

PROJECT DEVELOPMENT - DELIVERY OF SPRINT 1

Date:	17 November 2022
Team ID:	PNT2022TMID04601
Name:	Real-Time River Water Quality Monitoring and Control System

Coding for sprint 1:

Login.html

```
<html>
  <head>
    <meta charset="UTF-8">
    <title> Login </title>
    <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
  </head>
  <body></br></br></br></br></br>
    <div align="center">
      <div align="center" class="border">
        <div class="header">
          <h1 class="word">Login</h1>
        </div></br></br></br>
        <h2 class="word">
          <form action="{{ url_for('login') }}"
method="post">
          <div class="msg">{{ msg
          }}</div><input
          id="username" name="username"
type="text" placeholder="Enter Your Username" class="textbox"/></br></br>
          <input id="password" name="password" type="password"
placeholder="Enter Your Password" class="textbox"/></br></br></br>
          <input type="submit" class="btn" value="Sign
In"></br></br>
        </form>
      </div>
      <p class="bottom">Don't have an account? <a class="bottom"
href="{{ url_for('register') }}"> Sign Up here</a></p>
    </div>
  </body>
</html>
```

Register.html

```
<html>
```

```

<head>
  <meta charset="UTF-8">
  <title> Register </title>
  <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
</head>
<body></br></br></br></br></br>
  <div align="center">
    <div align="center" class="border">
      <div class="header">
        <h1 class="word">Register</h1>
      </div></br></br></br>
      <h2 class="word">
        <form action="{{ url_for('register') }}"
method="post">
          <div class="msg">{{ msg }}</div>
          <input id="username"
            name="username"
type="text" placeholder="Enter Your Username" class="textbox"/></br></br>
            <input id="password" name="password" type="password"
placeholder="Enter Your Password" class="textbox"/></br></br>
            <input id="email" name="email" type="text"
placeholder="Enter Your Email ID" class="textbox"/></br></br>
            <input type="submit" class="btn" value="Sign
Up"></br>
          </form>
        </h2>
        <p class="bottom">Already have an
account? <a
class="bottom" href="{{ url_for('login') }}"> Sign In here</a></p>
      </div>
    </div>
  </body>
</html>

```

Style.css

```

.header{
    padding: 5px 120px;
    width: 150px; height:
70px;
    background-color: #236B8E;
}

.border{
    padding: 80px 50px;
    width: 400px; height:
450px;

```

```
border: 1px solid #236B8E;
border-radius: 0px;
background-color: #9AC0CD;
}

.btn {
padding: 10px 40px;
background-color: #236B8E;
color: #FFFFFF;
font-style: oblique;
font-weight: bold;
border-radius: 10px;
}

.textbox{
padding: 10px 40px;
background-color: #236B8E;
text-color: #FFFFFF;
border-radius: 10px;
}

::placeholder { color:
#FFFFFF; opacity:
1;
font-style: oblique;
font-weight: bold;
}

.word{
color: #FFFFFF;
font-style: oblique;
font-weight: bold;
}

.bottom{
color: #236B8E;
font-style: oblique;
font-weight: bold;
}
```

