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

Team ID	PNT2022TMID30708
Project Name	Project - Signs with Smart Connectivity for Better Road safety

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

Guidelines:

1. **To replace the static signboards,smart connected sign boards are used.**
2. **These smart connected sing boards get the speed limitations from a web app using weather API and update automatically.**
3. **Based on the weather changes the speed may increase or decrease.**
4. **Based on the traffic and fatal situations the diversion signs are displayed.**
5. **Guide signs are also displayed accordingly.**
6. **Different modes of operations can be selected with the help of buttons.**

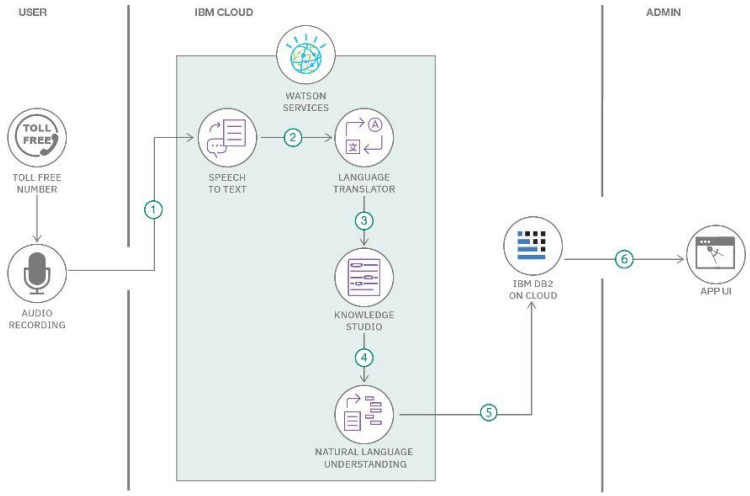

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
•	User Interface	The means by which the user and a computer system interact in particular the use of input devices and software e.g. Web UI, Mobile App, Chatbot etc	HTML, CSS, JavaScript / Angular Js / React Js etc.
•	Application Logic-1	Road safety rules and regulations state that you should never use a moblie phone while driving	Java / Python
•	Application Logic-2	Wear seatbelts and helmets.Be carefull of speed limits.	IBM Watson STT service
•	Application Logic-3	Walk carefully on the sidewalks and only cross on the zebra crossing	IBM Watson Assistant
•	Database	Data types ,Accident database,configurations etc	MySQL, NoSQL, etc.
•	Cloud Database	All highway can improve their ability to respond to safety concerns by having a reliable database that provides easily accessible.	IBM DB2, IBM Cloudant etc.
•	File Storage	The document,save LIVES:road safety technical package details key evidence-based measures identified by many of the world's leading road safety experts	IBM Block Storage or Other Storage Service or Local Filesystem
•	External API-1	Aim is to provide road safety informations to the road users.	IBM Weather API, etc.
•	External API-2	The programs and activities include advocating for the safe and efficient transportation.	Aadhar API, etc.
•	Machine Learning Model	Help the students understand the importance of safety on the road when walking as a pedestrian or as one driving a vehicle.	Object Recognition Model, etc.
•	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Computer that serves a client within the local network or LAN. Cloud Server Configuration : Process of setting hardware and software details for elements of a cloud environment to ensure that they can interoperate and communicate	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
•	Open-Source Frameworks	Open source platform created in partnership with thw world bank to mitigate road accidents through road incident data management and analysis.	Technology of Opensource framework
•	Security Implementations	Travelers can minimize their risk by assessing thE road culture in travel areas and implementing safety precautions.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
•	Scalable Architecture	It should be able to easily change and need in requirement.	Technology used
•	Availability	It should be available 24/7 so that it can be beneficial to the customer.	Technology used
•	Performance	Performance review assesses the current road safety situation helps the government to identify the most critical safety aspects and recommends actions to be taken.	Technology used