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

Date	15 October 2022
Team ID	PNT2022TMID03026
Project Name	Smart Solution for Railways
Maximum Marks	4 Marks

Technical Architecture:

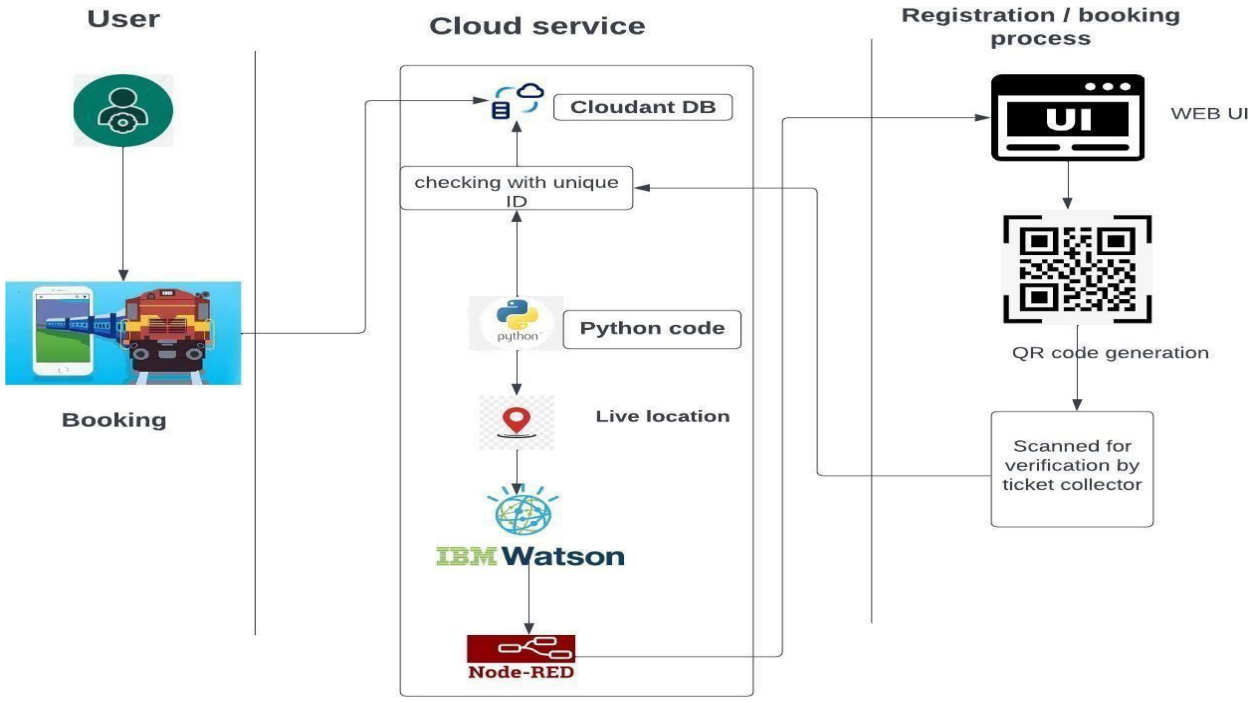

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Web UI	User can login and book their ticket through the website based on the availability of the seats.	HTML, CSS, JavaScript
2.	Cloud Services	Requirements filled by the passenger is stored in the cloud database.	Python
3.	GPS Tracking	Live Location details shared through the code to share the location in the website	IBM Watson Service
4.	External API-1	Used for rail schedule, ticketing and travel documents generation, cancellation.	Sabre API
5.	External API-2	Used for combining carriers and ticket types, Multilanguage & currency support.	Trainline B2B API
6.	Data Processing	Ticket is verified with the unique ID generated with the cloudland DB	Python, IBM cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	CSS, Backend framework,	Python, IBM cloudant DB
2.	Security Implementations	Data entered are encrypted, Continuous Location Tracking	Python, Cloud service
3.	Scalable Architecture	The scanner and the codes written are highly scalable where any implementation can be done anytime needed	Python
4.	Availability	Any time available system. The ticket can be verified by the ticket collector from anywhere.	IBM Load Balancer
5.	Performance	Though the details are get stored in the cloud the system crash will not affect the data. The data can be retrieved from anywhere with a scanner. And the GPS states the exact location of the train.	Distributed Services, GPS Tracker