

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

Date	17 October 2022
Team ID	PNT2022TMID23626
Project Name	Smart solutions for Railways

Technical Architecture:

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

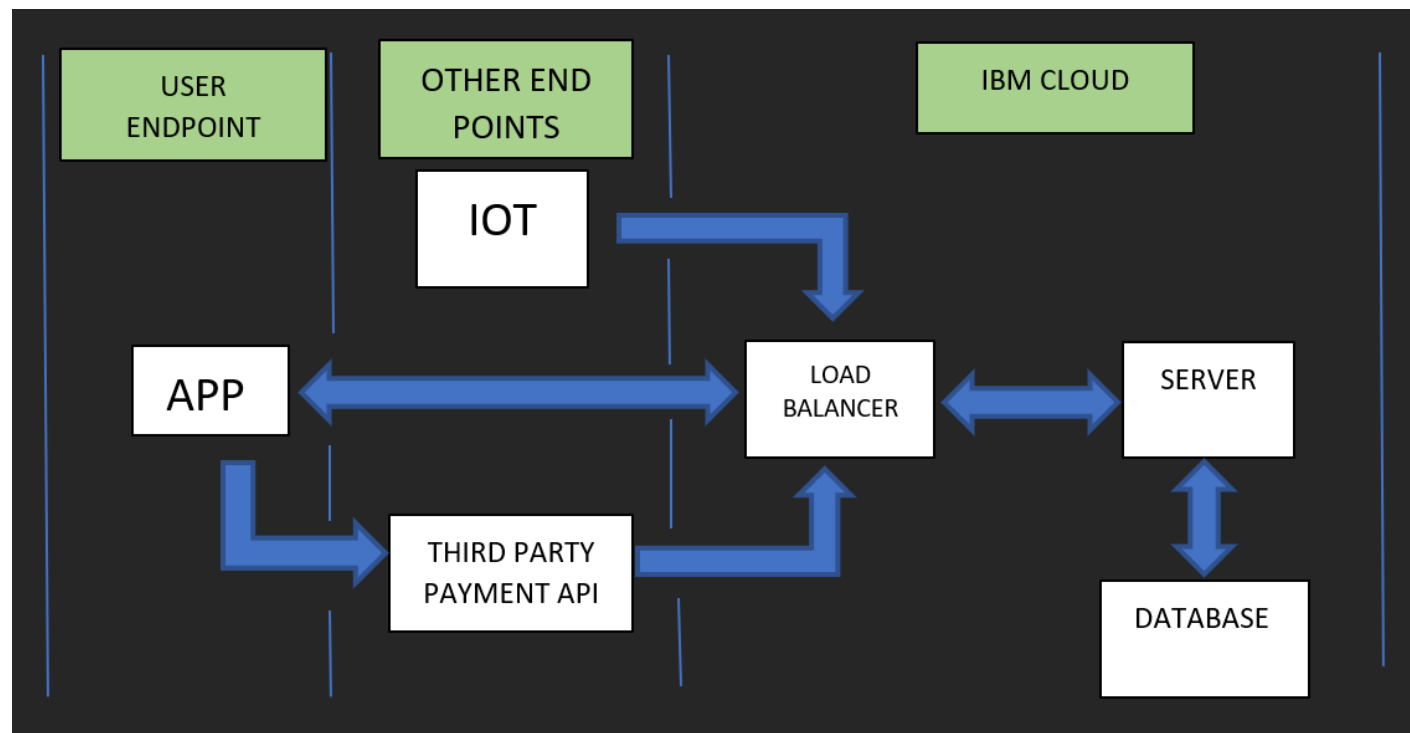


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chat bot etc.	HTML, CSS, JavaScript, React Js, Flutter
2.	Application Logic-1	Logic for a process in the application	MIT app inventor,
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2, Firebase
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	Purpose of External API used in the application	Stripe Payment API
9.	Machine Learning Model	Purpose of Machine Learning Model	Recommendations system
10.	Infrastructure (Server / Cloud)	Application Deployment on Cloud system	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	React JS, Flutter
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	SHA-256, Encryptions, IAM Controls, OWASP
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	3 – Tier architecture
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Nginx Load balancers, Fault tolerant systems
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Multicore processors for servers