

## SPRINT-2

Date	20 November 2022
Team ID	PNT2022TMID12156
Project Name	Personal Assistance for Seniors Who Are Self Reliant

### TASK: -

To create a device in the IOT Watson Platform, Workflow for IOT scenarios using Node-RED.

### DESCRIPTION: -

- ❖ We have used **IoT Watson platform** for the creation of IoT device.
- ❖ The web application is built using **Node-RED** for collecting the medicine details from the users.
- ❖ We have used the **Cloudant DB** for storing the collected data.
- ❖ The web application will send the medicine details to the created IoT device.
- ❖ The IoT device on receiving the details, it make use of TTS to remind the user about the medicine.
- ❖ By using **TTS** (Text to Speech) service from the IBM platform, the medicinal information will be notified to the users in the form of voice commands.
- ❖ Following are the screenshots that demonstrate the device creation and workflow of the IoT scenarios.

# 1) IBM WATSON – DEVICE CREATION

## DEVICE TYPE CREATION:

The screenshot shows the 'Add Type' dialog box in the IBM Watson IoT Platform. The dialog has a progress bar with two steps: 'Identity' (selected) and 'Device Information'. Below the progress bar, there is a text area for 'Name' containing 'loginsignup' and a text area for 'Description' containing '19112022'. There are 'Cancel' and 'Next' buttons at the bottom right. A status bar at the bottom indicates '0 Simulations running'.

IBM Watson IoT Platform

73151921034@smartinternz.com  
ID: zqbv7a

Browse Action **Device Types** Interfaces

**Add Type**

Identity Device Information

Device types group devices that have similar characteristics, such as model number, firmware version, or location. Give the device type a unique name and a description that identifies characteristics that are shared by devices of this type.

Type  Or

Name

The device type name is used to identify the device type uniquely and uses a restricted set of characters to make it suitable for API use.

Description

0 Simulations running

## DEVICE CREATION:

The screenshot shows the 'Device Types' page in the IBM Watson IoT Platform. It displays a table of devices with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. The first device listed is '19112022' with status 'Disconnected' and type 'loginsignup'. Below the table, there is a 'Device Simulator' toggle and a 'Device Information' panel showing details for the selected device.

IBM Watson IoT Platform

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ID: zqbv7a

Browse Action **Device Types** Interfaces

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.

Search by Device ID

Device Simulator ☒

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
19112022	Disconnected	loginsignup	Device	Nov 19, 2022 12:08 PM	

Identity Device Information Recent Events State Logs

Device ID 19112022

Device Type loginsignup

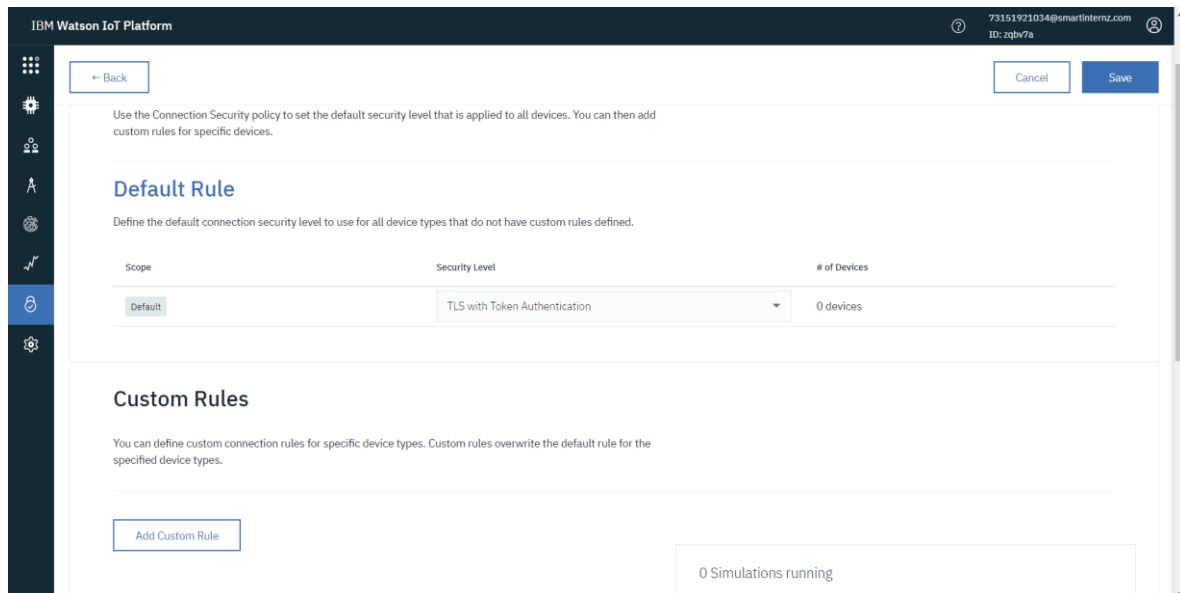
Date Added Nov 19, 2022 12:08 PM

Added By 73151921034@smartinternz.com

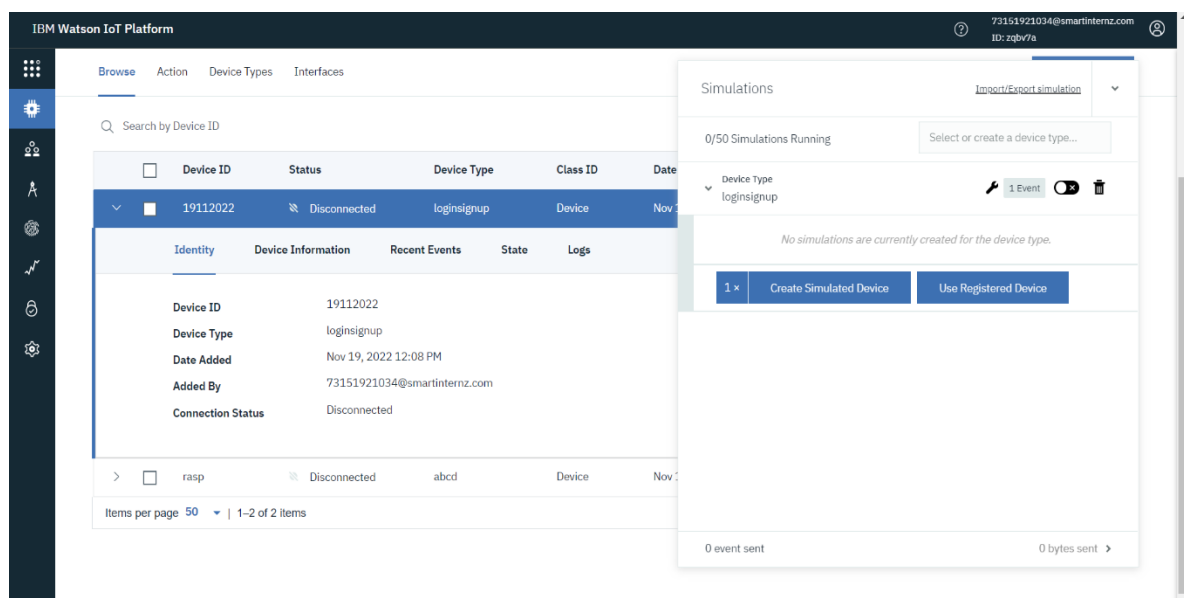
Connection Status Disconnected

0 Simulations running

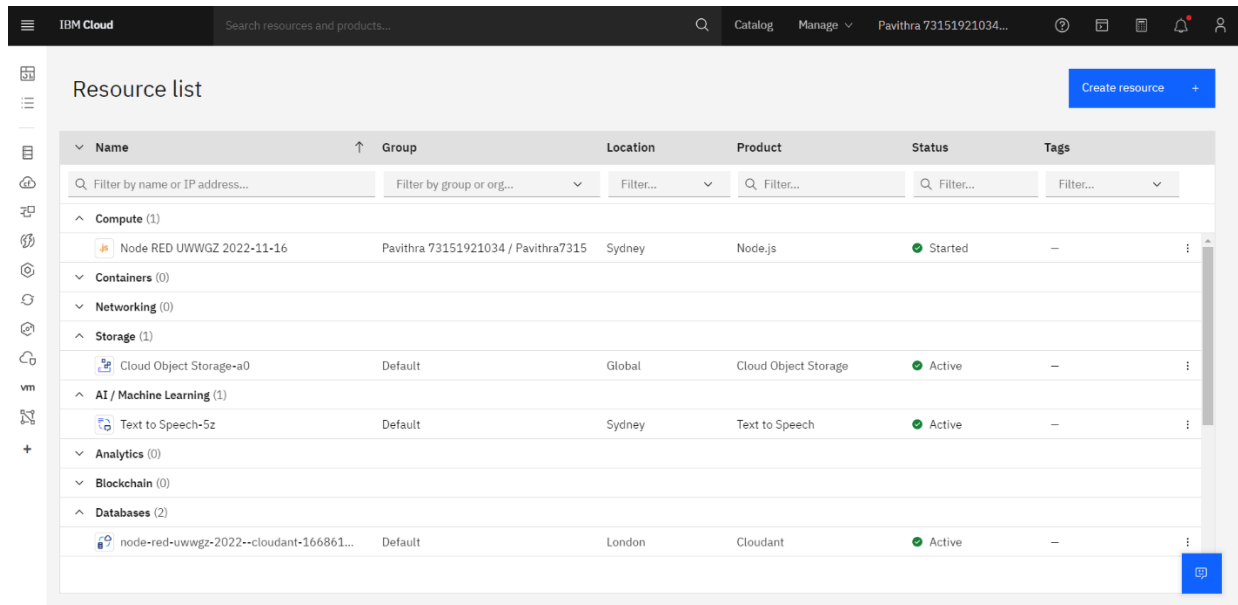
## CONFIGURE SECURITY POLICY:



## SIMULATE IOT DEVICE:



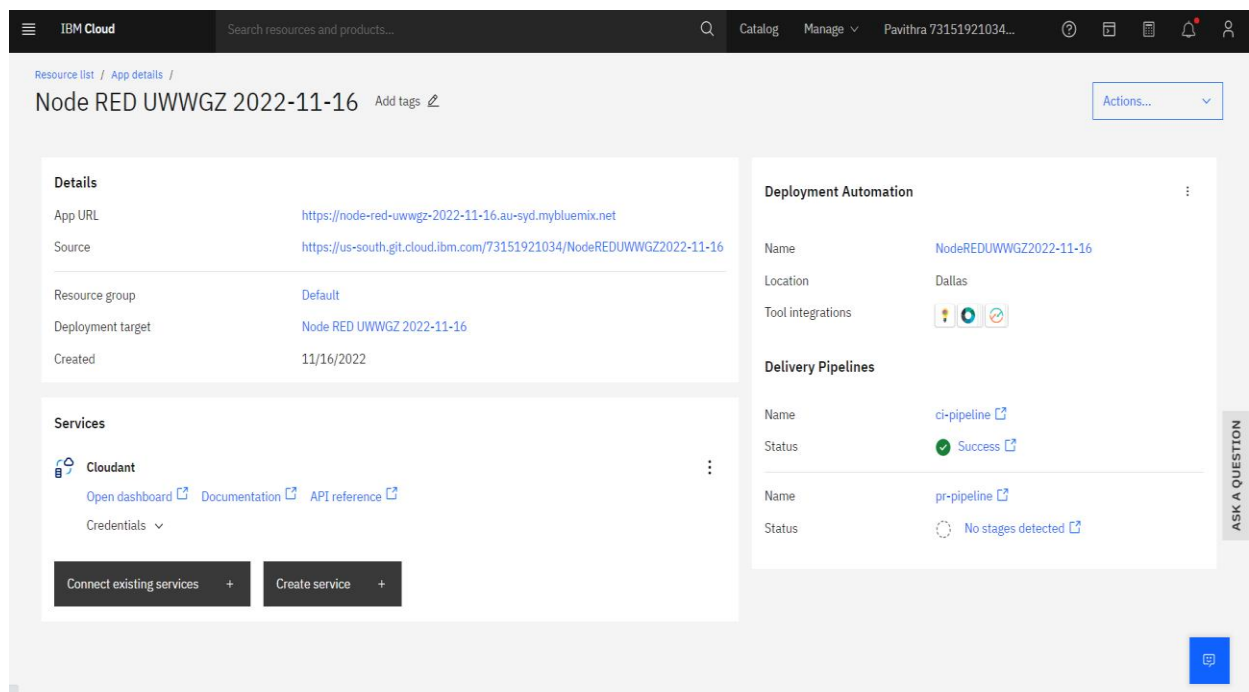
## 2) NODE-RED CREATION:



