Project Design Phase-II

Technology Architecture

Date	**20October2022**
Team ID	PNT2022TMID50925
Project Name	**Smart Solution for Railways**

Technical Architecture:
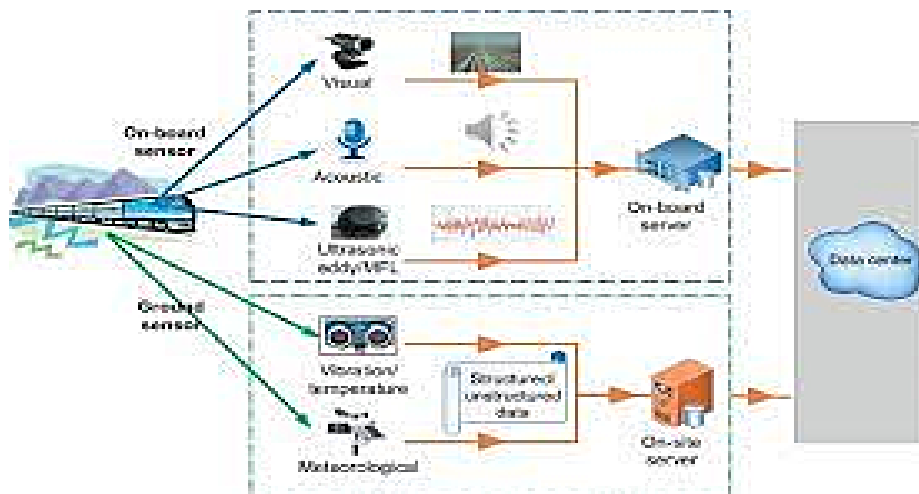
Table-1 : Components & Technologies:

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	IBM Watson Service

		the website	
4	**External API-1** **Sabre API**	**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 cloudant 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

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