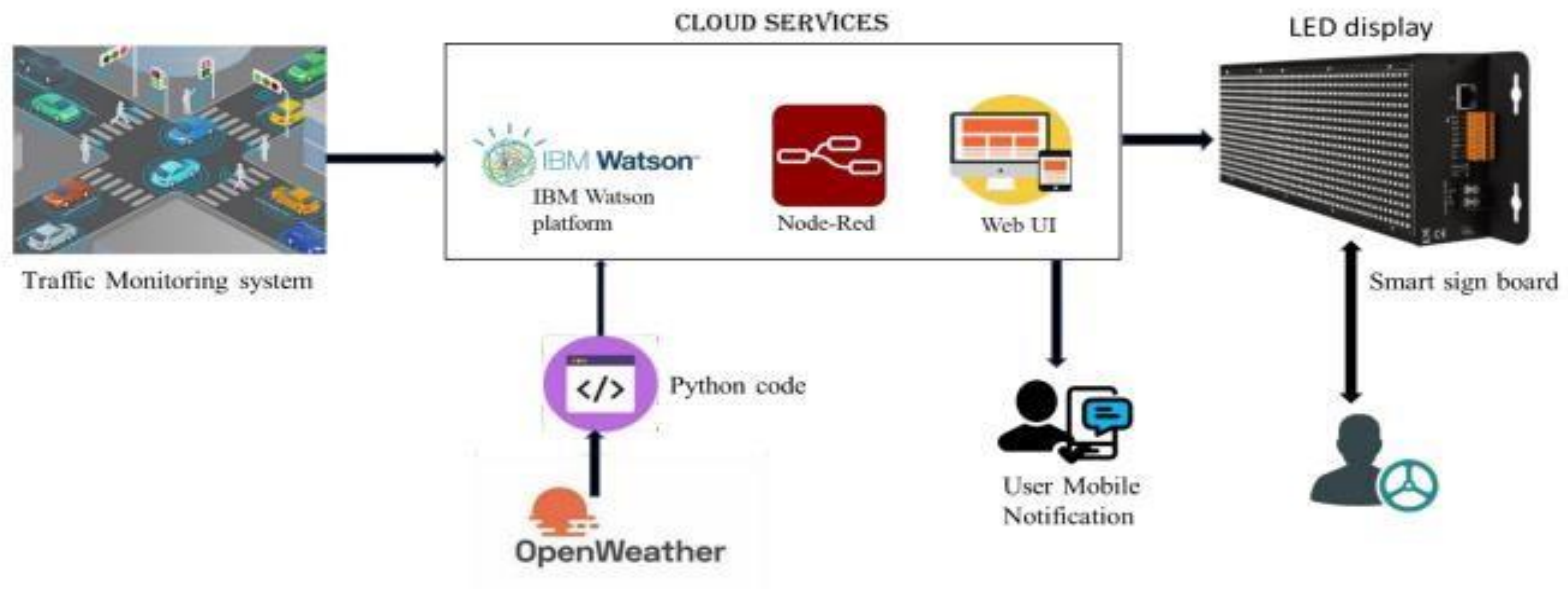


Project Design Phase-II Technology Stack (Architecture & Stack)

Date	07 October 2022
Team ID	PNT2022TMID52636
Project Name	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 static signboards, smart connected sign boards are used.
- These smart connected sign boards get the speed limitations from a web app using weather API and update automatically.
- Based on the weather changes the speed may increase or decrease.
- Based on the traffic and fatal situations the diversion signs are displayed.
- Guide(Schools), Warning and Service(Hospitals, Restaurant) signs are also displayed accordingly.
- Different modes of operations can be selected with the help of buttons.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	IoT	The IoT values are collected	WOKWI
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	Node Red
4.	Application Logic-3	Logic for a process in the application	Node Red
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Security Implementations	Strong security system that anyone without login credentials and hackers are not allowed to enter the network.	Firewall, Firebase, cyber resiliency strategy.
2.	Scalable Architecture	Firewall, Firebase, cyber resiliency strategy.	IoT, internet.
3.	Availability	Available anytime and everywhere 24/7 as long as the user is signed into the network.	IBM Cloud.
4.	Performance	Supports a large number of users to access the technology simultaneously.	IBM Cloud.