The screenshot shows the IBM Cloud Resource list page. The table lists resources categorized by type. The 'Compute' category shows a 'Node RED UWWGZ 2022-11-16' resource. The 'Storage' category shows a 'Cloud Object Storage-a0' resource. The 'AI / Machine Learning' category shows a 'Text to Speech-5z' resource. The 'Databases' category shows a 'node-red-uwwgz-2022--cloudant-166861...' resource.

Name	Group	Location	Product	Status	Tags
<b>Compute (1)</b>					
Node RED UWWGZ 2022-11-16	Pavithra 73151921034 / Pavithra7315	Sydney	Node.js	Started	—
<b>Containers (0)</b>					
<b>Networking (0)</b>					
<b>Storage (1)</b>					
Cloud Object Storage-a0	Default	Global	Cloud Object Storage	Active	—
<b>AI / Machine Learning (1)</b>					
Text to Speech-5z	Default	Sydney	Text to Speech	Active	—
<b>Analytics (0)</b>					
<b>Blockchain (0)</b>					
<b>Databases (2)</b>					
node-red-uwwgz-2022--cloudant-166861...	Default	London	Cloudant	Active	—

## DEPLOYING NODE-RED WEB APP:



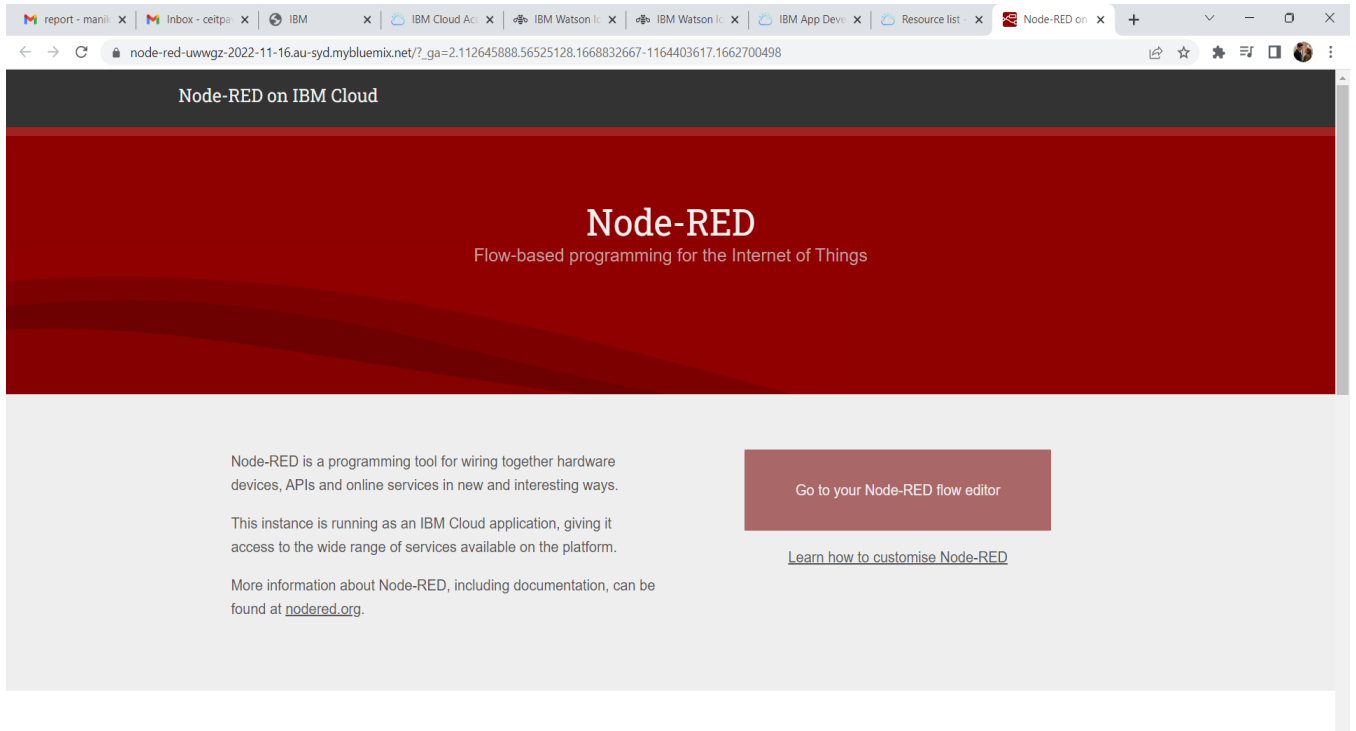
The screenshot shows the IBM Cloud App details page for 'Node RED UWWGZ 2022-11-16'. The page is divided into several sections: Details, Services, Deployment Automation, and Delivery Pipelines.

