Project DesignPhase-IITechnologyStack(Architecture&Stack)

Date	17October2022
TeamID	PNT2022TMID41867
ProjectName	Signs With Smart Connectivity for Better Road Safety
MaximumMarks	4Marks

TechnicalArchitecture:

TheDeliverableshall includethearchitecturaldiagramasbelowandtheinformationasperthetable1&table2
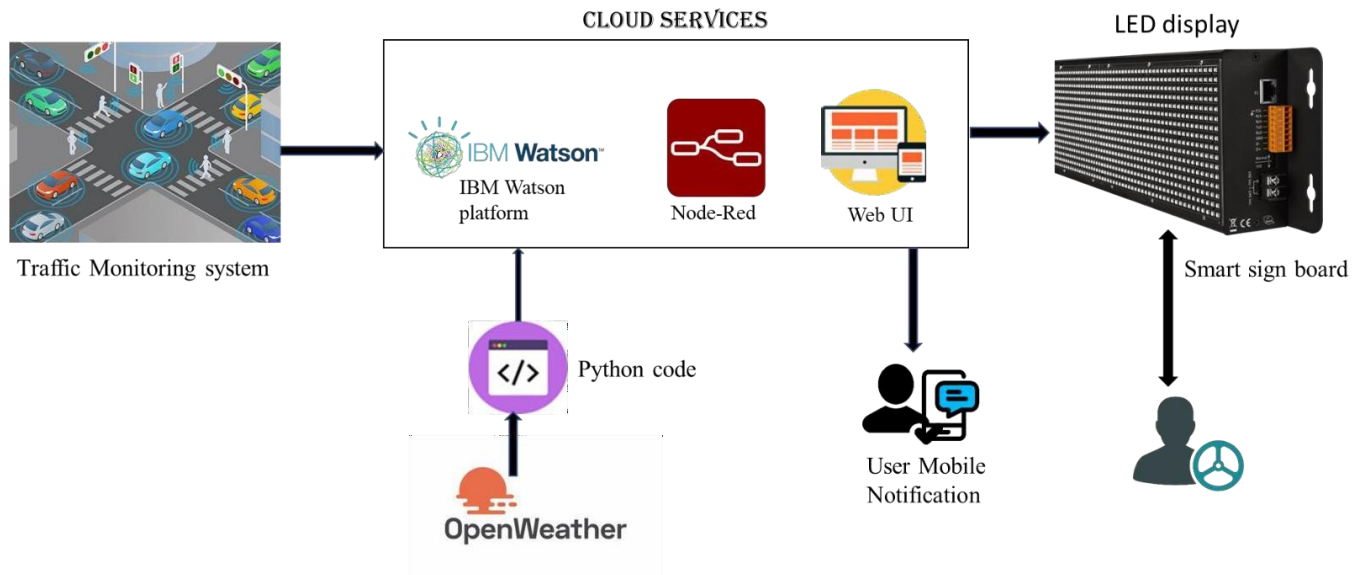
GUIDELINES:

• Toreplacethestaticsignboards,smartconnectedsignboardsareused.

• Thesesmartconnectedsignboardsgetthespeedlimitationsfromawebapp usingweatherAPIandupdateautomatically.

• Basedontheweatherchangesthespeedmayincreaseordecrease.

• Basedonthetrafficand fatalsituationsthediversionsignsaredisplayed.

• Guide(Schools),WarningandService(Hospitals,Restaurant)signsarealso displayedaccordingly.

• Differentmodesofoperations canbeselectedwiththehelpofbuttons.

Table-1:Components &Technologies:

S.No	Component	Description	Technology
1.	UserInterface	Howuserinteractswithapplicatione.g. WebUI,MobileApp,Chatbotetc.	HTML, CSS, JavaScript/ AngularJs/ ReactJsetc.
2.	ApplicationLogic-1	Logicforaprocess intheapplication	Java/Python
3.	ApplicationLogic-2	Logicforaprocess intheapplication	IBMWatson STTservice
4.	ApplicationLogic-3	Logicforaprocess intheapplication	IBMWatsonAssistant
5.	Database	DataType,Configurationsetc.	MySQL,NoSQL,etc.

6.	CloudDatabase	DatabaseServiceonCloud	IBMDB2,IBMCloudantetc.
7.	FileStorage	Filestoragerequirements	IBM Block Storage or Other StorageServiceorLocalFilesystem
8.	ExternalAPI-1	PurposeofExternalAPIused intheapplication	IBMWeatherAPI,etc.

Table-2:ApplicationCharacteristics:

S. No	Characteristics	Description	Technology
1.	Security Implementations	Strong security system that anyonewithoutlogincredentials andhackersarenotallowedto enterthenetwork.	Firewall, Firebase, cyber resiliency strategy
2.	Scalable Architecture	Easytoexpandtheoperatingrange byincreasingthebandwidthofthe network.	IoT,internet.
3.	Availability	Availableanytimeandeverywhere 24/7aslongastheuserissignedinto thenetwork.	IBMCloud
4.	Performance	Supportsalargenumberofusersto accessthetechnology simultaneously.	IBMcloud