SPRINT-2 DOCUMENT

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| Date | 16 NOVEMBER 2022 |
| Team ID | PNT2022TMID47932 |
| 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:**

* Login page
* TTE dashboard which contains clear button
* Ticket verification
* Displaying verified user details in web ui

**LOGIN PAGE:**



**TTE dashboard which contains clear button:**



**Ticket verification:**



**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:

