

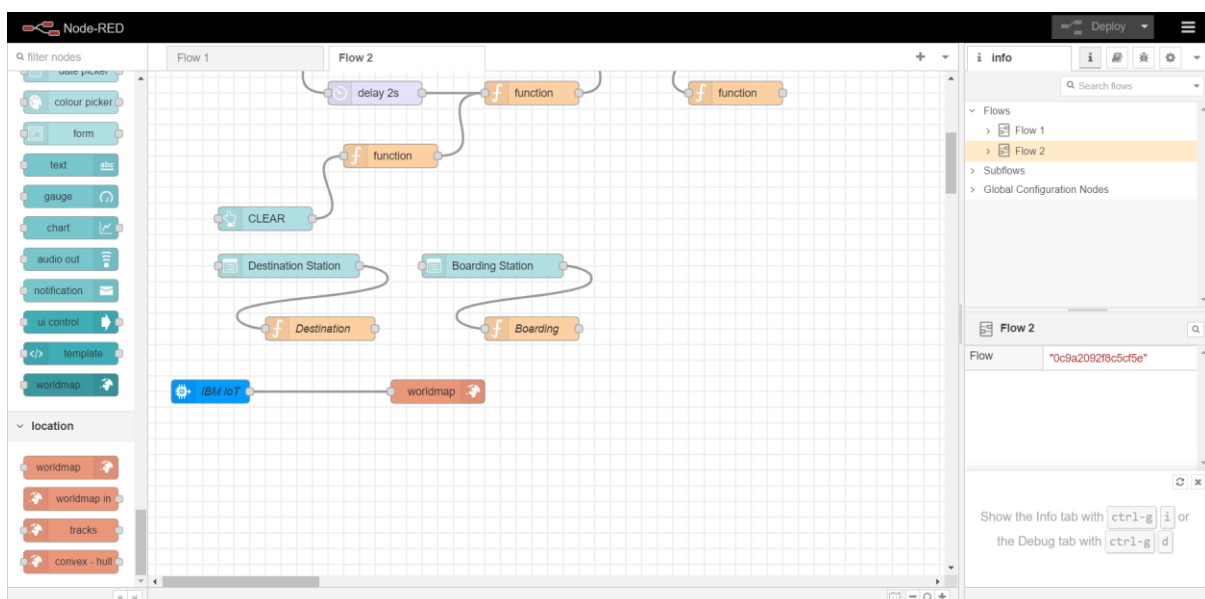
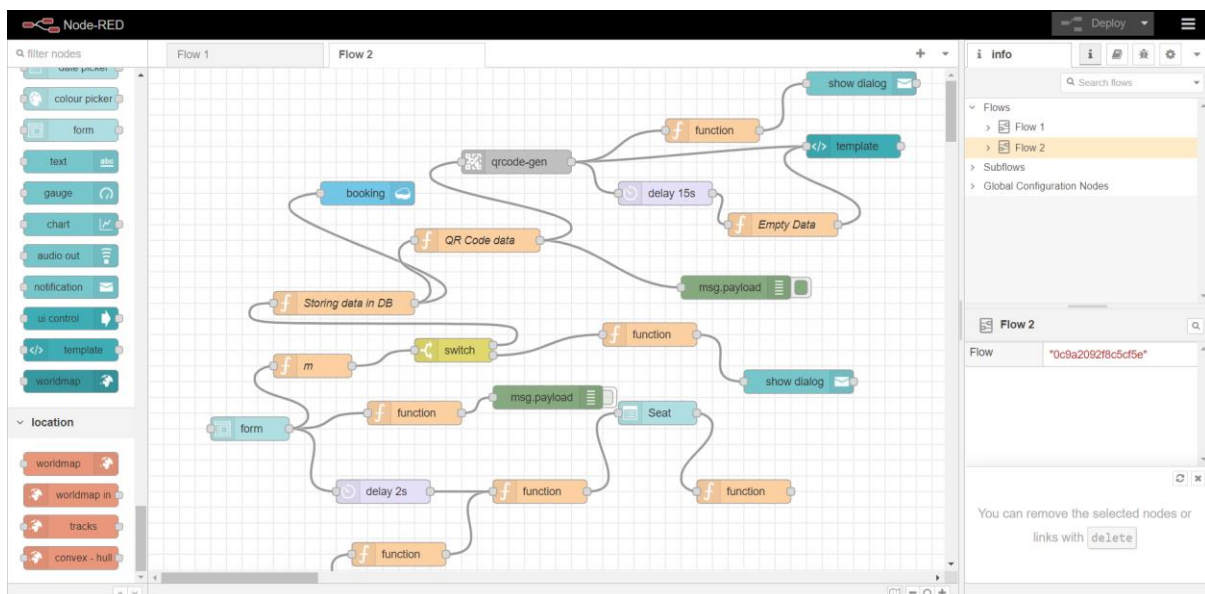
## Project Development – Delivery of Sprint-2

Team ID	PNT2022TMID47580
Project Name	Smart Solutions for Railways

### Sprint-2 :

- In sprint 2 Our developed a node red application that describes the workflow of our smart solutions for railways project
- This application is useful for to understand how the data is given by the user and how the data flow through the database and then it converted into qrcode through the user details can be retried by the TTR.
- The python code was developed to scan the qrcode and retrieve the user information from the Cloudant database.

### Node-red Application Flow:



Output:

Details

Passenger Information

Boarding Station

Vijayawada

Destination Station

Chennai

Seat

Select option

Name \*

Age \*

Mobile No \*

SUBMIT

CANCEL

Python Code:

```
qrcode.py - C:\Users\ramkr\OneDrive\Desktop\qrcode.py (3.7.0)
File Edit Format Run Options Window Help

import cv2
import numpy as np
import time
import pyzbar.pyzbar as pyzbar
from ibmcloudant import CouchDbSessionAuthenticator
from ibmcloudant.cloudant_v1 import CloudantV1
from ibm_cloud_sdk_core.authenticators import BasicAuthenticator

authenticator = BasicAuthenticator('apikey-v2-v151c36pvfp4478gn911a9quezm1c6wx35gsa5an7cp','66d5a65b81360dd97cc802ea47a8ebd7')
service= CloudantV1 (authenticator=authenticator)
service.set_service_url('https://4ec8693c-41dd-43b0-87a9-eabb98825ef3-bluemix.cloudantnosqldb.appdomain.cloud/')

cap = cv2.VideoCapture(0)
font = cv2.FONT_HERSHEY_PLAIN

while True:
    frame = cap.read()
    decodedObjects = pyzbar.decode (frame)
    for obj in decodedObjects:
        #print ("Data", obj.data)
        a=obj.data.decode('UTF-8')
        cv2.putText(frame, "Ticket", (50, 50), font, 2,
                    (255, 0, 0), 3)
        print(a)
        try:
            response = service.get_document(
                db='booking',
                doc_id=a
            ).get_result()
            print (response)
            time.sleep(5)
        except Exception as e:
            print ("Not a Valid Ticket")
            time.sleep(5)

        cv2.imshow("Frame",frame)
        if cv2.waitKey(1) & 0xFF ==ord('q'):
            break
cap.release()
cv2.destroyAllWindows()
client.disconnect()
```

Output :