Details	
App URL	<a href="https://node-red-uwwgz-2022-11-16.au-syd.mybluemix.net">https://node-red-uwwgz-2022-11-16.au-syd.mybluemix.net</a>
Source	<a href="https://us-south.git.cloud.ibm.com/73151921034/NodeREDUWWGZ2022-11-16">https://us-south.git.cloud.ibm.com/73151921034/NodeREDUWWGZ2022-11-16</a>
Resource group	Default
Deployment target	Node RED UWWGZ 2022-11-16
Created	11/16/2022

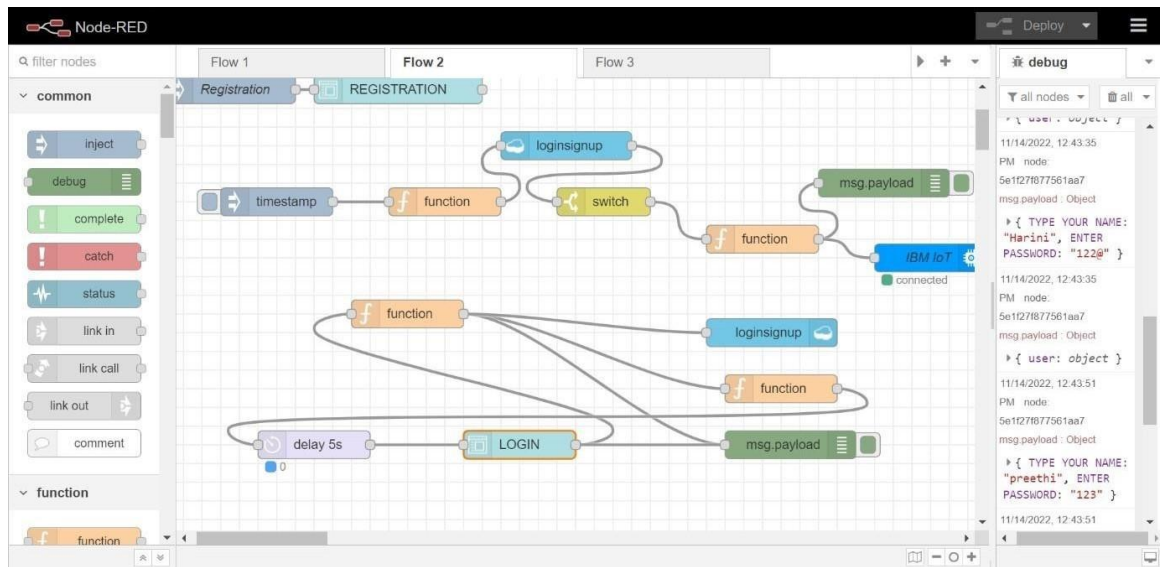
Services	
Cloudant	
<a href="#">Open dashboard</a>	<a href="#">Documentation</a> <a href="#">API reference</a>
Credentials	
<a href="#">Connect existing services</a>	<a href="#">Create service</a>

