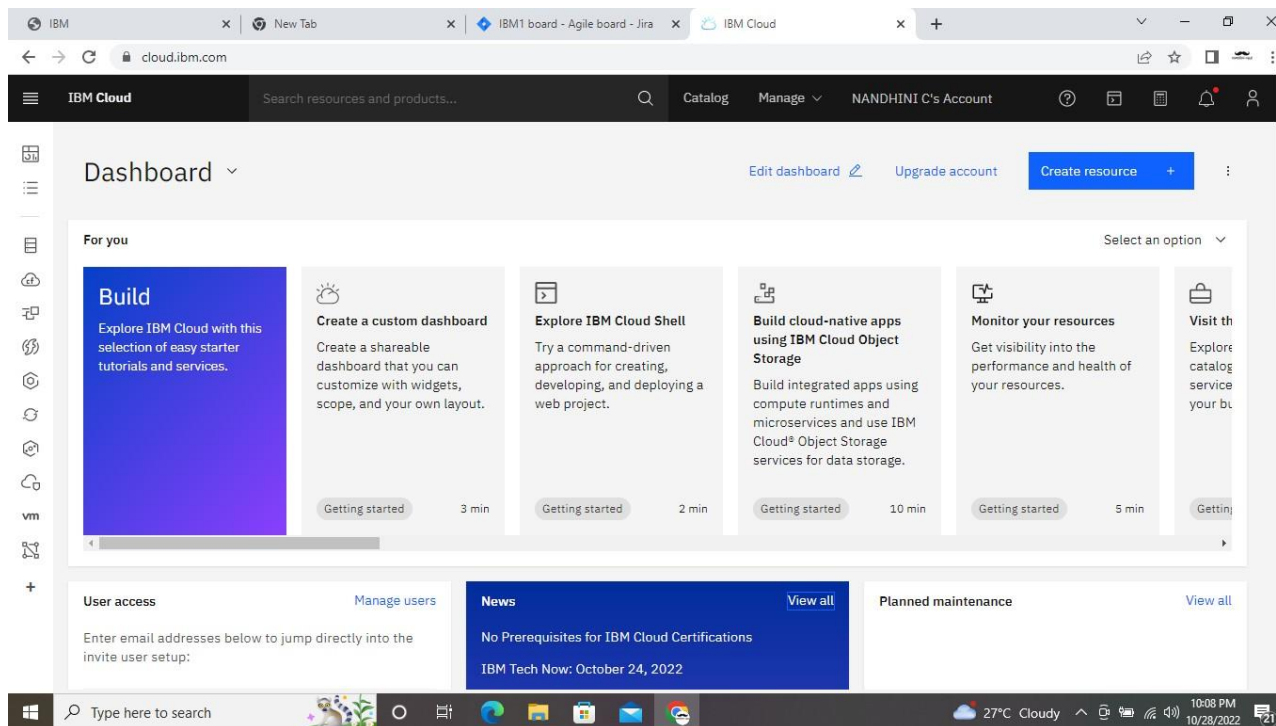


Project Development Phase Sprint-1

Date	29 October 2022
Team ID	PNT2022TMID35688
Project Name	Project – IoT Based Real-time River water quality monitoring and control system

USN-1

As a user,I will register in ICTA Academy and create IBM cloud account.



USN-2

As a user, I will access IBM cloud and launch the IBM Watson IOT platform.

IBM Watson IoT Platform

815119106025@smartinternz.com
ID: rv07c6

Browse Action Device Types Interfaces

Add Device +

Browse Devices

All Devices Diagnose

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 ☒

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
>	<input type="checkbox"/> 123456	Disconnected	riverwaterquality-22_23	Device	Oct 28, 2022 1:47 AM		815119106025@smartinternz.com
>	<input type="checkbox"/> rv07c6	Disconnected	b11m3edeviceld	Device	Oct 9, 2022 9:52 PM		815119106025@smartinternz.com

Items per page 50 | 1-2 of 2 items

1 of 1 page

1 Simulation running

Type here to search

27°C Cloudy 10:48 AM 10/29/2022

USN-3

As a user, I can create a device in the IOT IBM Watson platform for simulation .

The screenshot shows the IBM Watson IoT Platform dashboard. The main heading is "Browse Devices". Below it, there are tabs for "All Devices" and "Diagnose". 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. Below it, a table lists devices:

Device ID	Status	Device Type	Class ID	Date Added	Description
123456	Disconnected	riverwaterquality-22_23	Device	Oct 28, 2022 1:47 AM	

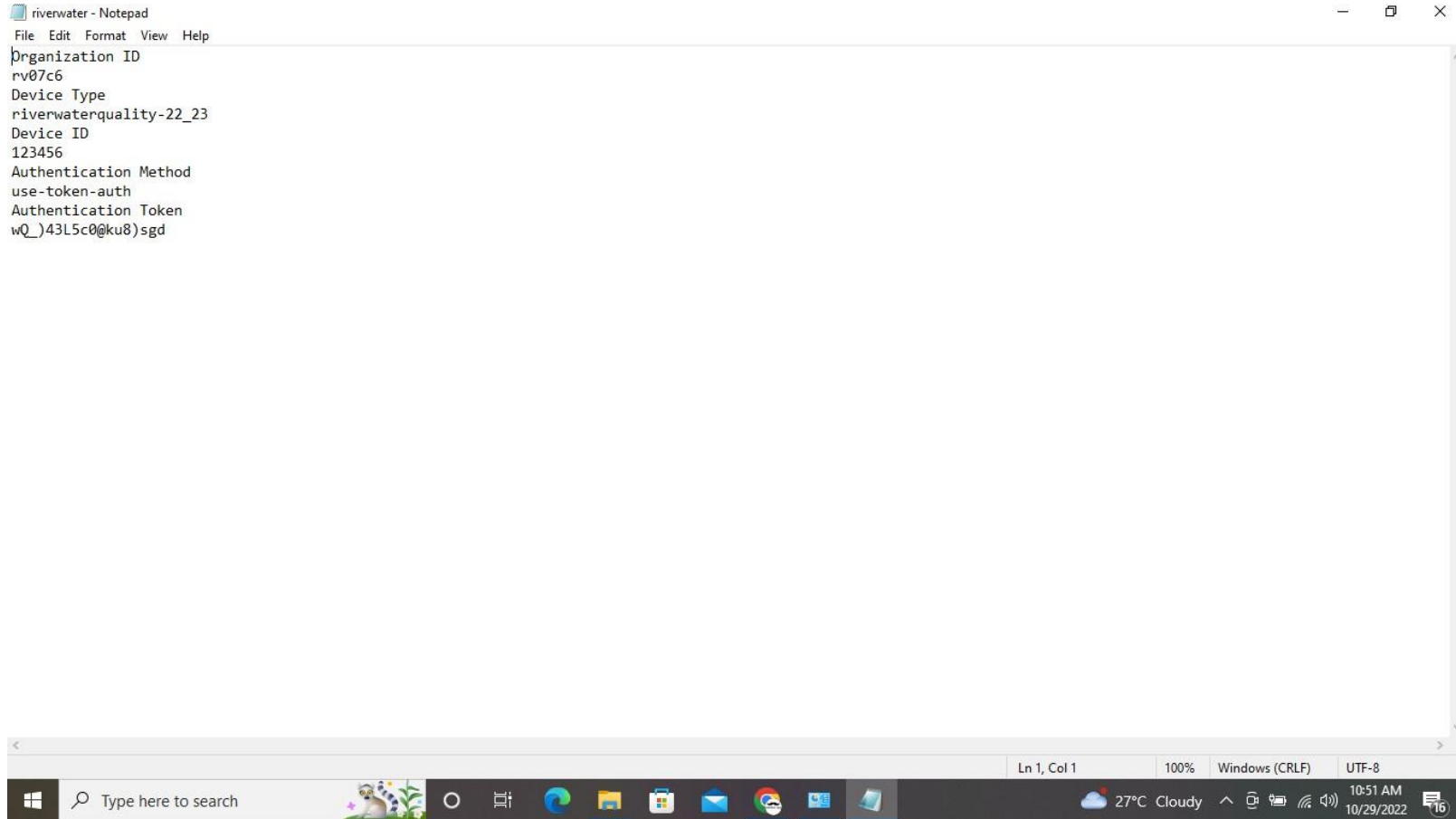
Below the table, there are tabs for "Identity", "Device Information", "Recent Events", "State", and "Logs". The "Device Information" tab is selected, showing details for device 123456:

- Device ID: 123456
- Device Type: riverwaterquality-22_23
- Date Added: Oct 28, 2022 1:47 AM
- Added By: 815119106025@smartinternz.com
- Connection Status: Disconnected

A modal window is open on the right, showing simulation details for the selected device. It includes a "Simulations" section with "1/50 Simulations Running" and a "New Simulation" button. Below this, it shows "Device Type: riverwaterquality-22_23" and "1 Event". At the bottom, it displays "82 events sent" and "3.79 KB sent".

USN-4

As a user, I will get the device ID and device type of my device.



```
riverwater - Notepad
File Edit Format View Help
{
  "organization ID": "rv07c6",
  "Device Type": "riverwaterquality-22_23",
  "Device ID": "123456",
  "Authentication Method": "use-token-auth",
  "Authentication Token": "wQ_)43L5c0@ku8)sgd"
}
```

The screenshot shows a Windows Notepad application window titled "riverwater - Notepad". The window contains a JSON-formatted text output. The text is as follows: { "organization ID": "rv07c6", "Device Type": "riverwaterquality-22_23", "Device ID": "123456", "Authentication Method": "use-token-auth", "Authentication Token": "wQ_)43L5c0@ku8)sgd" }. The Notepad window has a standard menu bar with File, Edit, Format, View, and Help. The status bar at the bottom of the Notepad window shows "Ln 1, Col 1", "100%", "Windows (CRLF)", and "UTF-8". Below the Notepad window is the Windows taskbar, which includes the Start button, a search bar with the text "Type here to search", several application icons (including a cartoon animal, a globe, and a folder), and a system tray on the right showing the date and time as "10:51 AM 10/29/2022" along with weather and network icons.

USN-5

As a user, I can simulate the device created.

The screenshot displays the IBM Watson IoT Platform interface. The main dashboard shows a list of devices, with one device, 'riverwaterquality-22_23_1', selected. The device is in a 'Connected' state. The 'Device Information' tab is active, showing details such as Device ID, Device Type, Date Added, Added By, and Connection Status.

An overlay window titled 'Device Type: riverwaterquality-22_23' is open, showing the configuration for a new event type. The 'Event type name' is set to 'Data'. The 'Schedule' is configured to 'Every Minute'. The 'Payload' is defined as a JSON object with three fields: 'Temperature', 'PH', and 'Turbidity', each using a random value generator.

The payload configuration is as follows:

```
0 {
1   "Temperature": random(0, 100),
2   "PH": random(0, 14),
3   "Turbidity": random(0, 100)
4 }
5
```

The 'Add Device' button is visible in the top right corner of the dashboard. The bottom of the screen shows the Windows taskbar with the search bar and system tray.

