

Project Development Phase

Sprint – 4 (Storage, Web UI & App Deployment using Node RED)

Date	24 November 2022
Team ID	PNT2022TMID18250
Project Name	Project – Gas leakage monitoring and alerting system for industries

Workflow:

1. Create Unique database for storing Login credentials (gasleakagedb) and Sensor data (db).
2. Interface IBM Watson platform and Cloudant database using Node RED and to store sensor data in sensor storage database (db).
3. Create Web UI using Node RED to display Gas Concentration values on Gauge with three colours for three conditions (Green – Normal, Yellow – Moderate & Red – Danger).
4. In addition, Notification will be displayed on Web UI for Moderate and Danger Level.
5. Interface Login (Username & Password), New User Registration (Username, Password & Mobile Number) and Cloudant database using Node RED and to store Login credential data in Login credentials database (gasleakagedb).
6. Interface IBM Watson platform sensor data and App using Node RED to display sensor data in App dashboard.
7. Develop App with three screen (Login, New User Registration & Sensor data Dashboard) using MIT App Inventor and interface Node Red and App for displaying Sensor data for registered user.

Create Database (Login database & sensor data):

←

→

Database name

Create Database

{ } JSON

Your Databases

Name	Size	# of Docs	Partitioned	Actions
gasleakagedb	312 bytes	4	No	<div></div> <div></div> <div></div>
noderedeclvx20221113	37.6 KB	4	No	<div></div> <div></div> <div></div>
sensordb	5.4 KB	159	No	<div></div> <div></div> <div></div>

Showing 1–3 of 3 databases.