Deployment Automation	
Name	NodeREDUWWGZ2022-11-16
Location	Dallas
Tool integrations	
<b>Delivery Pipelines</b>	
Name	ci-pipeline
Status	Success
Name	pr-pipeline
Status	No stages detected

# NODE-RED FLOW EDITOR:



## CREATION OF NODES FOR THE WORKFLOW:



### 3) CLOUDANT CREATION:

IBM Cloud

Search resources and products...

Catalog

Manage

Pavithra 73151921034...

Resource list /

node-red-uwwgz-2022--cloudant-1668614027190Active

Add tags

Details

Actions...

Manage

Overview

Capacity

Docs

Service credentials

Plan

Connections

Deployment details

CRN

crn:v1:bluemix:public:cloudantnosqldb:eu-gb:a/3106c1e9a4b44915b532426faa94f55a:70ac035f-f8bf-4dad-a337-949243baaa41::

Location

London

External endpoint

<https://5b8c832a-3ad0-47cf-8af3-b8314d064341-bluemix.cloudant.com>

External endpoint (preferred)

<https://5b8c832a-3ad0-47cf-8af3-b8314d064341-bluemix.cloudantnosqldb.appdomain.cloud>

Authentication methods

[IBM Cloud IAM](#) and [Cloudant credentials](#)

Migrate to IAM Only

Activity Tracker event types ⓘ

Management

Save

Disk encryption

Yes. Automatically generated disk encryption key.

# BUCKET CREATION:

The screenshot shows the IBM Cloud 'Resource list' page. The interface includes a top navigation bar with the IBM Cloud logo, a search bar, and a 'Catalog' dropdown. The left sidebar contains a list of resource categories. The main area displays a table of resources with columns for Name, Group, Location, Product, Status, and Tags. A 'Create resource' button is visible in the top right corner.

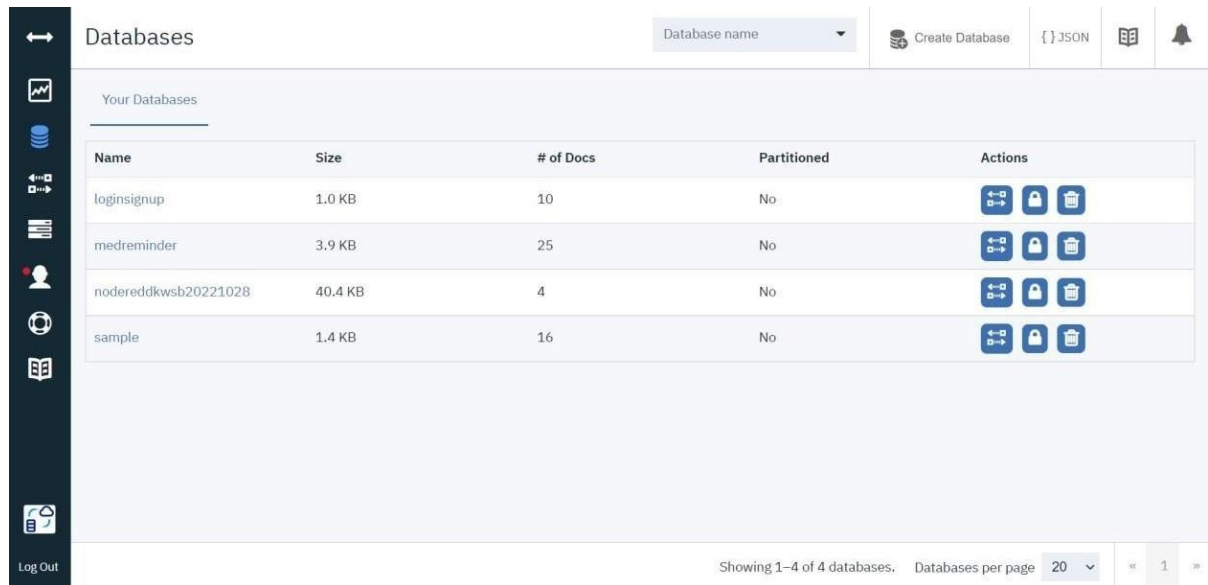
Name	Group	Location	Product	Status	Tags
Compute (1)					
Node RED UWWGZ 2022-11-16	Pavithra 73151921034 / Pavithra7315	Sydney	Node.js	Started	—
Containers (0)					
Networking (0)					
Storage (1)					
Cloud Object Storage-a0	Default	Global	Cloud Object Storage	Active	—
AI / Machine Learning (1)					
Text to Speech-5z	Default	Sydney	Text to Speech	Active	—
Analytics (0)					
Blockchain (0)					
Databases (2)					
node-red-uwwgz-2022--cloudant-166861...	Default	London	Cloudant	Active	—

