

SPRINT – 2

Date	10- Nov-2022
Team ID	PNT2022TMID11105
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring & Notification
Maximum Marks	8 Marks

USN- 4 : Integrating the IBM Watson IoT Platform and Cloudant DB with the node red.

- Launching IBM IoT Watson

The screenshot displays the IBM Watson IoT Platform interface. The main heading is "Browse Devices". Below the heading, there are two buttons: "All Devices" (selected) and "Diagnose". A descriptive text 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." Below this text is a search bar labeled "Search by Device ID". To the right of the search bar is a "Device Simulator" toggle switch, which is currently turned off. The table below contains one device entry:

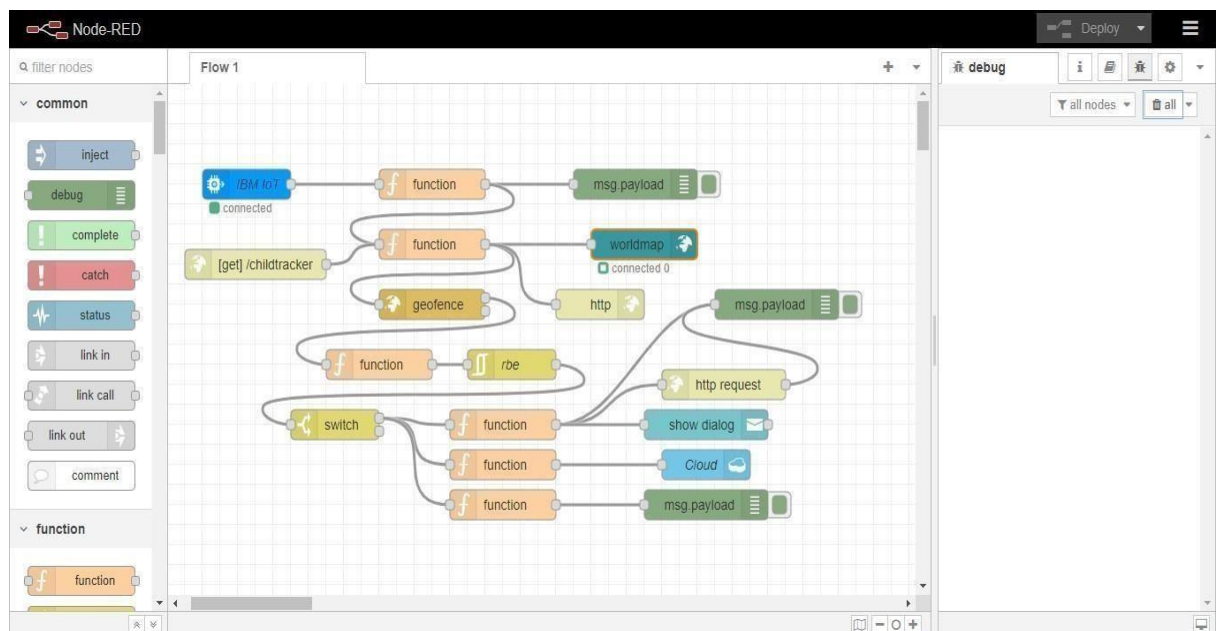
Device ID	Status	Device Type	Class ID	Date Added
28	Disconnected	Tracker	Device	Nov 6, 2022 11:54 AM

At the bottom of the table, there is a pagination bar showing "Items per page 50" and "1-1 of 1 item". On the right side of the pagination bar, it says "1 of 1 page" with navigation arrows.

- Implementing the node-red in IBM cloud.

	Name	Group	Location	Product	Status	Tags
	Filter by name or IP address...	Filter by group or org...	Filter...	Filter...	Filter...	Filter...
^	Databases (2)					
	node-red-rvwbe-2022--cloudant-...	Default	London	Cloudant	Active	—
	node-red-rvwbe-2022--cloudant-...	asvithavscse19veltechmultitech / 1	Sydney	Cloudant	Provisioned	—
^	Developer tools (3)					
	Continuous Delivery	Default	Sydney	Continuous Delivery	Active	—
	Node RED RVWBE 2022-11-05	Default	Global	Cloud Application	—	—
	NodeREDRVWBE2022-11-05	Default	Sydney	Toolchain	—	—
^	Logging and monitoring (0)					
^	Migration (0)					
^	Integration (0)					
^	Internet of Things (1)					
	Internet of Things Platform-asv	Default	Frankfurt	Internet of Things Platform	Active	—

- Designing the node-red work flow for our project.



