Project Design Phase-II

Technology Stack(Architecture&Stack)

Date	19 October2022
TeamID	PNT2022TM39941
ProjectName	Smart solution for railways

Technical Architecture:

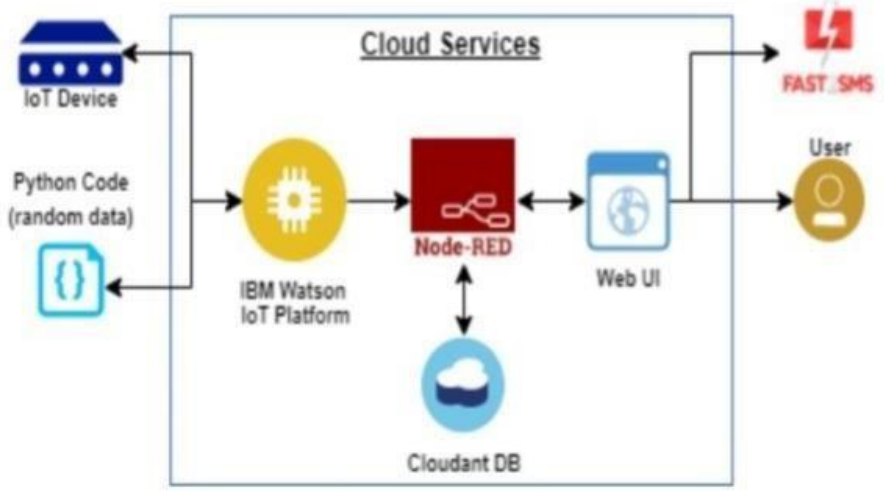

Table-1:Components & Technologies:

S.No	Component	Description	Technology
1.	UserInterface	How user interacts with application e.g. WebUI,Mobile App,Chatbotetc.	HTML, CSS, JavaScript, React Js,Flutter
2.	Application Logic-1	Logic for a process in the application	MITapp 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	DataType,Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBMDB2, 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	Recommendation system
10.	Infrastructure(Server/Cloud)	Application Deployment on Cloud system	Kubernetes, Heroku

Table-2:ApplicationCharacteristics:

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 tolerantsystems
5.	Performance	Design consideration for the performance of the application(number of requests per sec,use of Cache,useofCDN's)etc.	Multicore processors forvservers