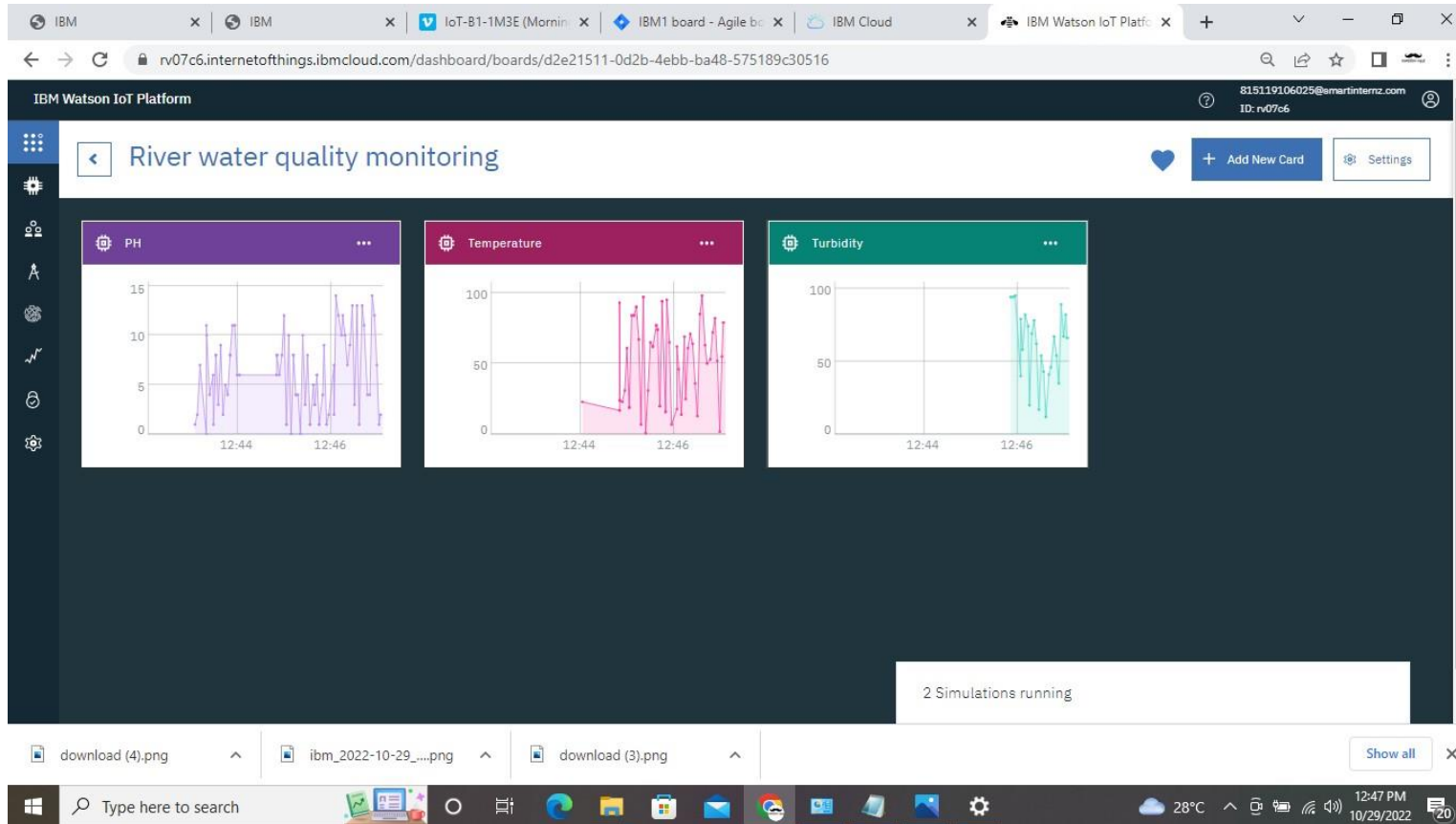
USN-6

As a user ,I can get the values of temperature, PH and turbidity. I can create a line chart with my output data .