- Launch the cloudant DB and create a database to store the location data.

The screenshot shows the IBM Cloudant Databases interface. On the left is a dark sidebar with navigation links: Monitoring, Databases, Replication, Active Tasks, Account, Support, and Documentation. The main area is titled 'Databases' and includes a 'Database name' dropdown, a 'Create Database' button, and a 'JSON' icon. Below this is a section titled 'Your Databases' containing a table with the following data:

Name	Size	# of Docs	Partitioned	Actions
child_location	0 bytes	0	Yes	[Icons: Add, Lock, Delete]
noderedrvwbe20221105	30.4 KB	4	No	[Icons: Add, Lock, Delete]
sample	0 bytes	0	Yes	[Icons: Add, Lock, Delete]

At the bottom right, it says 'Showing 1-3 of 3 databases. Databases per page 20' with pagination controls.

- For our project we are creating a database called child_loaction.

This screenshot shows the same IBM Cloudant Databases interface, but now only one database is listed in the table:

Name	Size	# of Docs	Partitioned	Actions
child_location	0 bytes	0	Yes	[Icons: Add, Lock, Delete]

USN – 5 : Developing the Python code for connecting with IBM Watson IoT platform.

```

1 import time
2 import wiotp.sdk.application
3 print("Hello")
4 myConfig = {
5     "identity": {
6         "orgId": "fjde2i",
7         "typeId": "Tracker",
8         "deviceId": "28",
9     },
10    "auth": {
11        "token": "123456789"
12    }
13 }
14 client = wiotp.sdk.device.DeviceClient(config = myConfig, logHandlers = None)
15 client.connect()
16
17 while True:
18     name = "Child"
19     #in area location
20
21     latitude = 17.4219272
22     longitude = 78.5488783
23
24
25     #out area location
26
27
28     #latitude = 17.4219272
29     #longitude = 78.5488783
30     myData = {'name': name, 'lat': latitude, 'lon': longitude}
31     client.publishEvent(eventId = "status", msgFormat = "json", data = myData, qos = 0, onPublish = None)
32     print("Data published to IBM IoT Platform: ", myData)
33     time.sleep(5)
34
35 client.disconnect()

```

- Connected successfully with IBM IoT Watson.



```

Run: child x
C:\Users\de11\AppData\Local\Programs\Python\Python311\python.exe C:/Users/de11/AppData/Local/Programs/Python/child.py
Data published to IBM IoT Platform: {'name': 'Child', 'lat': 17.4219272, 'lon': 78.5488783}
2022-11-08 20:56:53,786 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:fjde2i:Tracker:28
Data published to IBM IoT Platform: {'name': 'Child', 'lat': 17.4219272, 'lon': 78.5488783}
Data published to IBM IoT Platform: {'name': 'Child', 'lat': 17.4219272, 'lon': 78.5488783}
Data published to IBM IoT Platform: {'name': 'Child', 'lat': 17.4219272, 'lon': 78.5488783}
Data published to IBM IoT Platform: {'name': 'Child', 'lat': 17.4219272, 'lon': 78.5488783}

```

- IBM IoT Watson platform receiving the details of the child's location.

Browse Action Device Types Interfaces Add Device +

▼
■
28
Disconnected
Tracker
Device
Nov 6, 2022 11:54 AM
→ ...

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	{"name":"Child","lat":17.4219272,"lon":78.5488...	json	a few seconds ago
status	{"name":"Child","lat":17.4219272,"lon":78.5488...	json	a few seconds ago
status	{"name":"Child","lat":17.4219272,"lon":78.5488...	json	a few seconds ago
status	{"name":"Child","lat":17.4219272,"lon":78.5488...	json	a few seconds ago
status	{"name":"Child","lat":17.4219272,"lon":78.5488...	json	a few seconds ago