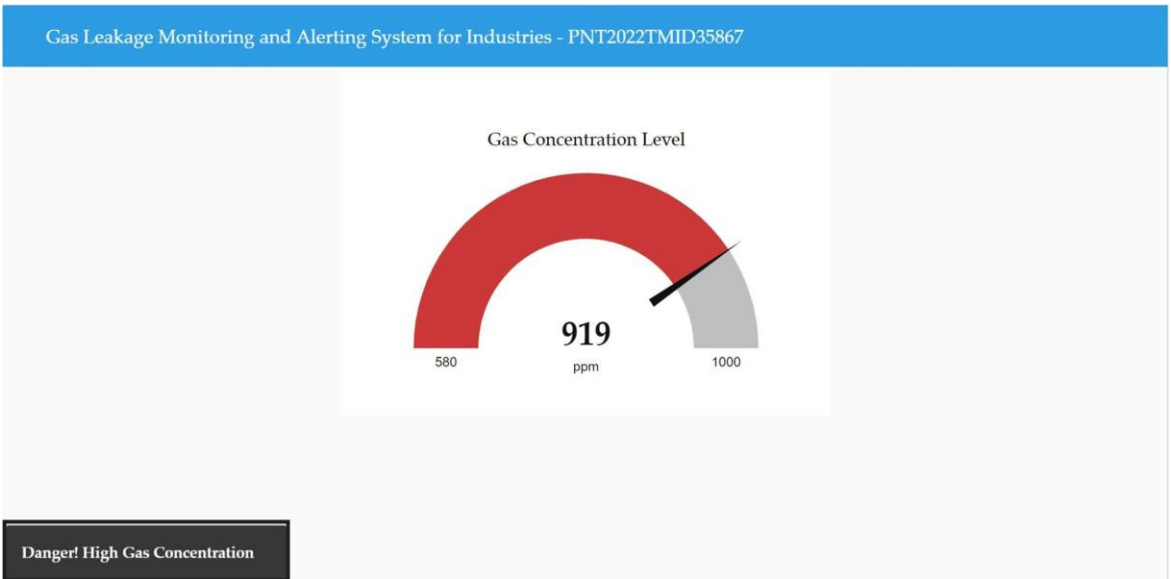
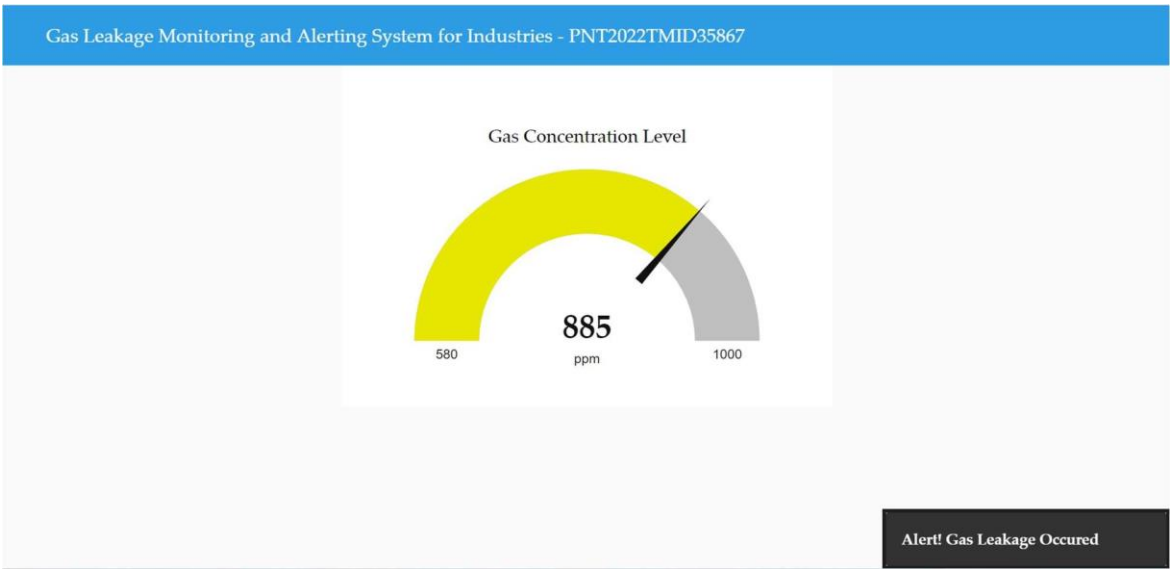
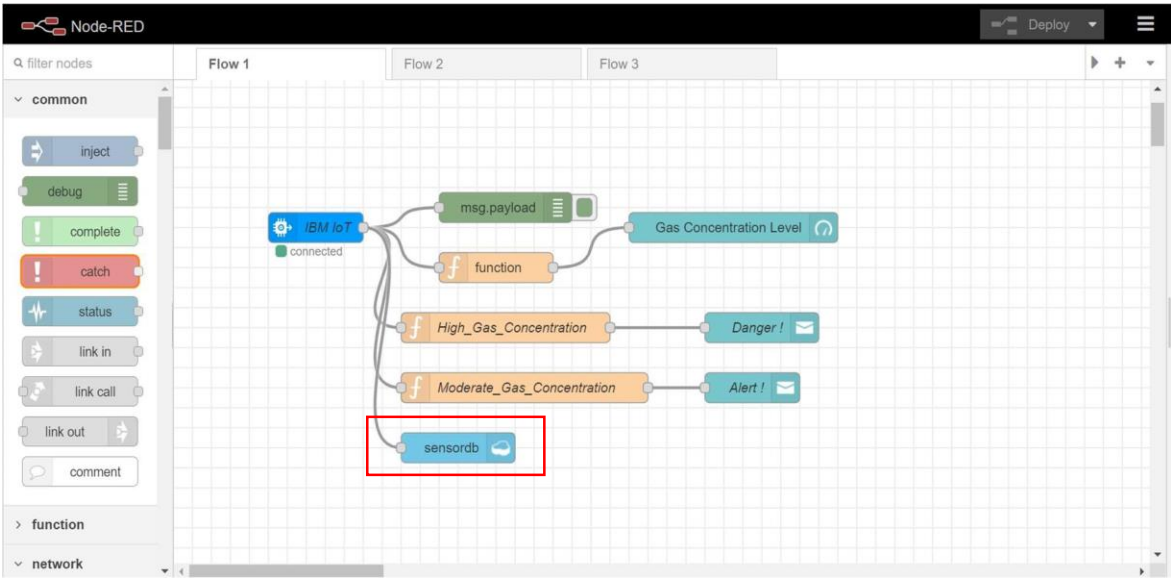
Databases per page