❖ Here we created an bucket in as cloud object storage for our project.













The screenshot shows the IBM Cloud 'Buckets' page. The left sidebar is expanded to show 'Cloud Object Storage' and 'Buckets'. The main area displays a table of buckets with columns for Name, Public access, Location, Storage class, and Created. A 'Create bucket' button is visible in the top right corner.

Name	Public access	Location	Storage class	Created
pavi2831	No	jp-tok	Smart Tier	2022-11-19 2:43 PM

## 4) DATABASE CREATION:

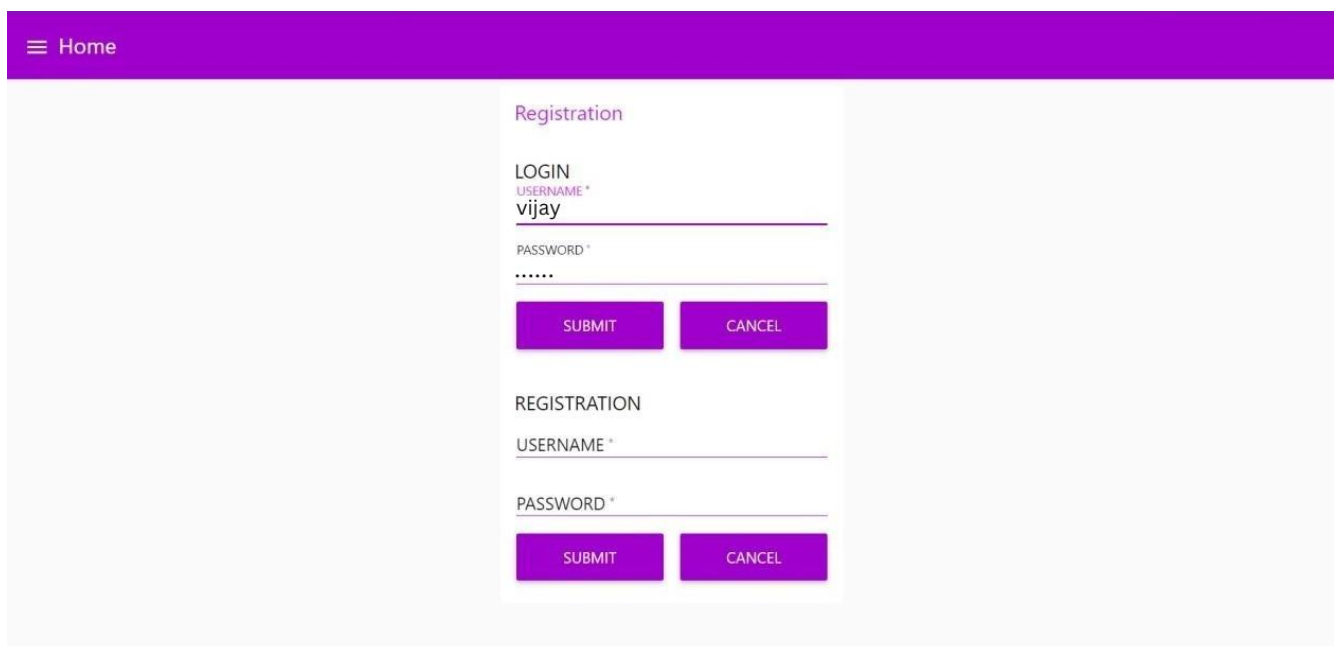


The screenshot shows a web application interface for managing databases. On the left is a dark sidebar with icons for home, databases, users, and other features. The main area is titled 'Databases' and contains a table of existing databases. The table has columns for Name, Size, # of Docs, Partitioned, and Actions. There are four databases listed: loginsignup, medreminder, nodereddkwsb20221028, and sample. Each database has a size, a number of documents, and is currently not partitioned. The Actions column for each database contains three icons: a plus sign, a lock, and a trash can. At the top right of the interface, there is a 'Create Database' button and a JSON icon. At the bottom right, there is a pagination control showing 'Showing 1-4 of 4 databases' and 'Databases per page 20'.

Name	Size	# of Docs	Partitioned	Actions
loginsignup	1.0 KB	10	No	  
medreminder	3.9 KB	25	No	  
nodereddkwsb20221028	40.4 KB	4	No	  
sample	1.4 KB	16	No	  

## FINAL EXECUTION:

- ❖ When the user enters the login credentials, it gets stored in db.
- ❖ After successful login user get redirected to the home screen.



The screenshot shows a web application interface with a purple header bar containing a 'Home' link. The main content area is white and contains two forms. The first form is titled 'Registration' and has a 'LOGIN' section with fields for 'USERNAME \*' (containing 'vijay') and 'PASSWORD \*' (containing '\*\*\*\*\*'). Below these fields are two buttons: 'SUBMIT' and 'CANCEL'. The second form is titled 'REGISTRATION' and has fields for 'USERNAME \*' and 'PASSWORD \*'. Below these fields are two buttons: 'SUBMIT' and 'CANCEL'.



❖ The data are getting coming in the IOT device platform.

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for navigation. The main content area displays a table of devices. The first device listed is '19112022' with status 'Disconnected' and device type 'loginsignup'. Below the table, a detailed view for the selected device is shown, including tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is active, showing a live stream of data. A table below lists recent events, with one event 'event\_1' having a value of '{"username":"vijay","password":"1234@!"}' in json format, received 'a few seconds ago'. A status bar at the bottom indicates '3 Simulations running'.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
19112022	Disconnected	loginsignup	Device	Nov 20, 2022 8:09 PM	

Event	Value	Format	Last Received
event_1	{"username":"vijay","password":"1234@!"}	json	a few seconds ago

❖ Now, we can see the data are getting stored in DB.

The screenshot shows the IBM Watson IoT Platform interface for a document titled 'loginsignup'. The document is displayed in a code editor with a 'Create Document' button. The document content is a JSON object representing a login event. The JSON structure includes fields for '\_id', '\_rev', 'payload', 'user', 'TYPE YOUR NAME', 'ENTER PASSWORD', and 'socketId'.

```
1 {
2   "_id": "4a50fe71c97165c6517d036f5bdfdf5a",
3   "_rev": "1-dc21b1d2ad91369e8181ae4efe1a6688",
4   "payload": {
5     "user": {
6       "TYPE YOUR NAME": "vijay",
7       "ENTER PASSWORD": "1234@!"
8     }
9   },
10   "socketId": "C9K09UYaqzLwHESMAABz"
11 }
```

## RESULT:

At the end of the sprint 2, we created the software for our project and tested successfully...!