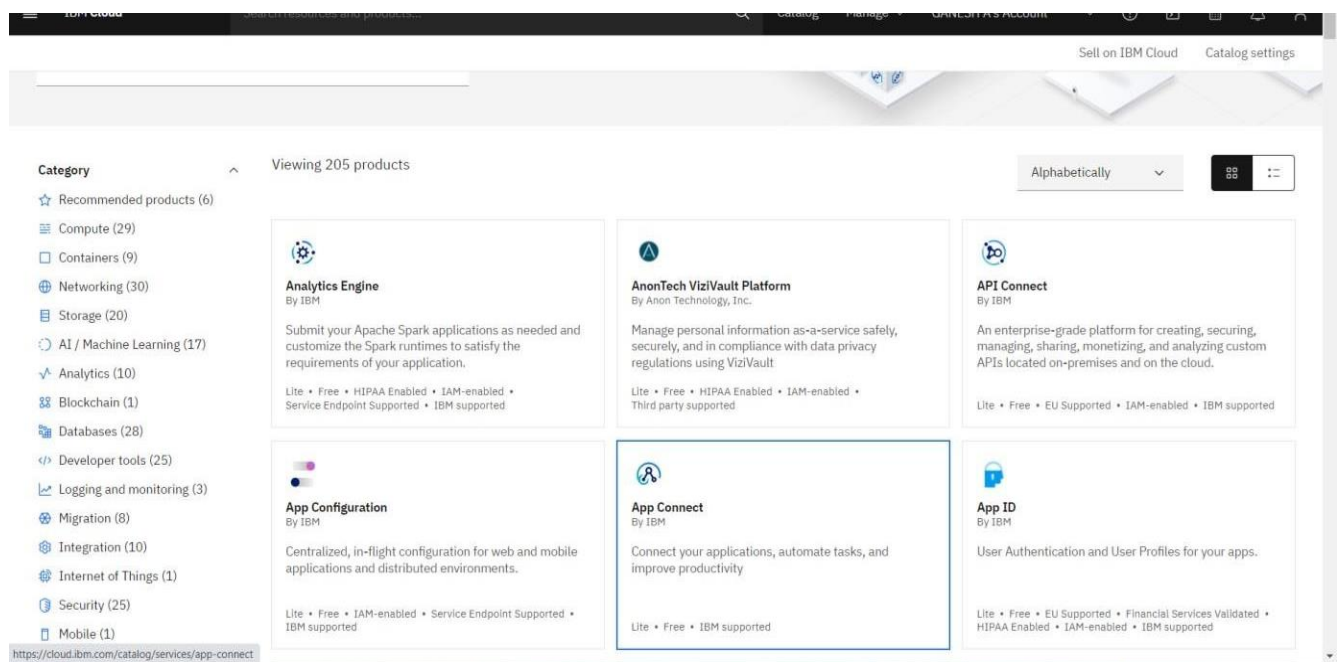
Output:
loginpage

Login

Don't have an account? [Sign Up here](#)

Registration page

Step-1: Creating IBM Cloud and Using its Service.



Step-2:

Configure the IBM cloud service and creating IOT platform

The screenshot shows the IBM Cloud console for the Internet of Things Platform. The page is titled "Internet of Things Platform" and includes a description: "This service is the hub of all things IBM IoT, it is where you can set up and manage your connected devices so that your apps can access their live and historical data." The "Create" tab is active, showing options to "Select a location" (Frankfurt (eu-de)) and "Select a pricing plan" (Lite). A table lists the available plans, with the "Lite" plan selected. The "Lite" plan includes up to 500 registered devices and a maximum of 200 MB of each data metric. The pricing is "Free". A warning message states: "Existing Lite plan instance. You can have only 1 Lite plan instance of this service per resource group. Delete your current Lite plan instance in Default resource group to create a new one, or view the existing instance." The "Summary" panel on the right shows the service name "Internet of Things Platform-15" and the resource group "Default". The "Create" button is visible.

Catalog /

Internet of Things Platform

This service is the hub of all things IBM IoT, it is where you can set up and manage your connected devices so that your apps can access their live and historical data.

Create About

Type
Service

Provider
IBM

Last updated
08/15/2022

Category
Internet of Things

Compliance
IAM-enabled

Location
Frankfurt
London
Dallas
Washington DC

Related links
[Docs](#)
[Terms](#)

Select a location

Frankfurt (eu-de)

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or location: [United States](#)

Plan	Features	Pricing
Lite	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 Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed	Free

The Lite service plan for Internet of Things Platform Includes up to 500 registered devices, and a maximum of 200 MB each of data exchanged, data analyzed, and edge data analyzed per month.

Summary

Internet of Things Platform **Free**

Location: Frankfurt
Plan: Lite
Service name: Internet of Things Platform-15
Resource group: Default

Existing Lite plan instance

You can have only 1 Lite plan instance of this service per resource group. [Delete](#) your current Lite plan instance in Default resource group to create a new one, or [view the existing instance](#).

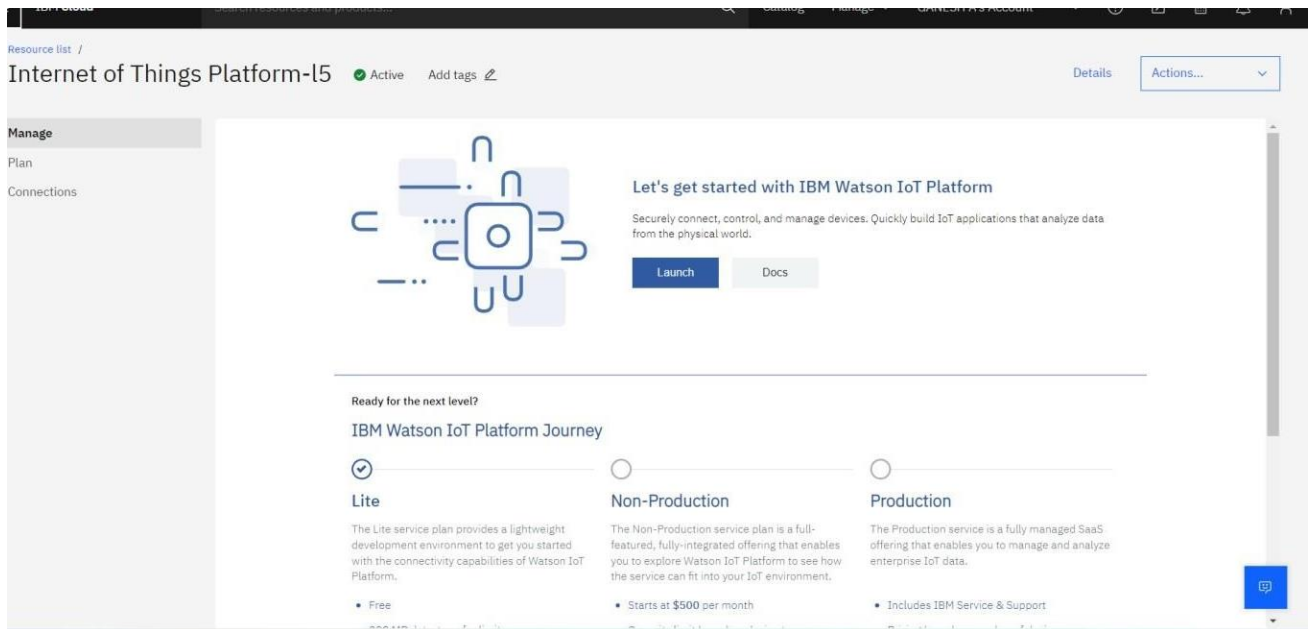
☒ I have read and agree to the following license agreements: [Terms](#)

