PROJECT OBJECTIVES

By the end of this project you will:

Gain knowledge of Watson IoT Platform.

Connecting IoT devices to the Watson IoT platform and exchanging the sensor.

Gain knowledge on IBM Cloudant DB

Explore Python client libraries of Watson IoT Platform

Explore Python library for integrating OpenCV for accessing the Live Camera input.

Scan the QR code in live streaming and retrieve the QR code details

Gain knowledge on web application development.

Gain knowledge of storing the data in Cloudant DB

Generating QR codes with the required data

To accomplish this, we have to complete all the activities and tasks listed below:

Create and configure IBM Cloud Services

* Create IBM Watson IoT Platform and Device

* Create Node-RED service

Develop the Python Script

* Develop the Python Script

Develop a web Application using Node-RED Service

* Develop the Web application using Node-RED

* Testing the Web UI by giving the required inputs

PROJECT FLOW

* Using the Web application, a user books a ticket based on the availability of the seats by giving the general required information.

* Once a user clicks on the submit button, a QR code is generated with a Unique ID and the data is stored in the Cloudant DB with that uniqueID.

* Users can save the QR code for further process.
* In python code, a Ticket collector can scan the QR code and
   extract he information from the QR Code i.e., Unique ID with that
   UniqueID, data is fetched from the Cloudant DB, if it is not found,
   then it displays Not a Valid Tickek.

* The train location can be tracked from a Web Application.