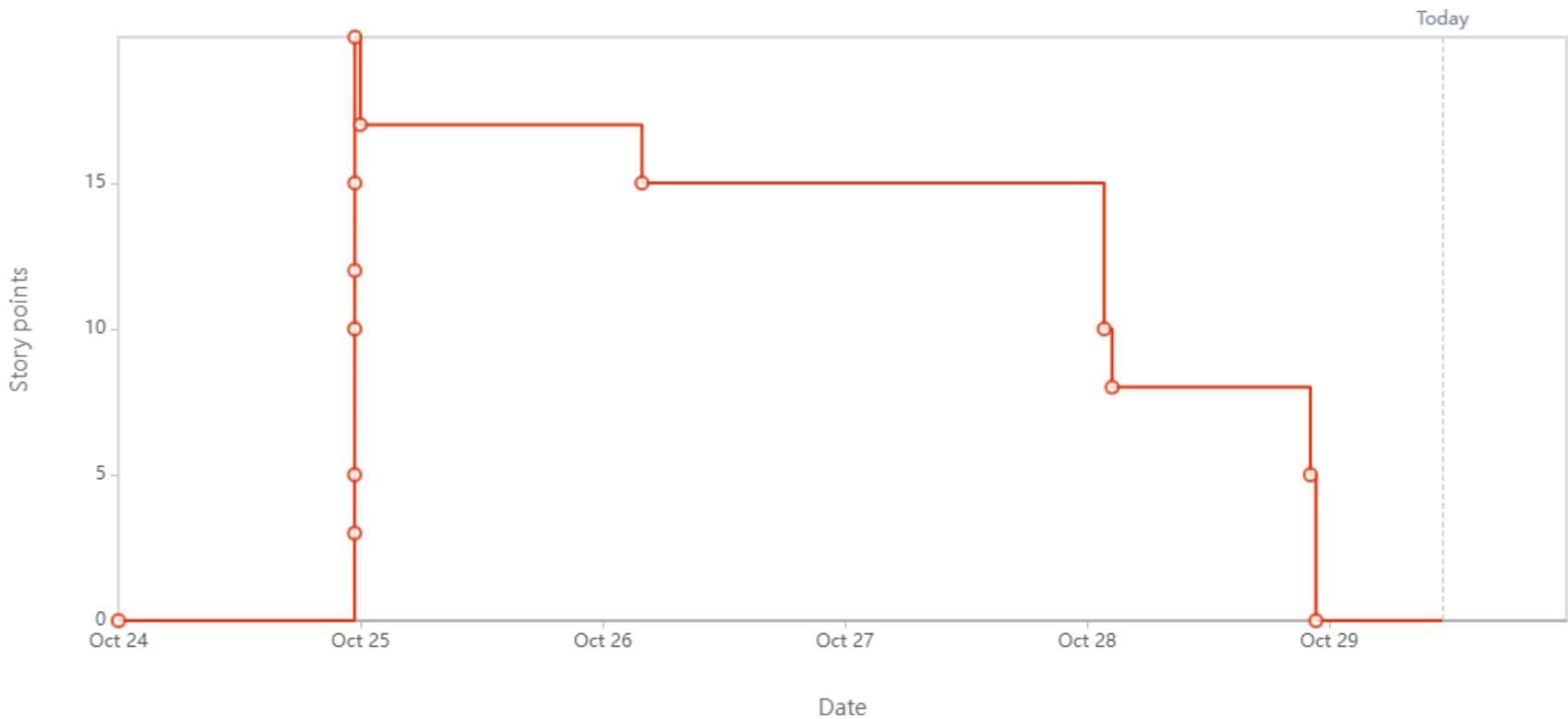
The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar labeled 'Search by Device ID' is present. The main content area shows a list of devices. The selected device, 'riverwaterquality-22_23_1', is in a 'Connected' state. Below the device list, the 'Recent Events' tab is active, showing a stream of data events. Each event contains a JSON object with 'Temperature', 'PH', and 'Turbidity' values. A status bar at the bottom indicates '2 Simulations running'.

Event	Value	Format	Last Received
Data	{"Temperature":55,"PH":10,"Turbidity":69}	json	a few seconds ago
Data	{"Temperature":19,"PH":1,"Turbidity":12}	json	a few seconds ago
Data	{"Temperature":84,"PH":10,"Turbidity":13}	json	a few seconds ago
Data	{"Temperature":38,"PH":1,"Turbidity":85}	json	a few seconds ago
Data	{"Temperature":79,"PH":5,"Turbidity":25}	json	a few seconds ago

LINE CHART



SPRINT BURNDOWN CHART



ROAD MAP

	OCT 2020	21	22	23	OCT 24	25	26	27	28	29	30
Sprints					Sprint 1						
> IBM1-7 Create and configure IBM cloud services (I...											
> IBM1-8 Create and access Node-Red											
> IBM1-13 MIT app inventor (Front end design and B...											
> IBM1-16 Simulate ESP32											
> IBM1-21 Create a Web UI											
> IBM1-24 Connect with web application											

VELOCITY CHART

