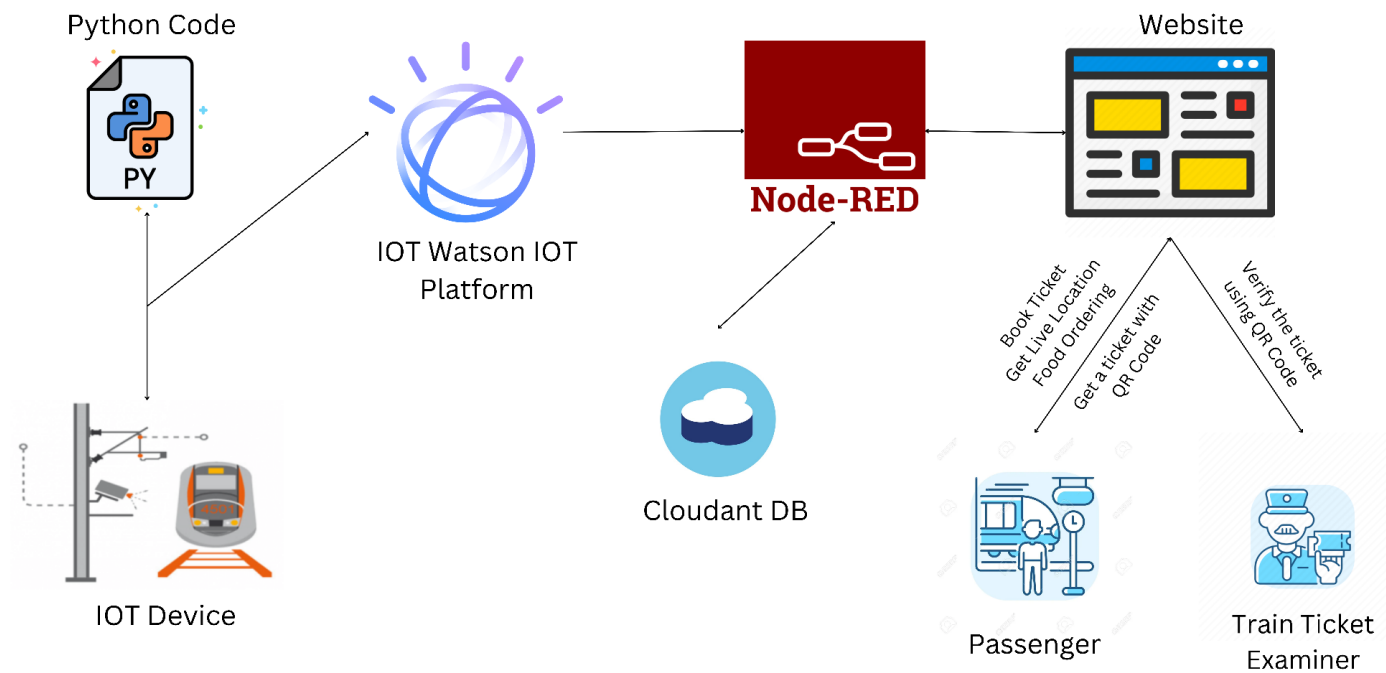


## Project Design Phase-II Technology Stack (Architecture & Stack)

Date	15 October 2022
Team ID	PNT2022TMIDxxxxxx
Project Name	Smart Solution For Railways
Maximum Marks	4 Marks

### Technical Architecture:



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

S.No	Component	Description	Technology
1.	User Interface	How the user interacts with the website	HTML, CSS, JavaScript
2.	Live location tracking	Track live location of trains and updation in the website	IBM Watson IoT, IBM cloud
3.	Ticket booking and verification	User books the train ticket and the QR code of the ticket is generated. Ticket is verified by the ticket checker using a QR code scanner	Django, qrcode.js
4.	Food ordering	Passengers can order food from various restaurants	GrubHub API
5.	Database	Data Type, Configurations etc.	Django
6.	Cloud Database	Database Service for storing tickets, user authentication etc.,	IBM Cloudant
7.	Trash segregation	Provide bounties for trash segregation	IBM Watson IoT, node.js
8.	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

S.No	Characteristics	Description	Technology
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