

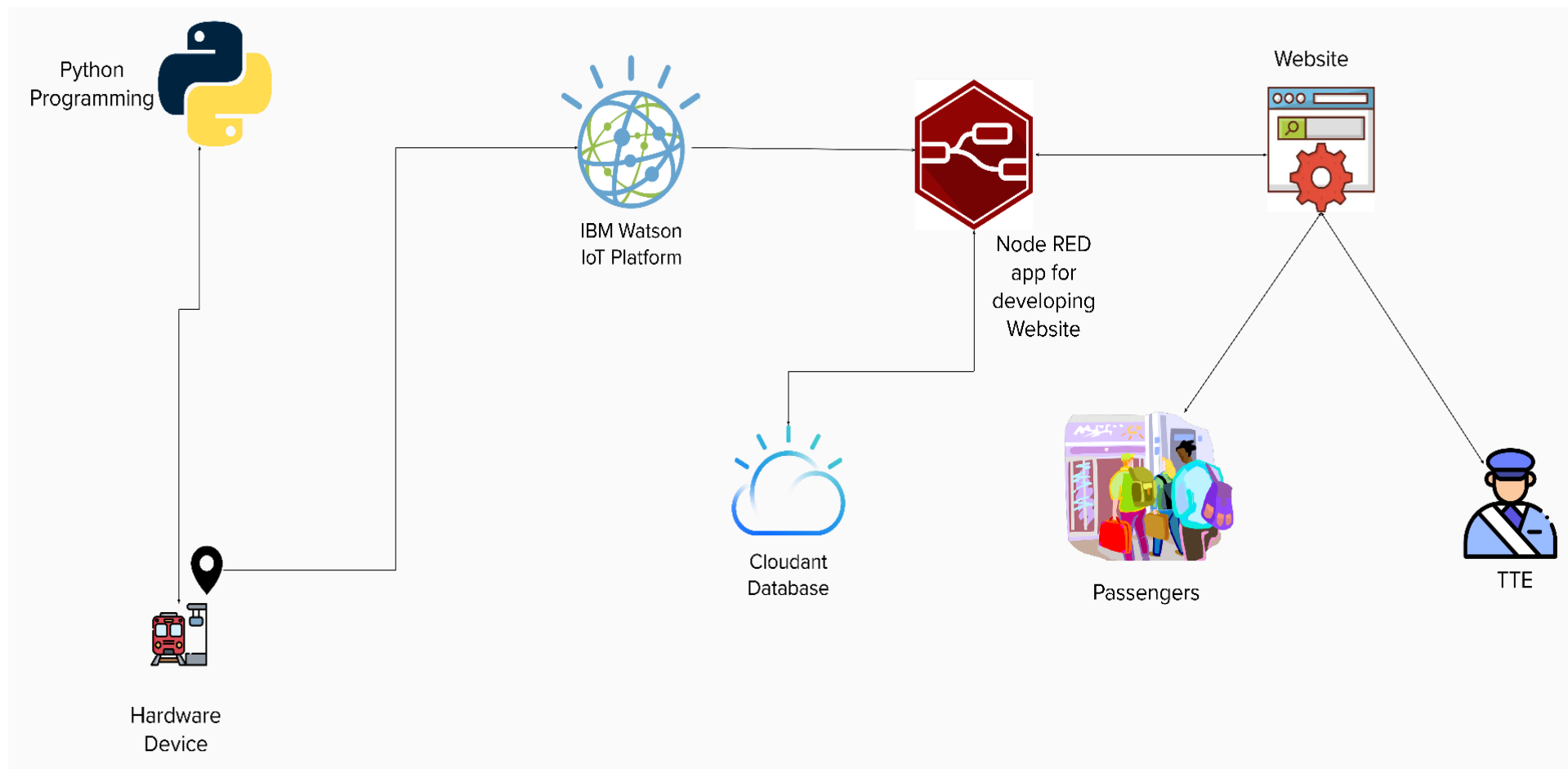
## Project Design Phase-II Technology Stack (Architecture & Stack)

Date	24 October 2022
Team ID	PNT2022TMID18193
Project Name	Smart Solution for Railways
Maximum Marks	4 Marks

### Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

### Smart Solution for Railways.



**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Live Location and tracking	Live location is updated in the webpage	IBM Watson Assistant, IBM cloud
3.	Ticket Booking	Ticket Booking and verification of QR code	qrcode.js, python Script
4.	Cloud Database	Database Service on Cloud	IBM Cloudant
5.	QR reuse	Reusability of QR code is done	node.js
6.	Machine Learning Model	To recognize face for security	Facial Recognition
7.	Alert	Alerts passengers just before the destination station	Geofencing API

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-Source Frameworks are used in our application for UI creation, QR code generation, trash segregation etc.,	Django, qrcode.js, JavaScript, node.js
2.	Security Implementations	Securing user credentials and ticket information in database	SHA-256,OWASP
3.	Scalable Architecture	To scale the cloud database for storing more tickets as users increase	IBM Auto Scale
4.	Availability	To make the application available to use 24/7	Technology used
5.	Performance	To increase the performance of the application hosted in the high-performance instance	IBM Instance