Create

Add to estimate

Step-3:

IBM Watson IOT platform acts as the mediator to connect the web application to IOT devices, hence launching IBM Watson IOT platform.



IBM Watson IOT platform is created

Step-4:

In order to connect the IOT device to the IBM cloud ,create device in the IBM Watson IOT Platform and get the device credentials.

IBM Watson IoT Platform

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
> <input type="checkbox"/>	01	Disconnected	iot1	Device	Nov 5, 2022 8:11 AM	
> <input type="checkbox"/>	iot1_1	Disconnected	iot1	Device	Nov 5, 2022 9:28 AM	

Items per page 50 | 1-2 of 2 items

1 of 1 page < 1 >

2 Simulations running

Connect the device and start simulating.

Step-5:

The screenshot displays the 'Device Drilldown - iot1_1' page in an IoT management console. The left sidebar contains navigation links: Recent Events, State, Device Information, Metadata, Diagnostics, Connection Logs, and Device Actions. The main content area is divided into two sections. The top section, 'Connection Information', shows the device is 'Disconnected' and provides details: Added By (ganesharum145@gmail.com), Last Connected (Nov 5, 2022 9:30 AM), Client Address (182.65.232.197), SecureToken (SecureToken), Duration (2 minutes), and Data Transferred (1.0 KB). The bottom section, 'Recent Events', lists three events with their values. A modal window titled 'Events 1' is open, showing the 'event_1' type with a frequency of '20 x Every Minute'. The 'Payload' editor is active, displaying a JSON payload with random values for Temperature, pH, and Turbidity. The modal includes a 'Send' button and a 'Cancel' button.

Device Drilldown - iot1_1

Connection Information

Added By: ganesharum145@gmail.com

Connection Status: **Disconnected**

Last Connected: Nov 5, 2022 9:30 AM

Client Address: 182.65.232.197 SecureToken: SecureToken

Duration: 2 minutes

Data Transferred: 1.0 KB

Recent Events

The recent events listed show the live stream of data that is coming and going from the device.

Event	Value	For
event_1	{"Temperature":98,"pH":26,"Turbidity":70}	jsc
event_1	{"Temperature":45,"pH":90,"Turbidity":62}	jsc
event_1	{"Temperature":23,"pH":19,"Turbidity":16}	jsc

Events 1

Event type name: event_1

Frequency: 20 x Every Minute

Send

Payload

You can override field values in the event payload that is sent by this device. Specify the override values in the editor window.

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

What functions can I apply?

Cancel Save

Step-6:

SIMULATION:

The simulation shows the Temperature, pH and Turbidity value.

The screenshot displays the 'Device Drilldown - 01' interface in the IBM Watson IoT Platform. The left sidebar contains navigation links: Connection Information, Recent Events, State, Device Information, Metadata, Diagnostics, Connection Logs, and Device Actions. The main content area shows the 'Connection Information' tab, which includes details about the device's connection status (Disconnected) and a list of recent events. The 'Recent Events' section contains a table with columns for Event, Value, Format, and Last Received. Below the table, a status bar indicates '2 Simulations running'. A 'Up' button is visible at the bottom of the interface.

Event	Value	Format	Last Received
event_1	{"Temperature":21,"pH":95,"Turbidity":14}	json	a few seconds ago
event_1	{"Temperature":74,"pH":43,"Turbidity":98}	json	a few seconds ago
event_1	{"Temperature":16,"pH":49,"Turbidity":38}	json	a few seconds ago
event_1	{"Temperature":31,"pH":90,"Turbidity":54}	json	a few seconds ago
event_1	{"Temperature":5,"pH":48,"Turbidity":60}	json	a few seconds ago

2 Simulations running

Up

Already have an account? [Sign In here](#)