SPRINT-2
DOCUMENT

Date	29 OCTOBER 2022
Team ID	PNT2022TMID32277
Project Name	Project - Smart Solutions for Railways

DESCRIPTION:

In this sprint, we have designed a webpage for TTE to verify the train ticket easily. Login page is designed for the TTE to login and after successful login they are redirected for ticket verification.In this form, TTE can scan the QR code and verify the users's personal details, boarding , destination details and seats. If it is was valid, the verified users details are displayed in web UI.

FEATURES:

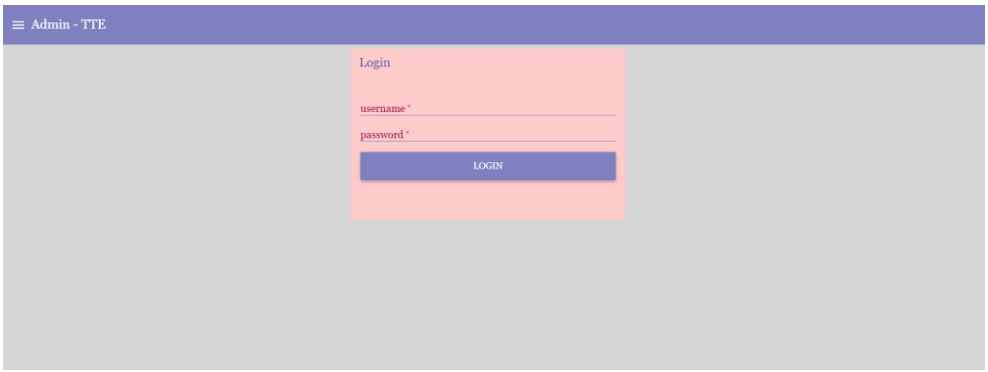
1) Login page

2) TTE dashboard which contains clear button

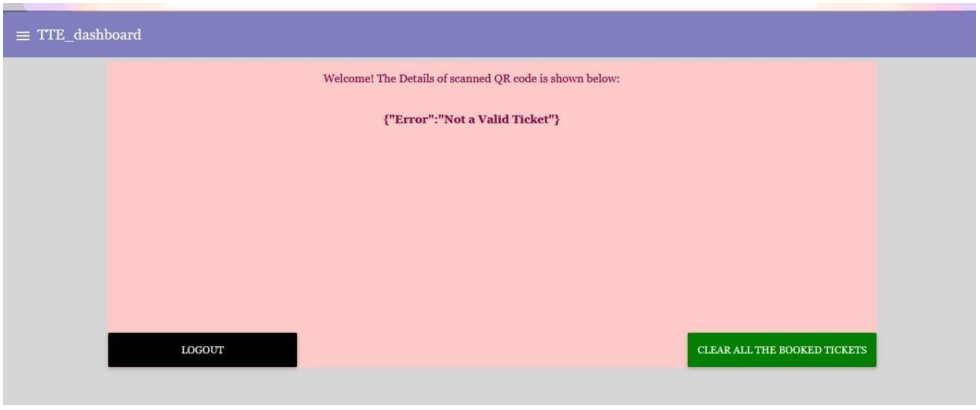
3) Ticket verification

4) Displaying verified user details in web ui

LOGIN PAGE:



TTE dashboard which contains clear button:



Ticket verification:

```
Published data Successfully: %s {'Error': 'Not a Valid Ticket'}

Not a Valid Ticket
```

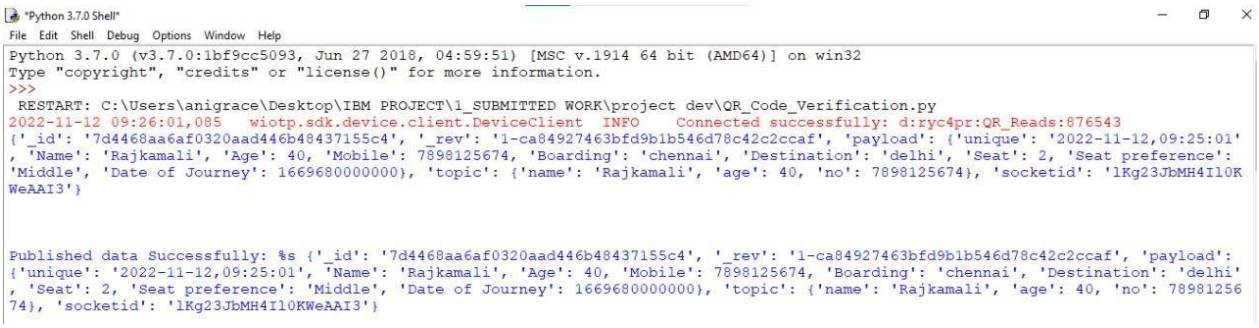
Displaying verified user details in web ui:

Python code

```
import cv2 as cv

import numpy as np

import time

import pyzbar.pyzbar as pyzbar

from ibmcloudant.cloudant_v1 import CloudantV1

from ibmcloudant import CouchDbSessionAuthenticator

from ibm_cloud_sdk_core.authenticators import BasicAuthenticator

import wiotp.sdk.device


authenticator=BasicAuthenticator('apikey-v2-
1w8tqt2prt3j7qz9d1rgrxhar3w9v43i2359u79ut5jb','86181a38eca19ae487f512b10aca0c80')

service=CloudantV1(authenticator=authenticator)

service.set_service_url('https://apikey-v2-
1w8tqt2prt3j7qz9d1rgrxhar3w9v43i2359u79ut5jb:86181a38eca19ae487f512b10aca0c80@9163f25a-10b8-4374-
a8de-cb92e4357567-bluemix.cloudantnosqldb.appdomain.cloud')


cap = cv.VideoCapture(0)

font = cv.FONT_HERSHEY_PLAIN

if not cap.isOpened():

    print("Cannot open camera")
```

```
    exit()



myConfig = {
    "identity" :{
        "orgId":"ryc4pr",
        "typeId":"QR_Reads",
        "deviceId":"876543"
        },
    "auth":{
        "token":"GGHvsi!XL-i7x0mC6B"
        }
    }
def myCommandCallback(cmd):
    print("Message received fromIBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

def pub(data):
    client.publishEvent(eventId = "status", msgFormat="json", data=response, qos=0, onPublish=None)
    print("Published data Successfully: %s",response)
    print("\n")

while True:
    ret, frame=cap.read()
    decodedObjects = pyzbar.decode(frame)
    if not ret:
        print("Can't receive frame (stream end?). Exiting ...")
        break
    for obj in decodedObjects:
```

```
        a=obj.data.decode('UTF-8')
        cv.putText(frame, "Ticket", (50,50),font,2,
                   (255 ,0, 0),3)

        try:
            response=service.get_document(
                db='bookingdetails',
                doc_id = a
                ) .get_result()
            print(response)
            print("\n\n")
            pub(response)
            time.sleep(5)
        except Exception as e:
            response={'Error':'Not a Valid Ticket'}
            pub(response)
            print("Not a Valid Ticket")
            print("\n\n")
            time.sleep(5)

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



NODE-RED FLOW: