

SMART SOLUTION FOR RAILWAYS

PROJECT DESIGN PHASE –II

TECHNICAL STACK (Architecture and Stack)

Date	28 October 2022
Team ID	PNT2022TMID37898
Project Name	IOT-Smart Solution for Railways
Maximum Marks	4 Marks

Technical Architecture:

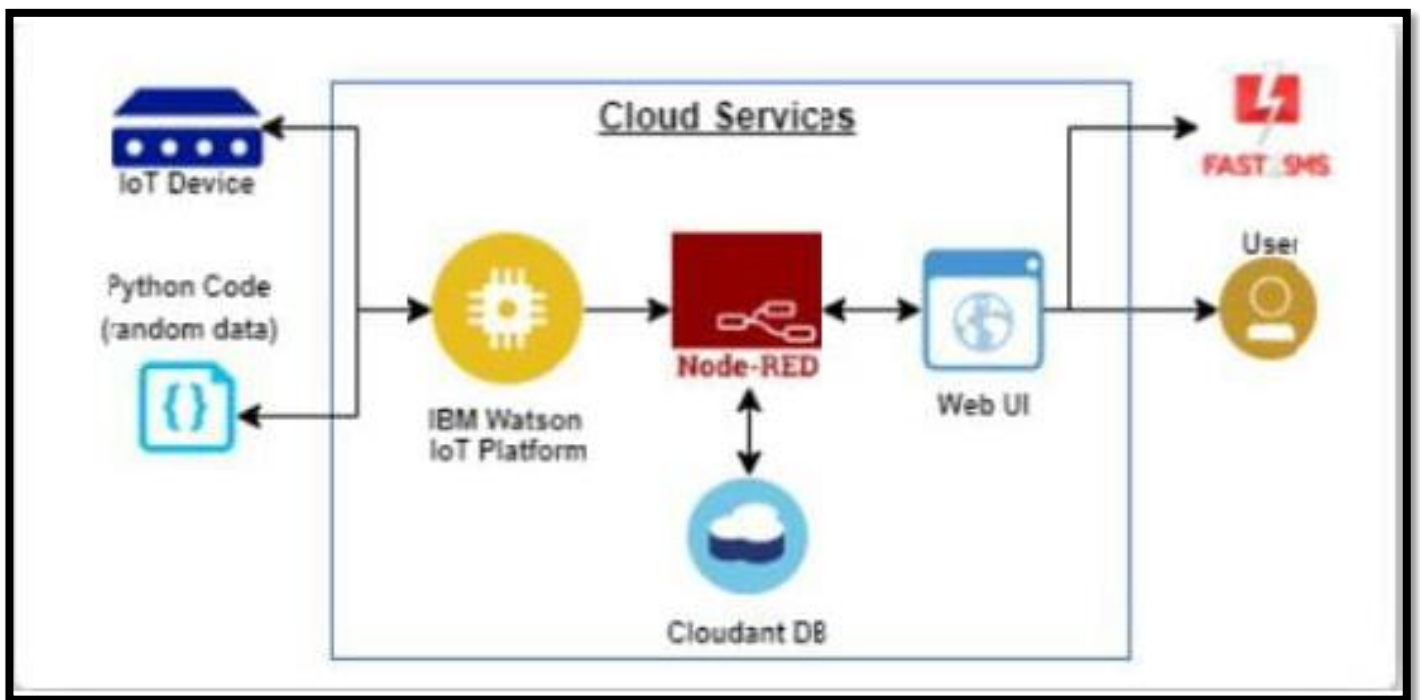


Table 1- Components and Technology

S.No	Component	Description	Technology
1	User Interface	User interaction with application. E.g: Web UI, Mobile App,etc..	HTML ,CSS, java Script, SMS for Web UI
2	Application Logic-1	Processing logic of the application	Python script website application
3	Database	Data Organization, Retrieval ,etc.	MySQL, NoSQL, unique code generation, location co-ordination details.
4	Cloud Database	DBaa Services, provide network access.	creating IBM Watson IOT Platform
5	File Storage	Hierarchical storage requirements	IBM Block Storage or Other Storage Service or Local File system.
6	External API-1	Purpose of External API used in the application	Node-RED key API
7	External API-2	Purpose of External API used in the application	Aadhar API, to identify, verify passenger information.
8	Machine Learning Model	Need of Machine Learning Model	Object Recognition Model, QR Code-generation,scanning and validation.
9	Infrastructure (Serve/Cloud)	Application Deployment on local and cloud system	Local, Cloud Foundry, etc.

Table-2: Application Characteristics

S.No	Characteristics	Description	Technology
1	Open Source Framework	List of Open-source frameworks used in application	Python, HTML Java Script, Angular JS and Node
2	Security Implementation	List of all the security/ access controls implemented.	Encryption, IAM Controls, etc
3	Architecture scalability	Justifies the scalability of architecture	Increasing database capacity and combining features for easy accessibility.
4	Availability	Determining the availability of application.	Cookies are used for storing user data and to enhance the processing speed.
5	Performance	deducing consideration for the performance of the application.	Highly responsive servers are required to manage number of requests per second.