20

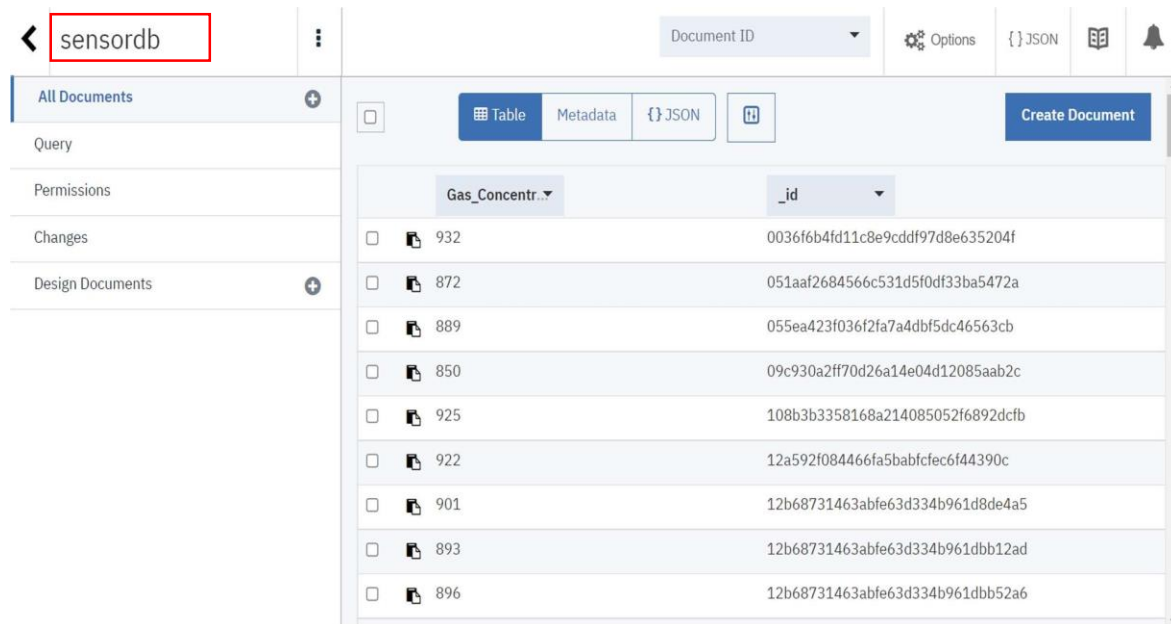
« 1 »

Log Out

Create Web UI and interface IBM Watson Platform & Web UI using Node RED:



