Project Design Phase-II

Technology Stack(Architecture &Stack)

Date	25 October 2022
Team ID	PNT2022TMID25909
Project name	Smart solutions for railway
Maximum marks	4 Marks

Technology Architecture

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & table 2.
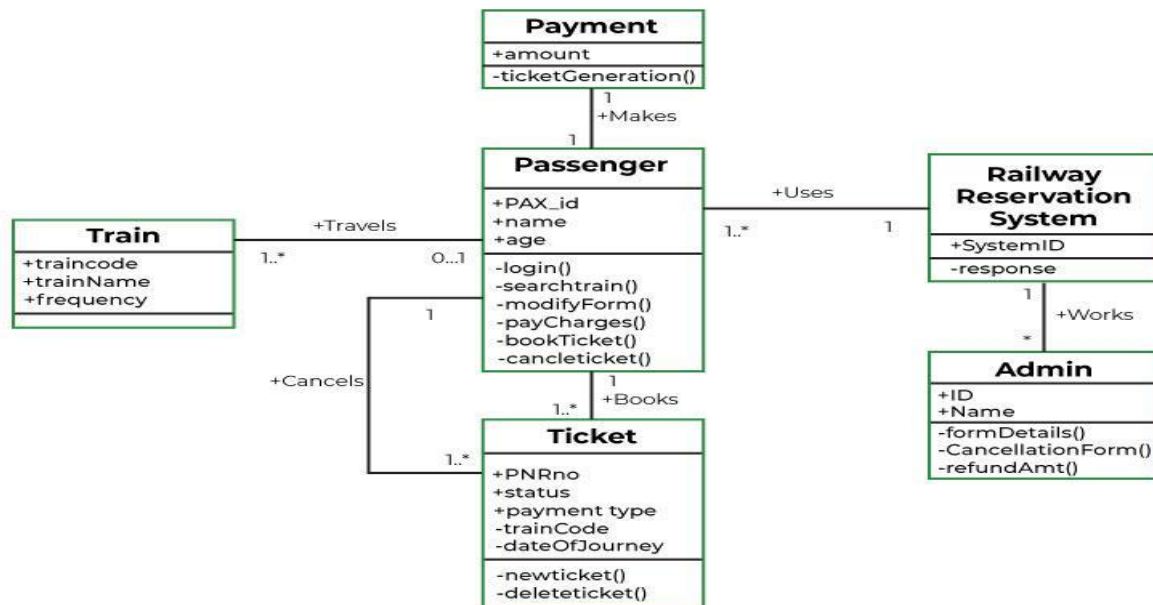
Guidelines
1.Include all the processes(As an application logic/Technology Block)
2.Provide infrastructural demarcation(local/Cloud)
3.Indicate external interfaces(Third Party API's etc)
4.indicate data storage componenets/service
5.Indicate interface to machine learning models(if application)

Table-1 : components &Technology

S.No	Components	Description	Technology
1.	User interface	User as to register and view the other device's location e.g Web UI, Mobile App etc.	Node red
2.	IOT-Application Logic -1	Register of railway ticket for reservation.	Python etc.
3.	IOT-Application Logic-2	Submit all details about ticket reservation in correctly.	IBM Watson Asistant
4.	IOT-Application Logic-3	If you register all correct details it can store the details and reg the railway ticket .	IBM Watson STT Service
5.	Database	Data Type can be any format such as arbitrary binary data, text. User-defined blob of data send from clouds iot core to a device etc.	SQlite, InFluxDB.
6.	Cloud Database	User install railway ticket reservation software on the cloud infrastructure to implement the database.	IBM DB2, IBM Cloudant etc.
7.	File storage	File storage contain the valuable time and date of the ticket until store the database.	IBM Block storage or Local files system.

S.NO		Description	
8.	External API-1	Our Rail API is a single point of access to shopping, booking, and servicing for all mojor rail operation . get complete control of rail system and make it available.	Aadhar API, etc
9.	External API-2	Rail Booking API allows any Railway to connect their inventory, pricing, rules, and ticketing capability to a single platform for easy multi-use distribution option.	City geo –reservation system.
10.	Machine learning Model	Integrating machine learning AI tools can improve and streamline internal processes, so urgent issues get handled first, and you can always be sure that your customer are getting the best service possible.	Urgency detection is another example of machine leaning that uses sentiment analysis to automatically tag incoming ticket as Urgent or Not Urgent in your help desk software.
11.	Infrastructure(Server/cloud)	The created a ticketing system to track issues , feature requests and anything else related to the fedora infrastructure. The ticket system require a valid username and password.	Fedora support ticking system, cloud Foundry infrastructure etc.

Table-2 Application Characteristics :

S.NO	Characteristics	Description	Technology
1.	Open source Frameworks	When it comes with a free plan. It doesn't work it limits you somewhere for agent count on the number of ticket. Moreover , there will be be less chance to have one agent for business, it will be greater. And per agent	Faveo, UVDesk, FreeScount ,Zammad ,Hesk etc.

		cost will take a huge part of your budget .	
2.	Security implementations	If you register your all details in the ticket reservation system except you or what the ticket name will be reg that person only valuable for that ticker .and time and date also secure.	e.g SHA-256, HubSpot Service Hub, Freshdesk, frount, jira Service Deck ,vision Helpdest . jitBit.
3.	Availability	SpiceWorks , HubSpot, osTicket, ServiceNow, ConnectWise, solar winds web help desk, jira service desk , jitbit.	Erich westendarp to loco communication . credit: Erich automatic train protection (ATP) system.
4.	Scalable Architecture	If you register the railway ticket by using mobile your reservation details will be show In the app and alert the devices .	Multiple Dta Storage technology, reliable Micro services, etc.
5.	performance	When you want to travel any place it can be help for it. Our secure software application allows riders to purchase their own ticket from any smartphone. Rider can make one-off purchase using a guest checkout process or sign up for account to save payment for future.	Ticket app, railway tracking devices, etc.