID qe3ow0
Device Type Nodemcu
Device ID 199795
Authentication Method use-token-auth
Authentication Token 1997199520012005

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. At the top, there's a navigation bar with links like 'Browse', 'Action', 'Device Types', 'Interfaces', and a prominent 'Add Device' button. On the left, a sidebar contains various icons for device management. The main content area features a search bar ('Search by Device ID') and a table with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. A single row is shown for a device with ID 199795, which is currently disconnected. Below the table, tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs' are visible, with 'Recent Events' being the active tab. It displays a message: 'The recent events listed show the live stream of data that is coming and going from this device.' Underneath this, there are columns for 'Event' and 'Value'. In the center, there's a large icon of a bee-like device with the text 'Waiting for device events...'. The bottom of the screen shows a Windows taskbar with various application icons and system status indicators.

IBM Watson IoT Platform

Search by Device ID

Device ID: 199795 | Status: Disconnected | Device Type: Nodemcu | Class ID: Device | Date Added: 17 Sep 2022 20:07

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

Waiting for device events...

89°F Partly cloudy 8:11 PM 9/17/2022

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 image contains two screenshots of the IBM Watson IoT Platform interface. The top screenshot shows the 'Boards' dashboard with sections for 'Usage Overview' (3 Cards owned by you) and 'Risk and Security Overview' (4 Cards owned by you). A large '+' button is available to create new boards. The bottom screenshot shows the 'Usage Overview' card expanded, displaying device type details (1 Nodemcu device) and data transfer statistics: 0.2 MB transferred today, 0.2 MB this month, and 0.0 MB previous month. A line chart shows data transferred over time.

RESULT:

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