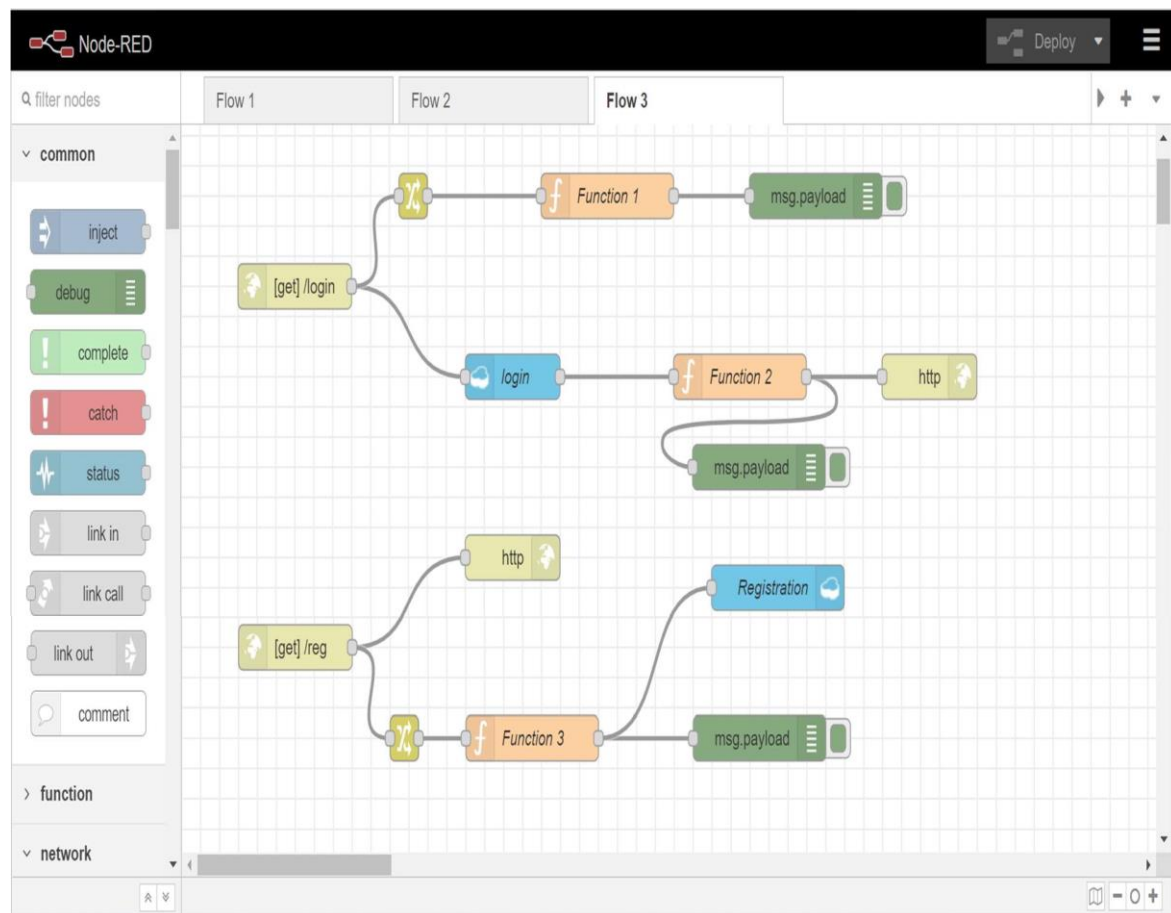
Storage of sensor data in Cloudant database:



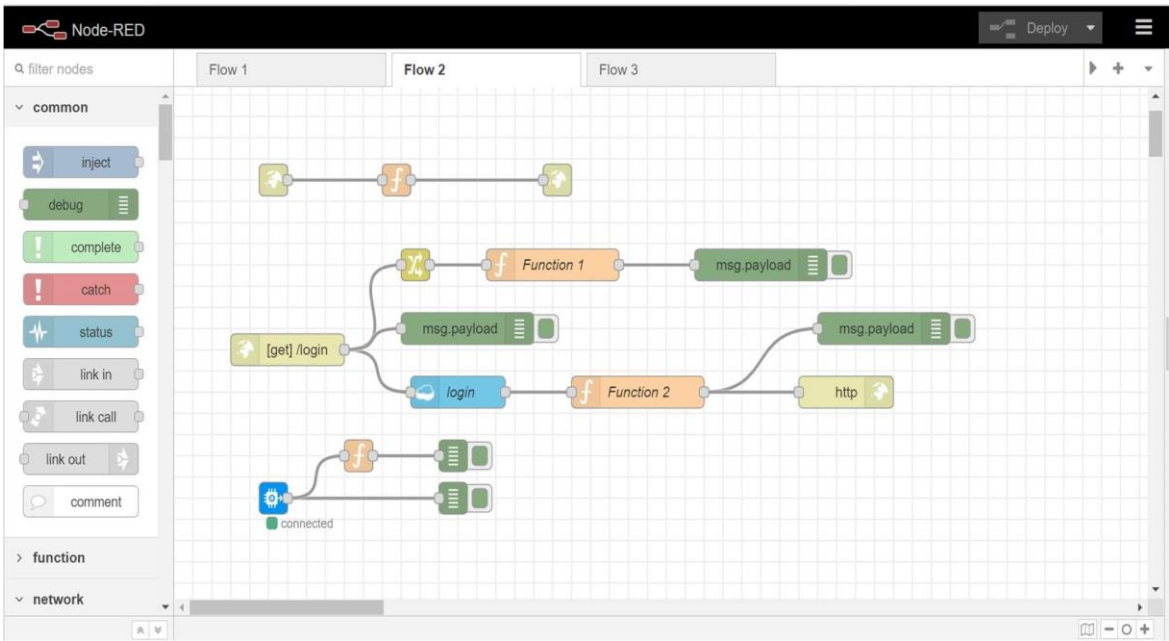
The screenshot shows the Cloudant database interface. The database name 'sensordb' is highlighted in a red box. The table view displays the following data:

	Gas_Concentr...	_id
<input type="checkbox"/>	932	0036f6b4fd11c8e9cddf97d8e635204f
<input type="checkbox"/>	872	051aaf2684566c531d5f0df33ba5472a
<input type="checkbox"/>	889	055ea423f036f2fa7a4dbf5dc46563cb
<input type="checkbox"/>	850	09c930a2ff70d26a14e04d12085aab2c
<input type="checkbox"/>	925	108b3b3358168a214085052f6892dcfb
<input type="checkbox"/>	922	12a592f084466fa5babfcfec6f44390c
<input type="checkbox"/>	901	12b68731463abfe63d334b961d8de4a5
<input type="checkbox"/>	893	12b68731463abfe63d334b961dbb12ad
<input type="checkbox"/>	896	12b68731463abfe63d334b961dbb52a6

Interface Login and New User registration with Cloudant database & App deployment using Node-RED:

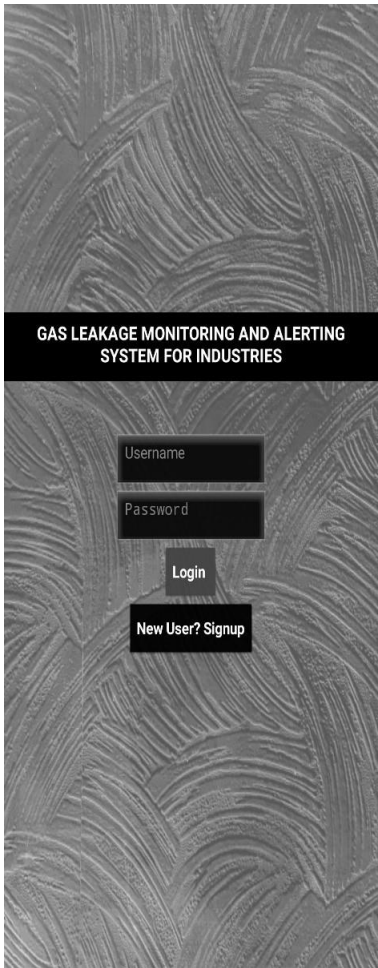


Interface IBM Watson platform and App to display sensor data for registered user using Node RED:

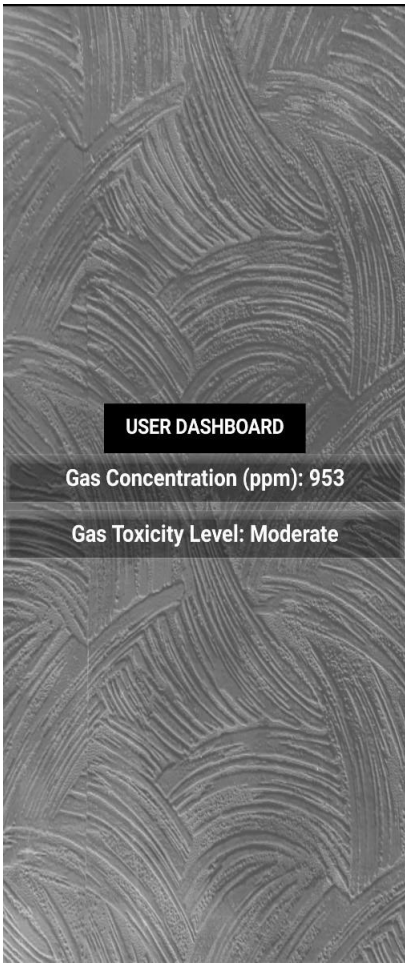


App Deployment:

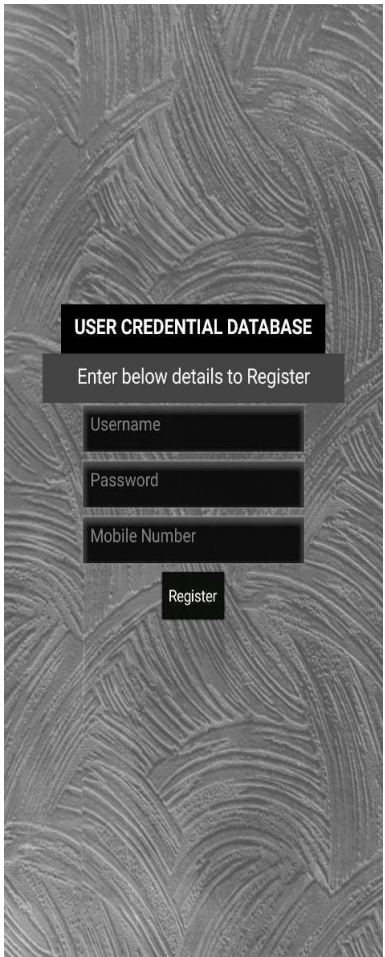
Login Window



User Dashboard

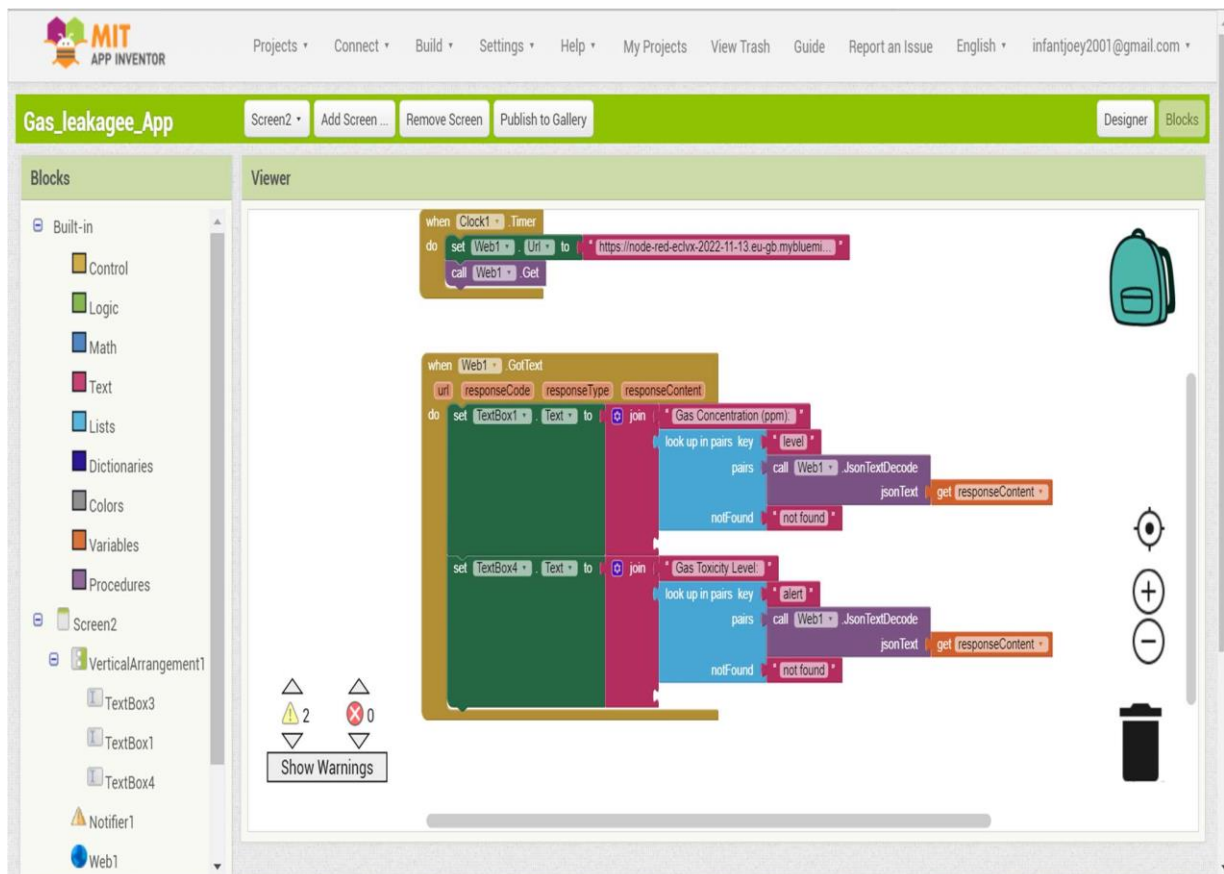
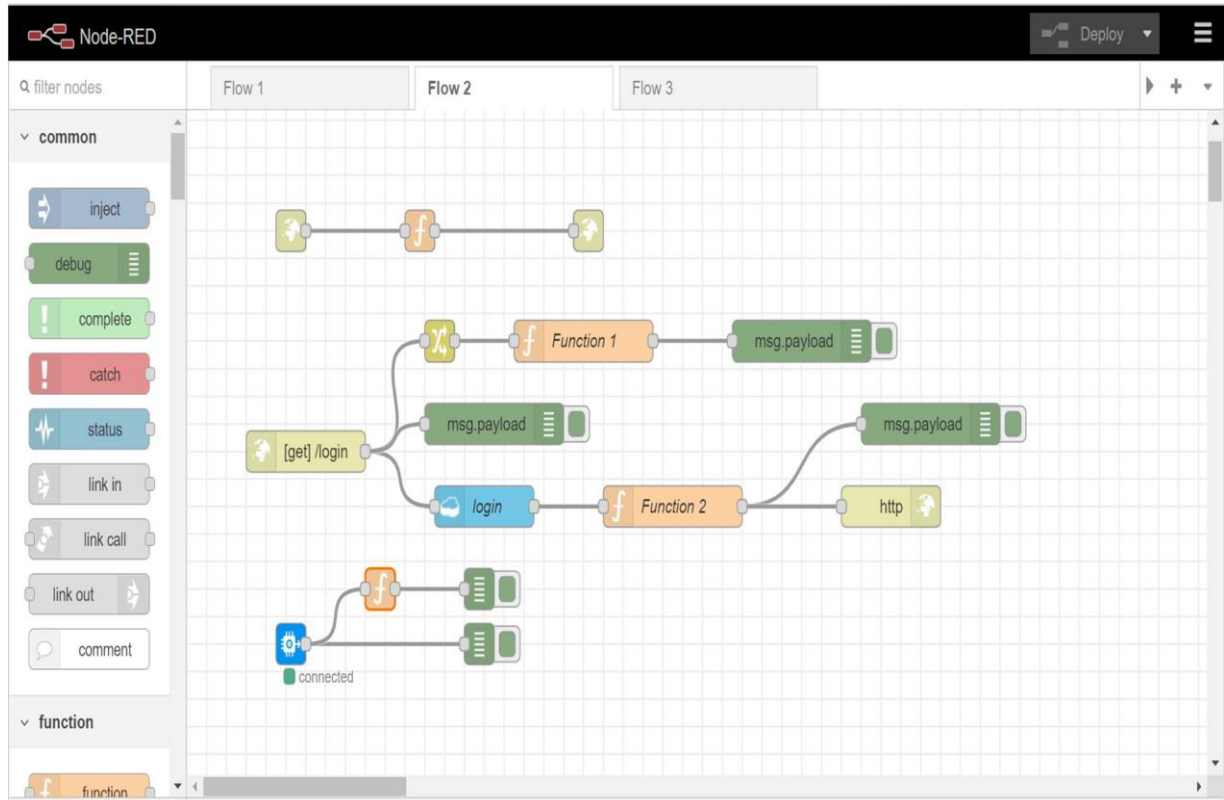


