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

Date	03 October 2022
Team ID	PNT2022TMID18146
Project Name	Project – Signs with smart connectivity for better road safety
Maximum Marks	4 Marks

Technical Architecture:

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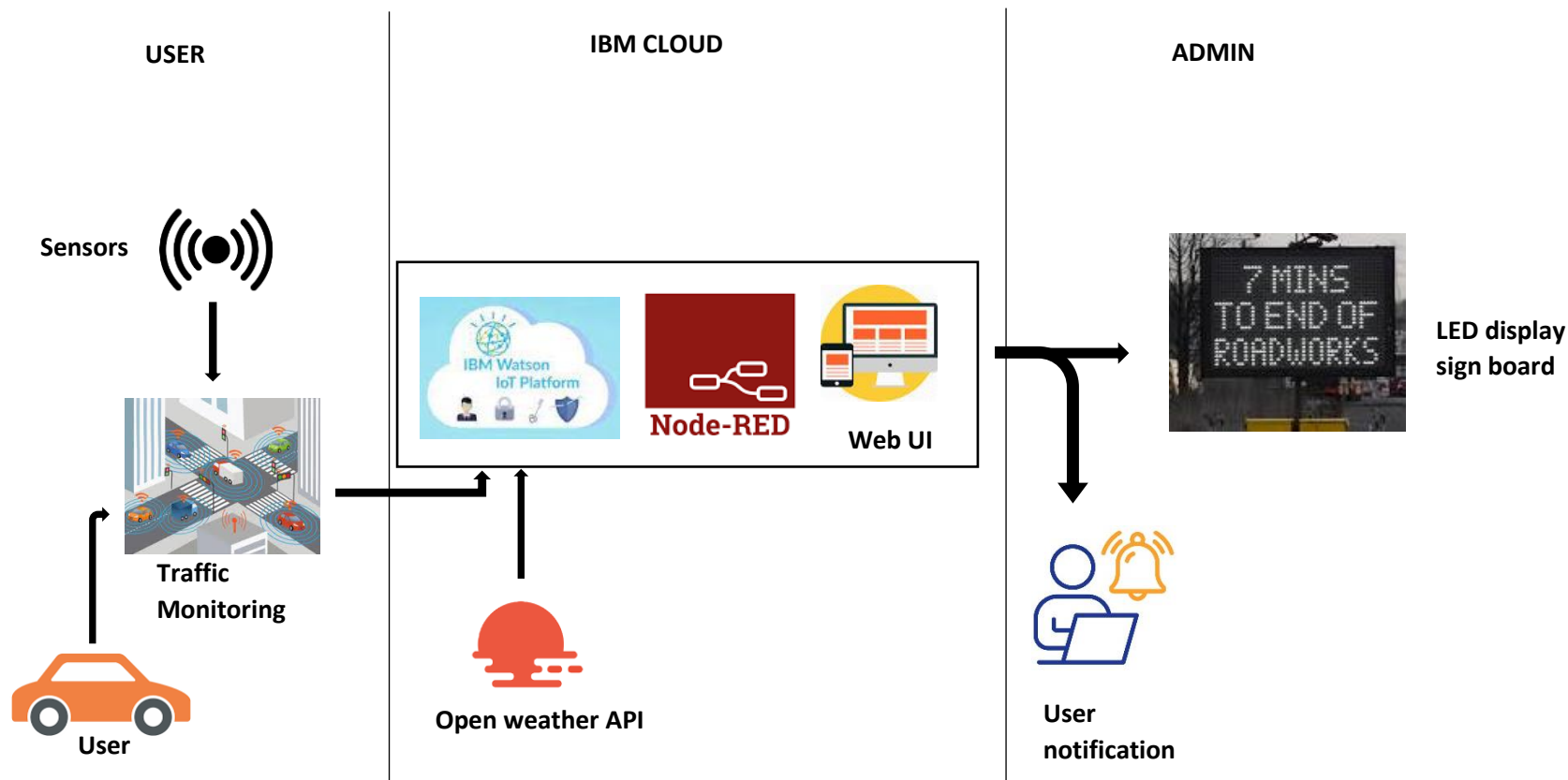
GUIDELINES:

- To replace the traditional static signboards to digital sign boards.
- This gets the weather information from weather API and also get location information and it get updated accordingly.
- Based on the road, location and weather conditions the speed of the vehicle get varies.
- Based on the current traffic and the fatal situations the diversion to other routes is displayed.
- Locations such as schools, hospitals, etc are also displayed accordingly.
- With the help of easy access app different modes can also be selected for user satisfactions.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Traffic Monitoring and constructions indication ahead	Google Map API (Python)
3.	Application Logic-2	Speed limitations based on the current weather	IBM Watson Assistant
4.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Monitoring traffic	Google Map API (Python)
8.	External API-2	Speed limitations based on the current weather	Aadhar API, etc.

| 9. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud
Local Server Configuration:
Cloud Server Configuration : | Local, Cloud Foundry, Kubernetes, etc. |

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It was framed in the form of an application which provides the end user an easy access.	UI/UX design developement
2.	Security Implementations	This application has a strong security that only with the credentials one can access that and for authorized users only.	Encryptuon,IAM controls,Firewall,Firebase.
3.	Scalable Architecture	This is easy to expand the operating in range by increasing the network bandwidth. It is easy to handle and operate.	IOT internet
4.	Availability	This technology available for 24/7, anytime and anywhere	IBM cloud
5.	Performance	This provides highly proper and betterment functionalities are there to ensure to support large amount of users to access the technology.	IBM cloud