New User Registration Window



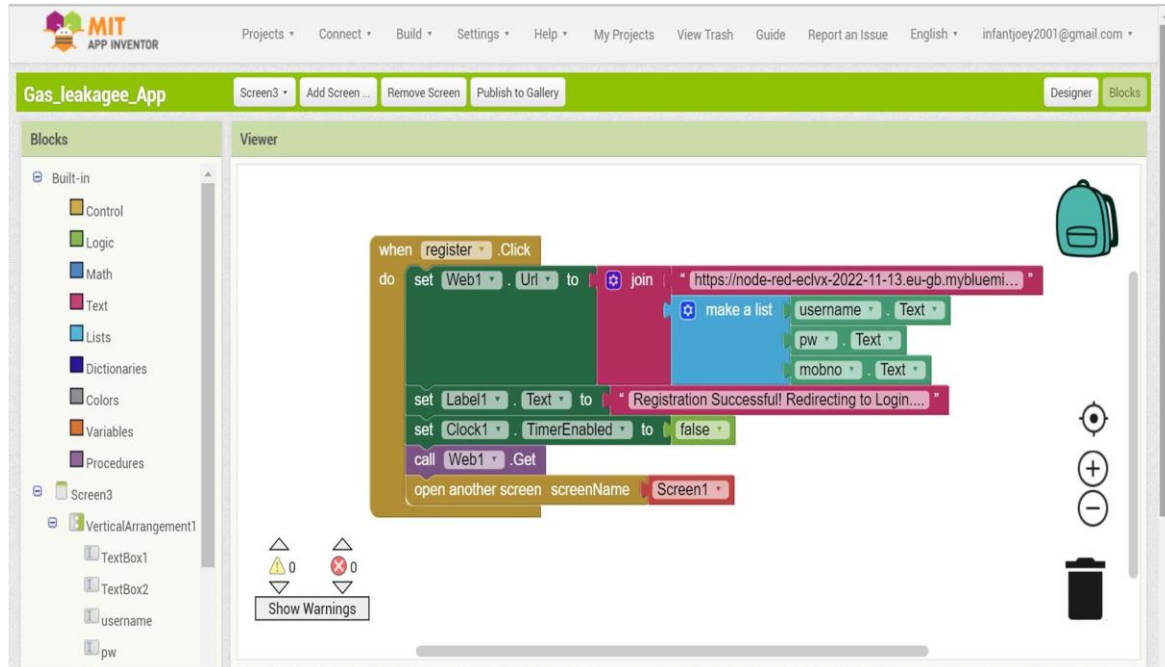
Interface Node RED, Cloudant, IBM Watson Platform & MIT App Inventor:

1. Node RED and IBM Watson Platform:



2. Node RED and MIT App Inventor (Login & New User Registration):

Registration Interface:



Login Interface:

